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 the "Command Modes" section to determine the appropriate mode for each command. For more information, refer to the *Cisco MDS 9000 Family Configuration Guide*.

line com1

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

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]

SyntaxDescription

line com1	Configures a primary terminal line.
databits	Set number of databits per character (ranges from 5 to 8).
number	Enters number of databits.
flowcontrol hardware	Enables modem flowcontrol on the COM1 port.
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.
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	Sets the transmit and receive speeds (ranges from 110 to 115, 200 baud).
speed	Sets transmit and receive speeds.
stopbits	Sets async line stopbits.
1	Sets one stop bit.
2	Sets two stop bits.

Defaults   Disabled.

Command Modes   Configuration mode.

Command History   This command was modified in Cisco MDS SAN-OS Release 1.2(2).

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.

If you issue the **no modem in** command, then the show line com1 command will not show the `Modem Init-String` portion.

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

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

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

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

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

The following example deletes the configured initialization string.

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

Related Commands	Command	Description
	line console	Configure primary terminal line.
	line vty	Configure virtual terminal line.

line console

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

> **line console**
> [**databits** *number*] |
> [**exec-timeout** *minutes*] [**flowcontrol none | software**]
> [**modem in | init-string (default | user-input) | set-string user-input** *string*] |
> [**parity even | none | odd**]
> [**speed** *speed*] |
> [**stopbits 1 | 2**]

Syntax Description

line console	Configures a primary terminal line.
databits	Set number of databits per character. (ranges from 5 to 8)
number	Enters number of databits.
exec-timeout	Configure exec timeout.
minutes	Enters timeout in minutes 0-525600. 0 to disable.
flowcontrol	Set the flow control.
none	Sets no flowcontrol.
software	Sets software flowcontrol.
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.
init-string user-input	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	Sets the transmit and receive speeds.
speed	Sets transmit and receive speeds.
stopbits	Sets async line stopbits.
1	Sets one stop bit.
2	Sets two stop bits.

Defaults   Disabled

Command Modes   Configuration mode.

Command History   This command was modified in Cisco MDS SAN-OS Release 1.2(2).

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

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

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

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

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

Related Commands

Command	Description
line vty	Configure virtual terminal line.
line com1	Confgiures the auxilary COM 1 port

line vty

To configure a virtual terminal line, use the **line vty** command.

line vty exec-timeout *minutes* **| exit | no**

Syntax Description

line vty	Configures a virtual terminal line.
exec-timeout	Configure exec timeout.
minutes	Enter timeout in minutes 0-525600. 0 to disable.
exit	Exit from this submode.
no	Negate a command or set its defaults.

Defaults None.

Command Modes Configuration mode.

Command History This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

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

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

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

Related Commands

Command	Description
line console	Configure primary terminal line.
line com1	Confgiures the auxiliary COM 1 port

logging console

To set console logging, use the **logging console** command.

logging console *range* [**size** *bytes*]

Syntax Description

logging console	Sets console logging.
range	0-7 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
size *bytes*	Configures the size of the log file in bytes. The valid range is 4096- 4194304 bytes.

Defaults   Disabled.

Command Modes   Configuration mode.

Command History   This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines   None.

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 t
switch(config)# logging console 2
switch(config-console)#
```

logging level

To modify message logging facilities, use the **logging level** command.

logging level [**acl** *severity level*] [**all** *severity level*] [**auth** *severity level*] [**authpriv** *severity level*] [**bootvar** *severity level*] [**callhome** *severity level*] [**cron** *severity level*] [**daemon** *severity level*] [**fcc** *severity level*] [**fcdomain** *severity level*] [[**fcns** *severity level*] [**fcs** *severity level*] [**flogi** *severity level*] [**fspf** *severity level*] [**ftp** *severity level*] [**ipconf** *severity level*] [**ipfc** *severity level*] [**kernel** *severity level*] [**local0** *severity level*] [**local1** *severity level*] [**local2** *severity level*] [**local3** *severity level*] [**local4** *severity level*] [**local5** *severity level*] [**local6** *severity level*] [**local7** *severity level*] [**mail** *severity level*] [[**mcast** *severity level*] [**module**] [**news**] [**ntp**] [**platform**] [**port**] [**port-channel**] [**qos**] [**rdl**] [**rib** *severity level*] [**rscn** *severity level*] [**scsi-target** *severity level*] [**security** *severity level*] [**syslog** *severity level*] [**sysmgr** *severity level*] [**tlport** *severity level*] [**user** *severity level*] [**uucp** *severity level*] [**vni** *severity level*] [**vrrp configuraion** *severity level* **engine** *severity level*] [**vsan** *severity level*] [**vshd** *severity level*] [**wwnm** *severity level*] [**xbar** *severity level*] [**zone** *severity level*]

no logging level [**acl** *severity level*] [**all** *severity level*] [**auth** *severity level*] [**authpriv** *severity level*] [**bootvar** *severity level*] [**callhome** *severity level*] [**cron** *severity level*] [**daemon** *severity level*] [**fcc** *severity level*] [**fcdomain** *severity level*] [[**fcns** *severity level*] [**fcs** *severity level*] [**flogi** *severity level*] [**fspf** *severity level*] [**ftp** *severity level*] [**ipconf** *severity level*] [**ipfc** *severity level*] [**kernel** *severity level*] [**local0** *severity level*] [**local1** *severity level*] [**local2** *severity level*] [**local3** *severity level*] [**local4** *severity level*] [**local5** *severity level*] [**local6** *severity level*] [**local7** *severity level*] [**mail** *severity level*] [[**mcast** *severity level*] [**module**] [**news**] [**ntp**] [**platform**] [**port**] [**port-channel**] [**qos**] [**rdl**] [**rib** *severity level*] [**rscn** *severity level*] [**scsi-target** *severity level*] [**security** *severity level*] [**syslog** *severity level*] [**sysmgr** *severity level*] [**tlport** *severity level*] [**user** *severity level*] [**uucp** *severity level*] [**vni** *severity level*] [**vrrp configuraion** *severity level* **engine** *severity level*] [**vsan** *severity level*] [**vshd** *severity level*] [**wwnm** *severity level*] [**xbar** *severity level*] [**zone** *severity level*]

Syntax Description	logging level	Sets console logging.
	acl	Sets 0-7 syslog filter level for acl manager. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	all	Sets 0-7 severity level for all facilities. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	auth	Sets 0-7 severity level for authorization system. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	authpriv	Sets 0-7 severity level for authorization (private) system. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	bootvar	Sets 0-7 severity level for bootvar. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	callhome	Sets 0-7 severity level for Callhome feature. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	cron	Sets 0-7 severity level l for Cron/at facility. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
	daemon	Sets 0-7 severity level for system daemons 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

fcc	Sets 0-7 severity level for FCC. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
fcdomain	Sets 0-7 syslog message level for fcdomain. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
fcns	Sets 0-7 syslog filter level for name server 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
fcs	Sets 0-7 syslog filter level for FCS. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
flogi	Sets 0-7 syslog message level for flogi. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
fspf	Sets 0-7 syslog message level for FSPF. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
ftp	Sets 0-7 syslog message level for File Transfer System. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
ipconf	Sets 0-7 syslog message level for IP configuration. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
ipfc	Sets 0-7 syslog message level for IPFC. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
kernel	Sets 0-7 syslog message level for kernel. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local0	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local2	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local3	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local4	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local5	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local6	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
local7	Sets 0-7 syslog message level for local use daemons. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
lpr	Sets 0-7 syslog message level for line printer system. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
mail	Sets 0-7 syslog message level for mail system. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
mcast	Sets 0-7 syslog message level for mcast 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
module	Sets 0-7 syslog message level for module. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
news	Sets 0-7 syslog message level for USENET news 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
ntp	Sets 0-7 syslog message level for NTP. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

platform	Sets 0-7 syslog message level for platform manager.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
port	Sets 0-7 syslog message level for port.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
port-channel	Sets 0-7 syslog message level for a Port Channel.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
qos	Sets 0-7 syslog message level for QoS manager.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
rdl	Sets 0-7 syslog message level for RDL.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
rib	Sets 0-7 syslog message level for rib.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
rscn	Sets 0-7 syslog message level for RSCN.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
scsi-target	Sets 0-7 syslog message level for SCSI target.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
security	Sets 0-7 syslog message level for security.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
s**yslog**	Sets 0-7 syslog message level for internal syslog messages.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
sysmgr	Sets 0-7 syslog message level for system manager.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
tlport	Sets 0-7 syslog message level for TL Port.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
user	Sets 0-7 syslog message level user process.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
uucp	Sets 0-7 syslog message level for Unix-to-Unix copy system.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vni	Sets 0-7 syslog message level for virtual network interface.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vrrp	Sets 0-7 syslog message level for vrrp.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vrrp configuration	Sets 0-7 syslog message level
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vrrp engine	Sets 0-7 syslog message level
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vsan	Sets 0-7 syslog message level for VSAN.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
vshd	Sets 0-7 syslog message level for vshd.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
wwnm	Sets 0-7 syslog message level for WWN manager.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
xbar	Sets 0-7 syslog message level for Xbar.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
zone	Sets 0-7 syslog message level for zone server.
	0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

Defaults   Disabled

Command Modes   Configuration mode

Command History   This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines None.

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 t
switch(config)# logging level kernal 4
```

logging logfile

To set message logging for logfile, use the **logging logfile** command.

> **logging logfile** *file name severity level*

Syntax Description

logging logfile	Sets message logging for logfile.
file name	Enters the logfile name.
severity level	0-7 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

Defaults

None.

Command Modes

Configuration mode.

Command History

This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines

None.

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 3000000 bytes.

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

Related Commands

Command	Description
show logging logfile	Displays the message logging for the logfile.

logging module

To set message logging for linecards, use the **logging module** command.

logging module *severity level*

Syntax Description	**logging module**	Sets message logging for modules.
	severity level	0-7 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

Defaults   None.

Command Modes   Configuration mode.

Command History   This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines None.

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

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

logging monitor

To set monitor message logging, use the **logging monitor** command.

logging monitor *severity level*

Syntax Description

logging monitor	Sets message logging.
severity level	0-7 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug

Defaults   None.

Command Modes   Configuration mode.

Command History   This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines   None.

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

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

Related Commands

Command	Description
show logging monitor	Displays the message logging for the logfile.

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	Enters host name for remote server.
ip address	Enters the IP address for the remote server.
severity_level	Enter severity level of message. 0-emerg;1-alert;2-crit;3-err;4-warn;5-notif;6-inform;7-debug
facility	Facility to use when forwarding to server
auth	Use auth facility
authpriv	Use authpriv facility
cron	Use Cron/at facility
daemon	Use daemon facility
ftp	Use file transfer system facility
kernel	Use kernel facility
local0	Use local0 facility
local1	Use local1 facility
local2	Use local2 facility
local3	Use local3 facility
local4	Use local4 facility
local5	Use local5 facility
local6	Use local6 facility
local7	Use local7 facility
lpr	Use lpr facility
mail	Use mail facility
news	Use USENET news facility
syslog	Use syslog facility
user	Use user facility
uucp	Use Unix-to-Unix copy system facility

Defaults   None.

Command Modes   Configuration mode.

Command History   This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines   None.

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

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

Related Commands

Command	Description
show logging server	Displays the message logging for the remote server.