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## L Commands

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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*.

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## 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*]

<b>Syntax Description</b>	<i>seconds</i>	Specifies the lifetime duration in seconds. The range is 600 to 86400.
<b>Defaults</b>	86,400 seconds.	
<b>Command Modes</b>	IKE policy configuration submode.	
<b>Command History</b>	<b>Release</b>	<b>Modification</b>
	2.0(1b)	This command was introduced.
<b>Usage Guidelines</b>	To use this command, the IKE protocol must be enabled using the <b>crypto ike enable</b> command. The <b>lifetime seconds</b> command overrides the default.	
<b>Examples</b>	The following example shows how to configure the SA lifetime duration for the IKE protocol.	
	<pre>switch# <b>config terminal</b> switch(config)# <b>crypto ike domain ipsec</b> switch(config-ike-ipsec)# <b>policy 1</b> switch(config-ike-ipsec-policy)# <b>lifetime seconds 6000</b></pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>crypto ike domain ipsec</b>	Enters IKE configuration mode.
	<b>crypto ike enable</b>	Enables the IKE protocol.
	<b>policy</b>	Configures IKE protocol policy.
	<b>show crypto ike domain ipsec</b>	Displays IKE information for the IPsec domain.

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## 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}
```

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

### Syntax Description

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

### Defaults

9600 Baud  
 8 databits  
 1 stopbit  
 Parity none  
 Default init string

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**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.

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 provides 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 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 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
```

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Related Commands	Command	Description
	<b>line console</b>	Configure primary terminal line.
	<b>line vty</b>	Configure virtual terminal line.
	<b>show line com1</b>	Displays COM1 information.

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## 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} |
  parity {even | none | odd} |
  speed speed |
  stopbits {1 | 2}
```

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

### Syntax Description

<b>databits</b> <i>number</i>	Specifies the number of databits per character. The range is 5 to 8.
<b>exec-timeout</b> <i>minutes</i>	Configure exec timeout in minutes. The range is 0 to 525,600. To disable, set to 0 minutes.
<b>modem</b>	Enables the modem mode.
<b>in</b>	Enables the COM 1 port to only connect to a modem.
<b>init-string default</b>	Writes the default initialization string to the modem.
<b>set-string user-input</b> <i>string</i>	Sets the user-specified initialization string to its corresponding profile. Maximum length is 80 characters.
<b>init-string user-input</b>	Writes the provided initialization string to the modem.
<b>parity</b>	Sets terminal parity.
<b>even</b>	Sets even parity.
<b>none</b>	Sets no parity.
<b>odd</b>	Sets odd parity.
<b>speed</b> <i>speed</i>	Sets the transmit and receive speeds. The range is 110 to 115, 200 baud.
<b>stopbits</b>	Sets async line stopbits.
<b>1</b>	Sets one stop bit.
<b>2</b>	Sets two stop bits.

### Defaults

9600 Baud  
 8 databits  
 1 stopbit  
 Parity none  
 Default init string

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**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` submenu.

**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 provides 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
```

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Related Commands	Command	Description
	<b>line vty</b>	Configure virtual terminal line.
	<b>line com1</b>	Configures the auxiliary COM 1 port
	<b>show line console</b>	Displays console information.



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## 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
```

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

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

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

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

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## 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(1b)	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
	<b>show logging</b>	Displays logging information.

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## 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(1b)	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
	<b>show logging</b>	Displays logging information.

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## 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*]

<b>Syntax Description</b>	<i>severity-level</i>	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.
<b>Defaults</b>	Disabled. The default severity level is 2.	
<b>Command Modes</b>	Configuration mode.	
<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).	
<b>Usage Guidelines</b>	The switch logs messages at or above the configured severity level.	
<b>Examples</b>	<p>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.</p> <pre>switch# <b>config terminal</b> switch(config)# <b>logging console 2</b></pre>	
<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show logging</b>	Displays logging configuration information.

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

Command History	Release	Modification
	2.0(1b)	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
	<b>logging commit</b>	Commits the logging configuration changes to the active configuration.
	<b>show logging</b>	Displays logging information.

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## 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*

<b>Syntax Description</b>	<i>facility-name</i>	Specifies the required facility name (for example <b>acl</b> , or <b>ivr</b> , or <b>port</b> , etc.)
	<i>severity-level</i>	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** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**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
```

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## 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**

Syntax Description		
	<i>filename</i>	Specifies the log filename. Maximum length is 80 characters.
	<i>severity-level</i>	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.
	<b>size</b> <i>filesize</i>	Specifies the log file size. The range is 4096 to 4194304 bytes.

**Defaults** None.

**Command Modes** Configuration mode.

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

**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
	<b>show logging</b>	Displays logging configuration information.

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## 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*]

<b>Syntax Description</b>	<i>severity-level</i>	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.
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<b>Defaults</b>	None.
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<b>Command Modes</b>	Configuration mode.
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<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
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<b>Usage Guidelines</b>	None.
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<b>Examples</b>	The following example sets message logging for modules at level 7.
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```
switch## config terminal
switch(config)# logging module 7
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show logging</b>	Displays logging configuration information.



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## 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.
	<i>severity level</i>	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 terminal
switch(config)# logging monitor 2
```

Related Commands	Command	Description
	<b>show logging</b>	Displays logging configuration information.

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

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**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
```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show logging</b>	Displays logging configuration information.

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