

S 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*.

- [send](#), page 15-2
- [setup](#), page 15-3
- [sleep](#), page 15-4
- [snmp-server](#), page 15-5
- [snmp-server host](#), page 15-7
- [span session](#), page 15-8
- [ssh key](#), page 15-10
- [ssh server enable](#), page 15-11
- [switchname](#), page 15-12
- [system auto-sync](#), page 15-13
- [system cores](#), page 15-14
- [system default switchport](#), page 15-15
- [system hap-reset](#), page 15-16
- [system heartbeat](#), page 15-17
- [system memlog](#), page 15-18
- [system statistics reset](#), page 15-19
- [system switchover](#), page 15-20
- [system trace](#), page 15-21
- [system upgrade-reset](#), page 15-22
- [system watchdog](#), page 15-23

send

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send

To send a message to all active CLI users currently using the switch, use the **send** command in EXEC mode.

send *message-text*

Syntax Description	<i>message-text</i>	The text of your message.
Defaults	None.	
Command Modes	EXEC mode.	
Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).	
Usage Guidelines	This message is restricted to 80 alphanumeric characters with spaces.	
Examples	The following example sends a warning message to all active users about the switch being shut down. switch# send Shutting down the system in 2 minutes. Please log off. Broadcast Message from admin@excal-112 (/dev/pts/3) at 16:50 ... Shutting down the system in 2 minutes. Please log off.	

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setup

To enter the switch setup mode, use the **setup** command in EXEC mode.

setup

Syntax Description This command has no arguments or keywords.

Defaults None.

Command Modes EXEC mode.

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

Usage Guidelines Refer to the *Cisco MDS 9000 Family Configuration Guide* for more information on using the **setup** command.

The setup utility guides you through the basic configuration process. Type **Ctrl-c** at any prompt to skip the remaining configuration options and proceed with what is configured until that point.

If you do not wish to answer a previously-configured question, or if you wish to skip answers to any questions press **Enter**. If a default answer is not available (for example switch name), the switch uses what is previously configured and skips to the next question.

Examples The following example shows how to enter switch setup mode.

```
switch# setup
---- Basic System Configuration Dialog ----
```

This setup utility will guide you through the basic configuration of the system. Setup configures only enough connectivity for management of the system.

*Note: setup always assumes a predefined defaults irrespective of the current system configuration when invoked from CLI.

Press Enter incase you want to skip any dialog. Use ctrl-c at anytime to skip away remaining dialogs.

Would you like to enter the basic configuration dialog (yes/no) : **yes**

sleep

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sleep

To delay an action by a specified number of seconds, use the **sleep** command.

sleep <seconds>

Syntax Description	<code><seconds></code> The number of seconds to delay an action.
Defaults	None.
Command Modes	EXEC mode.
Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
Usage Guidelines	<p>This command is useful within scripts. For example, if you create a script called test-script:</p> <pre>switch# show file slot0:test-script discover scsi-target remote sleep 10 show scsi-target disk switch# run-script slot0:test-script</pre> <p>When you execute the slot0:test-script, the switch software executes the discover scsi-target remote command, and then waits for 10 seconds before executing the show scsi-target disk command.</p>
Examples	<p>The following example shows how to delay the switch prompt return.</p> <pre>switch# sleep 30</pre> <p>You will see the switch prompt return after 30 seconds.</p>

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snmp-server

To set the contact information, switch location, and switch name, use the **snmp-server** command in configuration mode. To remove the system contact information, use the **no** form of the command.

```
snmp-server [community community string] [ro | rw] [contact name-string] [location location]
            [user name group auth md5 password priv password | sha password priv password]
no snmp-server [community snmp community string] [ro | rw] [contact name-string] [location
            location] [user name group auth md5 password priv password | sha password priv password
            / localizedkey]
```

Syntax Description	
community	Sets community string and access privileges.
<i>community string</i>	Specifies SNMP community string. Maximum length is 32 characters.
ro	Sets read-only access with this community string.
rw	Sets read-write access with this community string.
contact	Modifies system contact.
<i>name-string</i>	Specifies the name of the contact.
location	Modifies sysLocation.
<i>location</i>	Specifies and modifies system location.
user	Sets a user who can access the SNMP engine.
<i>group</i>	Specifies group to which the user belongs. Maximum length is 32 characters.
auth	Sets authentication parameters for the user.
md5	Sets HMAC MD5 algorithm for authentication.
<i>password</i>	Specifies user password. Maximum length is 64 characters.
priv	Sets encryption parameters for the user.
sha	Uses HMAC SHA algorithm for authentication.
localizedkey	Sets passwords in localized key format.
Defaults	The default is read-only (ro).
Command Modes	Configuration mode
Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
Usage Guidelines	The localized keys are not portable across devices as they contain information on the engine ID of the device. If a configuration file is copied into the device, the passwords may not be set correctly if the configuration file was generated at a different device. We recommend that passwords be explicitly configured to the desired passwords after copying the configuration into the device.

■ snmp-server

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Examples

The following example sets the contact information, switch location, and switch name.

```
switch# config t
switch(config)# snmp-server contact NewUser
switch(config)#
switch(config)# no snmp-server contact NewUser
switch(config)#
switch(config)# snmp-server location SanJose
switch(config)#
switch(config)# no snmp-server location SanJose
switch(config)#
switch(config)# snmp-server name NewName
switch(config)#
switch(config)# no snmp-server name NewName
switch(config)#
switch(config)# snmp-server user joe network-admin auth sha abcd1234
switch(config)#
switch(config)# snmp-server user sam network-admin auth md5 abcdefgh
switch(config)#
switch112(config)# snmp-server user Bill network-admin auth sha abcd1234 priv abcdefgh
switch112(config)#
switch112(config)# no snmp-server user usernameA
switch112(config)# snmp-server user user1 network-admin auth md5 0xab0211gh priv
0x45abf342 localizedkey
```

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snmp-server host

To specify the recipient of an Simple Network Management Protocol notification operation, use the **snmp-server host** global configuration command. To remove the specified host, use the no form of this command.

```
snmp-server host host-address [traps | informs] [version {1 | 2c | 3 [auth | noauth | priv]}]
community-string [udp-port port] [notification-type]
```

```
no snmp-server host host-address [traps | informs]
```

Syntax Description	
<i>host-address</i>	Specifies the name or IP address of the host (the targeted recipient).
traps	Sends SNMP traps to this host.
informs	Sends SNMP informs to this host.
version	Specifies the version of the Simple Network Management Protocol (SNMP) used to send the traps. Version 3 is the most secure model, as it allows packet encryption with the priv keyword.
1	SNMPv1 (default). This option is not available with informs.
2c	SNMPv2C.
3	SNMPv3 has three optional keywords (auth , no auth (default), or priv).
auth	Enables Message Digest 5 (MD5) and Secure Hash Algorithm (SHA) packet authentication
noauth	Specifies the noAuthNoPriv security level.
priv	Enables Data Encryption Standard (DES) packet encryption (privacy).
<i>community-string</i>	Sends a password-like community string with the notification operation.
udp-port	Specifies the port UDP port of the host to use. The default is 162.

Defaults Sends SNMP traps.

Command Modes Configuration mode

Command History This command was introduced in Cisco MDS SAN-OS Release 1.0(3).

Usage Guidelines If you use the **version** keyword, one of the following must be specified: 1, 2c, or 3.

Though you can set the **community-string** using the **snmp-server host** command by itself, we recommend you define this string using the **snmp-server community** command prior to using the **snmp-server host** command.

Examples The following example specify the recipient of an SNMP notification.

```
switch# config t
switch(config)# snmp-server host 10.1.1.1 traps version 2c abcdssfsf udp-port 500
```

span session

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span session

To configure a SPAN session, use the **span session** command. To remove a configured SPAN feature or revert it to factory defaults, use the **no** form of the command.

```
span session session-id {destination interface fc slot-number | source [filter | rx | tx] vsan vsan-id
| interface fc slot-number| port-channel port-channel-number | sup-fc
inband-interface-number [] | suspend }
```

```
no span session session-id {destination interface fc slot-number | source [filter | rx | tx] vsan
vsan-id | interface fc slot-number| port-channel port-channel-number | sup-fc
inband-interface-number [] | suspend }
```

Syntax Description

session-id	Enter SPAN session ID from 1 to 16.
destination	Specifies the SPAN destination.
interface	Specifies SPAN destination configuration.
fc	Configures the Fiber Channel interface.
slot-number	Specifies the slot number and port number.
source	Specifies the SPAN source.
filter	Specifies the SPAN session filter.
rx	Specifies SPAN traffic in ingress direction
tx	Specifies SPAN traffic in egress direction
vsan	SPAN source VSAN configuration.
vsan-id	The ID of the VSAN is from 1 to 4093.
interface	SPAN source interface configuration.
port-channel	PortChannel interface.
port-channel-number	PortChannel number from 1 to 128.
sup-fc	Inband interface.
<i>inband interface number</i>	Inband interface number, which is 0.
suspend	SPAN suspend session.

Defaults

None.

Command Modes

Configuration mode.

Command History

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

Usage Guidelines

None.

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Examples

The following example shows how to configure a SPAN session.

```
switch# config t
switch(config)# span session 1
switch(config-span)#
switch(config)# no span session 6
switch(config-span)# destination interface fc9/1
switch(config-span)# no destination interface fc1/5
switch(config-span)# source interface sup-fc0
switch(config-span)# source vsan1
switch(config-span)# source interface po1
switch(config-span)# no source interface po3
switch(config-span)# suspend
switch(config-span)# no suspend
switch(config-span)# exit
switch(config)# span session 1
switch(config-span)#
switch(config-span)# source interface fc9/1 tx filter vsan 1
switch(config-span)# source filter vsan 1-2
```

Related Commands

Command	Description
show span session	Displays all SPAN session information.

ssh key

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ssh key

To generate a host key, use the **ssh key** command in configuration mode.

ssh key {dsa number | rsa number | rsa1 number}

Syntax Description

dsa	Generates a DSA key.
rsa	Generates an RSA key.
rsa1	Generates an RSA1 key.
number	Specifies a number of bits from 768 to 2048.

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 shows how to generate a host key.

```
switch# config t
switch(config)# ssh key rsa1 1024
generating rsa1 key.....
generated rsa1 key
switch(config)#
switch(config)# ssh key dsa 1024
generating dsa key.....
generated dsa key
switch(config)#
switch(config)# ssh key rsa 1024
generating rsa key.....
generated rsa key
switch(config)#
switch(config)# no ssh key rsa 1024
cleared RSA keys
switch(config)#

```

Related Commands

Command	Description
ssh server enable	Enables SSH server.

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ssh server enable

To enable the SSH server, use the **ssh server enable** command in configuration mode. To disable the SSH service, use the **no** form of the command.

ssh server enable

no ssh server enable

Syntax Description This command has no arguments or keywords.

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 enables the SSH server.

```
switch# config t
switch(config)# ssh server enable
updated
switch(config)# no ssh server enable
updated
```

Related Commands

Command	Description
ssh key	Generates an SSH key.

switchname

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switchname

To change the name of the switch, use the **switchname** command in configuration mode. To revert the switch name to the default name, use the **no** form of the command.

switchname *name*

no switchname *name*

Syntax Description	name Specifies a switch name				
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	<p>The following example changes the name of the switch to myswitch1.</p> <pre>switch# config t switch(config)# switchname myswitch1 myswitch1(config)# myswitch1(config)# no switchname switch(config)# </pre>				
Related Commands	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>snmp-server</td> <td>Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).</td></tr> </tbody> </table>	Command	Description	snmp-server	Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).
Command	Description				
snmp-server	Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).				

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system auto-sync

To synchronize the standby supervisor module software image with the bootflash image, use the **system auto-sync** command in configuration mode. To disable auto syncing of the image, use the **no** form of this command.

system auto-sync image

no system auto-sync image

Syntax Description	image System auto-sync image
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	<p>The following example shows how to synchronize the standby supervisor module software image with the bootflash image.</p> <pre>switch# config t switch(config)# system auto-sync image switch(config)# no system auto-sync image Automatic synchronization of BOOT and KICKSTART is now disabled switch(config)# </pre>

system cores

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system cores

To copy the core and log files periodically, use the **system cores** command in configuration mode. To revert the switch to factory defaults, use the **no** form of this command.

system cores slot0 | tftp:

no system cores

Syntax Description	slot0 Selects destination file system. tftp: Selects destination file system.
---------------------------	--

Defaults	None.
-----------------	-------

Command Modes	Configuration mode.
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Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
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Usage Guidelines	Create any required directory before issuing this command. If the directory specified by this command does not exist, the switch software logs a syslog message each time a copy cores is attempted.
-------------------------	--

Examples	The following example copies the core and log files.
-----------------	--

```
switch# config t
switch(config)# system cores slot0:coreSample
switch(config)#
switch(config)# no system cores
switch(config)#

```

Related Commands	Command Description show system cores Displays the currently configured scheme for copying cores.
-------------------------	---

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system default switchport

To configure default values for various switchport attributes, use the **system default switchport** command in configuration mode.

system default switchport [shutdown] [trunk mode auto | off | on]

Syntax Description	shutdown (Optional) Disables or enables switch ports by default. trunk (Optional) Configures trunking parameters as a default. mode (Optional) Configures trunking mode. auto (Optional) Sets autosense trunking. off (Optional) Disables trunking. on (Optional) Enables trunking.
---------------------------	--

Defaults	Enabled
Command Modes	Configuration mode
Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).

Usage Guidelines	Attributes configured using this command are applied globally to all future switch port configurations, even if you do not individually specify them at that time.
-------------------------	--

Examples	The following example configures default values for switchport attributes.
<pre>switch# config t switch(config)# system default switchport shutdown switch(config-if)# switch(config)# no system default switchport shutdown switch(config-if)# switch(config)# system default switchport trunkmode auto switch(config-if)#</pre>	

Related Commands	Command	Description
	show system default switchport	Displays default values for switch port attributes.

system hap-reset

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system hap-reset

To configure the HA reset policy, use the **system hap-reset** command in EXEC mode. Use the **no** form of this command to disable this feature.

```
system hap-reset
```

```
system no hap-reset
```

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines You can disable the HA policy supervisor reset feature (enabled by default) for debugging and troubleshooting purposes.

Examples The following example enables the supervisor reset HA policy.

```
switch# system hap-reset
```

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system heartbeat

To enable system heartbeat checks, use the **system heartbeat** command in EXEC mode. Use the **no** form of this command to disable this feature.

system heartbeat

system no heartbeat

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines You can disable the heartbeat checking feature (enabled by default) for debugging and troubleshooting purposes like attaching a GDB to a specified process.

Examples The following example enables the system heartbeat checks.

```
switch# system heartbeat
```

system memlog

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system memlog

To collect system memory statistics, use the **system memlog** command in EXEC mode.

system memlog

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines Use this command for debugging and troubleshooting purposes.

Examples The following example enables system memory logging.

```
switch# system memlog
```

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system statistics reset

To reset the high availability statistics collected by the system, use the **system statistics reset** command in EXEC mode.

system statistics reset

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines You can disable the system statistics reset feature (enabled by default) for debugging and troubleshooting purposes.

Examples The following example resets the HA statistics.

```
switch# system statistics reset
```

system switchover

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system switchover

To specifically initiate a switchover from an active supervisor module to a standby supervisor module, use the **system switchover** command in configuration mode.

system switchover {ha | warm}

Syntax Description	ha Enables high availability. warm Enables a warm switchover.
--------------------	--

Defaults	system switchover ha
----------	-----------------------------

Command Modes	EXEC
---------------	------

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

Usage Guidelines	Perform a switchover when the switch has two supervisor modules functioning in the switch. The system switchover command returns a Failed to switchover: (supervisor has no standby) message when the standby supervisor is not present in the switch.
------------------	---

Any switchover function is nonrevertive. Once a switchover has occurred and the failed processor has been replaced or successfully restarted, you cannot switch back to the original, active supervisor module (unless there is a subsequent failure or you issue the **system switchover** command).

Examples	The following example initiates a HA switchover from an active supervisor module to a standby supervisor module.
----------	--

```
switch# config t
switch(config)# system switchover HA
```

Related Commands	Command	Description
	show version compatibility	Determines version compatibility between switching modules.
	show module	Displays the HA-standby state for the standby supervisor module.
	show system redundancy status	Determines whether the system is ready to accept a switchover.

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system trace

To configure the system trace level, use the **system trace** command in configuration mode. Use the **no** form of this command to disable this feature.

system trace *bit-mask*

no system trace

Syntax Description	<i>bit-mask</i> Specifies the bit mask to change the trace level.
Defaults	None.
Command Modes	Configuration mode.
Command History	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
Usage Guidelines	This command is used for debugging purposes.
Examples	<p>The following example shows how to configure the system trace level.</p> <pre>switch# config t switch(config)# system trace bit-mask</pre>

 system upgrade-reset

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system upgrade-reset

To enable a supervisor module reset, use the **system upgrade-reset** command in EXEC mode. Use the no form of this command to disable this feature.

system upgrade-reset

system no upgrade-reset

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines This feature enables supervisor module resets when an upgrade has failed. If the upgrade fails for any reason, the software reboots the switch since the file system may be in an unstable state. You can disable the upgrade-reset feature (enabled by default) for debugging and troubleshooting purposes.

Examples The following example enables the supervisor reset HA policy.

```
switch# system upgrade-reset
```

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system watchdog

To enable watchdog checks, use the **system watchdog** command in EXEC mode. Use the no form of this command to disable this feature.

system watchdog

system no watchdog

Syntax Description This command has no arguments or keywords.

Defaults Enabled

Command Modes EXEC

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

Usage Guidelines If a watchdog is not logged at every 8 seconds by the software, the supervisor module reboots the switch. You can disable the watchdog checking feature (enabled by default) for debugging and troubleshooting purposes like attaching a GDB or a kernel GDB (KGDB) to a specified process.

Examples The following example enables the supervisor reset HA policy.

```
switch# system watchdog
```

■ system watchdog

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