



## S 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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**send****send**

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

**send** *message-text*

<b>Syntax Description</b>	<i>message-text</i>	The text of your message.
<b>Defaults</b>	None.	
<b>Command Modes</b>	EXEC mode.	
<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).	
<b>Usage Guidelines</b>	This message is restricted to 80 alphanumeric characters with spaces.	
<b>Examples</b>	<p>The following example sends a warning message to all active users about the switch being shut down.</p> <pre>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.</pre>	

# 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**

# sleep

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

**sleep <seconds>**

<b>Syntax Description</b>	<code>&lt;seconds&gt;</code> The number of seconds to delay an action.
<b>Defaults</b>	None.
<b>Command Modes</b>	EXEC mode.
<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.0(2).
<b>Usage Guidelines</b>	<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 <b>discover scsi-target remote</b> command, and then waits for 10 seconds before executing the <b>show scsi-target disk</b> command.</p>
<b>Examples</b>	<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>

# 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]
[username rolename auth md5 password priv password | sha password priv password]
```

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

Syntax Description	
<b>community</b>	Sets community string and access privileges.
<i>community string</i>	Specifies SNMP community string. Maximum length is 32 characters.
<b>ro</b>	Sets read-only access with this community string.
<b>rw</b>	Sets read-write access with this community string.
<b>contact</b>	Modifies system contact.
<i>name-string</i>	Specifies the name of the contact.
<b>location</b>	Modifies sysLocation.
<i>location</i>	Specifies and modifies system location.
<b>user</b>	Sets a user who can access the SNMP engine.
<i>group</i>	Specifies group to which the user belongs. Maximum length is 32 characters.
<b>auth</b>	Sets authentication parameters for the user.
<b>md5</b>	Sets HMAC MD5 algorithm for authentication.
<i>rolename</i>	Specifies user password. Maximum length is 64 characters.
<b>priv</b>	Sets encryption parameters for the user.
<b>sha</b>	Uses HMAC SHA algorithm for authentication.
<b>localizedkey</b>	Sets passwords in localized key format.

  

<b>Defaults</b>	The default is read-only (ro).
<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 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****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
```

# 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).
<b>traps</b>	Sends SNMP traps to this host.
<b>informs</b>	Sends SNMP informs to this host.
<b>version</b>	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 <b>priv</b> keyword.
<b>1</b>	SNMPv1 (default). This option is not available with informs.
<b>2c</b>	SNMPv2C.
<b>3</b>	SNMPv3 has three optional keywords ( <b>auth</b> , <b>no auth</b> (default), or <b>priv</b> ).
<b>auth</b>	Enables Message Digest 5 (MD5) and Secure Hash Algorithm (SHA) packet authentication
<b>noauth</b>	Specifies the noAuthNoPriv security level.
<b>priv</b>	Enables Data Encryption Standard (DES) packet encryption (privacy).
<i>community-string</i>	Sends a password-like community string with the notification operation.
<b>udp-port</b>	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**

# 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 | fc-tunnel tunnel-id) |
    source [filter | (interface fc slot-number rx tx | port-channel port-channel-number rx tx |
      sup-fc inband-interface-number rx tx | (vsan vsan-id) ] |
      suspend }

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

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

<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 modified in Cisco MDS SAN-OS Release 1.2(1).
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<b>Usage Guidelines</b>	None.
-------------------------	-------

**Examples**

The following example shows how to configure a SPAN session.

```

switch# config t
switch(config)# span session 1
switch(config-span)#
switch(config-span)# 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
switch(config)# span session 11
switch(config-span)# destination interface fc-tunnel 1500

```

**Related Commands**

<b>Command</b>	<b>Description</b>
<b>show span session</b>	Displays all SPAN session information.

**special-frame**

# special-frame

To enable or disable special-frames for the FCIP interface, use the **special-frame** option. To disable the passive mode for the FCIP interface, use the **no** form of the option.

**special-frame peer-wwn *pwwn-id***

**no special-frame peer-wwn *pwwn-id***

<b>Syntax Description</b>	<b>special-frame</b> Configures special frames. <b>peer-wwn</b> Configures the peer WWN for special frames. <i>pwwn-id</i> Enters the peer pWWN ID.
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<b>Defaults</b>	Disabled
-----------------	----------

<b>Command Modes</b>	Configuration mode
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<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.1(1).
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<b>Usage Guidelines</b>	Access this command from the <code>switch(config-if)#</code> submode. When a new TCP Connection is established, an FCIP special frame (if enabled) makes one round trip from the FCIP profile and initiates the TCP connect operation to the FCIP profile receiving the TCP connect request and back. Use these frames to identify the FCIP link endpoints, to learn about the critical parameters shared by Fibre Channel and FCIP profile pairs involved in the FCIP link, and to perform configuration discovery
-------------------------	--

<b>Examples</b>	<pre>switch# config t switch(config)# interface fcip 1 switch(config)# peer-info ipaddr 10.1.1.1 switch(config)# peer-info ipaddr 10.1.1.1 port 4000 switch(config)# no peer-info ipaddr 10.1.1.1 port 4000</pre>
-----------------	---

<b>Related Commands</b>	<b>Command</b> <b>Description</b>
	<b>show interface fcip</b> Displays an interface configuration for a specified FCIP interface.

# ssh key

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

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

<b>Syntax Description</b>	<table border="1"> <tr> <td><b>dsa</b></td><td>Generates a DSA key.</td></tr> <tr> <td><b>rsa</b></td><td>Generates an RSA key.</td></tr> <tr> <td><b>rsa1</b></td><td>Generates an RSA1 key.</td></tr> <tr> <td><i>number</i></td><td>Specifies a number of bits from 768 to 2048.</td></tr> </table>	<b>dsa</b>	Generates a DSA key.	<b>rsa</b>	Generates an RSA key.	<b>rsa1</b>	Generates an RSA1 key.	<i>number</i>	Specifies a number of bits from 768 to 2048.
<b>dsa</b>	Generates a DSA key.								
<b>rsa</b>	Generates an RSA key.								
<b>rsa1</b>	Generates an RSA1 key.								
<i>number</i>	Specifies a number of bits from 768 to 2048.								
<b>Defaults</b>	Disabled								
<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>	None.								
<b>Examples</b>	<p>The following example shows how to generate a host key.</p> <pre>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)# </pre>								
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>ssh server enable</b></td> <td>Enables SSH server.</td> </tr> </tbody> </table>	Command	Description	<b>ssh server enable</b>	Enables SSH server.				
Command	Description								
<b>ssh server enable</b>	Enables SSH server.								

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 ssh server enable

## 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
<b>ssh key</b>	Generates an SSH key.

# 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***

<b>Syntax Description</b>	<i>name</i> Specifies a switch name				
<b>Defaults</b>	Disabled				
<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>	None.				
<b>Examples</b>	<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>				
<b>Related Commands</b>	<table border="1"> <thead> <tr> <th><b>Command</b></th><th><b>Description</b></th></tr> </thead> <tbody> <tr> <td><b>snmp-server</b></td><td>Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).</td></tr> </tbody> </table>	<b>Command</b>	<b>Description</b>	<b>snmp-server</b>	Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).
<b>Command</b>	<b>Description</b>				
<b>snmp-server</b>	Sets the contact information, switch location, and switch name within the limit of 20 characters (without spaces).				

**switchport**

# switchport

To assign the port mode, allowed VSAN numbers, or the description of an FCIP interface, use the **switchport** command in configuration mode. Use the **no** form of the command to delete the configured switchport information.

```
switchport [ beacon ] | [description text] | [ encaps eisl ] | [ fcrxbbcredit value | default | performance-buffers ( value | default ) ] | [fcrxbufsize default | size ] |[mode auto | E] | [trunk allowed vsan number | add vsan number | all]
```

```
no switchport [ beacon ] | [description text] | [ encaps eisl ] | [ fcrxbbcredit value | default | performance-buffers ( value | default ) ] | [fcrxbufsize default | size ] | [ loop-tenancy ] |[mode auto | E] | [trunk allowed vsan number | add vsan number | all]
```

Syntax Description	
<b>switchport</b>	Configures switchport parameters.
<b>beacon</b>	Configures beacon mode.
<b>description</b>	Enter description of maximum 80 characters.
<i>text</i>	Description text of maximum 80 characters.
<b>encap eisl</b>	Configures enhanced inter-switch link (EISL) encapsulation.
<b>SD</b>	Configures encapsulation for the selected SD port.
<b>fcrxbbcredit</b>	Configure receive BB_credit for the port.
<i>value</i>	Assigns a BB_credit value (1 and 255) to the selected interface.
<b>default</b>	Applies the default fcrxbbcredit value to the selected interface. The operational value depends on the port mode.
<b>performance-buffers</b>	Configures a performance buffer value to the selected interface.
<i>value</i>	Assigns a BB_credit value (1 and 145) to the selected interface.
<b>default</b>	Assigns the factory default (0) of using the built-in algorithm.
<b>fcrxbufsize</b>	Configures receive data field size for the port.
<i>size</i>	Assigns the data field size for the selected interface. The default is 2112 bytes and the range is from 256 to 2112 bytes.
<b>mode</b>	Enter the port mode.
<b>auto</b>	Autosensing mode.
<b>E</b>	Configures BB_credits for E or TE port modes.
<b>F</b>	Configures BB_credits for F or FL port modes.
<b>speed</b>	Enters the port speed
<b>trunk</b>	Configure trunking parameters on an interface.
<b>allowed vsan</b>	Configure allowed list for interface(s).
<i>number</i>	Enter the VSAN ID.
<b>add</b>	Give VSAN ID range to add to allowed list
<b>all</b>	Add all the VSANs to allowed list

<b>Defaults</b>	Disabled
-----------------	----------

**Command Modes** Configuration mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.1(1).

**Usage Guidelines** Access this command from the `switch(config-if)#` submode.

**Examples**

```
switch## config t
switch(config)# interface fc 1/23
switch(config-if)# switchport description techdocsSample
switch(config-if)# switchport mode E
switch(config-if)# switchport trunk mode auto
switch(config-if)# switchport trunk allowed vsan all
switch(config-if)# switchport trunk allowed vsan 3
switch(config-if)# switchport trunk allowed vsan add 2
switch(config-if)# switchport encaps eisl
switch(config-if)# switchport fcrxbbcredit performance-buffers 45
```

Related Commands	Command	Description
	<b>show interface fcip</b>	Displays an interface configuration for a specified FCIP interface.

**switchport initiator id**

# switchport initiator id

To identify the iSCSI initiator, use the **switchport initiator id** command in configuration mode. Use the **no** form of the command to delete the configured switchport information.

**switchport [initiator id ip-address | name ]**

**no switchport [initiator id ip-address | name ]**

<b>Syntax Description</b>	<b>switchport</b> Configures switchport parameters. <b>initiator id</b> Configures the iSCSI initiator ID <b>ip-address</b> Identifies initiators using the IP address. <b>name</b> Identifies initiators using the specified name.
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<b>Defaults</b>	Disabled
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<b>Command Modes</b>	Configuration mode.
----------------------	---------------------

<b>Command History</b>	This command was introduced in Cisco MDS SAN-OS Release 1.1(1).
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<b>Usage Guidelines</b>	Access this command from the <code>switch(config-if) #</code> submode.
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<b>Examples</b>	<pre>switch## config t switch(config)# interface iscsi 2/5 switch(config-if)# switchport initiator id ip-address switch(config-if)# switchport initiator name</pre>
-----------------	---

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show interface fcip</b>	Displays an interface configuration for a specified FCIP interface.

# 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**

<b>Syntax Description</b>	<b>image</b> System auto-sync image
<b>Defaults</b>	Disabled.
<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>	<p>You can synchronize the standby supervisor module software image with the bootflash image using the <b>system auto-sync image</b> command in configuration mode. The current running image and configuration files are synchronized from the active to the standby supervisor module.</p> <p>If the <b>auto-sync</b> option is disabled, the supervisor modules will not synchronize automatically. In this case, enable the <b>auto-sync</b> option before issuing the <b>reload module slot force-dnld</b> command. Once the synchronization is complete, disable this option.</p> <p>If the auto-sync option is enabled and the standby supervisor module is not booting while the supervisor status displays the initializing state, then issue the <b>reload module slot force-dnld</b> command on the standby supervisor module.</p>
<b>Examples</b>	The following example shows how to synchronize the standby supervisor module software image with the bootflash image.

```
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)#

```

**system cores**

# 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**

<b>Syntax Description</b>	<b>slot0</b> Selects destination file system. <b>tftp:</b> Selects destination file system.
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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>	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.
-------------------------	--

<b>Examples</b>	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)#

```

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show system cores</b>	Displays the currently configured scheme for copying cores.

# 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]**

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

<b>Defaults</b>	Enabled
<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>	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.

<b>Examples</b>	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>	

<b>Related Commands</b>	<b>Command</b>	<b>Description</b>
	<b>show system default switchport</b>	Displays default values for switch port attributes.

---

 system hap-reset

## 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
```

# 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**

# 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
```

# 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**

# 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}
```

<b>Syntax Description</b>	<b>ha</b> Enables high availability. <b>warm</b> Enables a warm switchover.
---------------------------	--

<b>Defaults</b>	<b>system switchover ha</b>
-----------------	-----------------------------

<b>Command Modes</b>	EXEC
----------------------	------

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

<b>Usage Guidelines</b>	Perform a switchover when the switch has two supervisor modules functioning in the switch. The <b>system switchover</b> 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).

<b>Examples</b>	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
```

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

# 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**

<b>Syntax Description</b>	<i>bit-mask</i> Specifies the bit mask to change the trace level.
<b>Defaults</b>	None.
<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>	This command is used for debugging purposes.
<b>Examples</b>	The following example shows how to configure the system trace level. <pre>switch# config t switch(config)# system trace bit-mask</pre>

---

 system upgrade-reset

# 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
```

# 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