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## C 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 [“About the CLI Command Modes”](#) section on page 1-3 to determine the appropriate mode for each command. For more information, refer to the *Cisco MDS 9000 Family Configuration Guide*.

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# callhome

To configure the Call Home function, use the **callhome** command.

**callhome**

**Syntax Description** This command has no arguments or keywords.

**Defaults** Disabled.

**Command Modes** Configuration mode.

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

**Usage Guidelines** The Call Home configuration commands are available in the `(config-callhome)` submode.

A Call Home message is used to contact a support person or organization in case an urgent alarm is raised.

Once you have configured the contact information, you must enable the Call Home function. The **enable** command is required for the Call Home function to start operating. When you disable the Call Home function, all input events are ignored.



**Note**

Even if Call Home is disabled, basic information for each Call Home event is sent to syslog.

**Examples** The following example assigns contact information.

```
switch# config terminal
config terminal
switch# snmp-server contact personname@companyname.com
switch(config)# callhome
switch(config-callhome)# email-contact username@company.com
switch(config-callhome)# phone-contact +1-800-123-4567
switch(config-callhome)# streetaddress 1234 Picaboo Street, Any city, Any state, 12345
switch(config-callhome)# switch-priority 0
switch(config-callhome)# customer-id Customer1234
switch(config-callhome)# site-id Site1ManhattanNY
switch(config-callhome)# contract-id Company1234
```

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| Related Commands | Command              | Description  |
|------------------|----------------------|--|
|                  | <b>callhome test</b> | Sends a dummy test message to the configured destination(s). |
|                  | <b>show callhome</b> | Displays configured Call Home information.                   |

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## callhome test

To simulate a CallHome message generation, use the **callhome test** command.

**callhome test [inventory]**

|                           |  |
|---------------------------|--|
| <b>Syntax Description</b> | <b>inventory</b> Sends a dummy CallHome inventory. |
|---------------------------|--|

|                 |       |
|-----------------|-------|
| <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> | You can simulate a message generation by issuing a <b>callhome test</b> command. |
|-------------------------|--|

|                 |  |
|-----------------|--|
| <b>Examples</b> | The following example sends a test message to the configured destination(s): |
|-----------------|--|

```
switch# callhome test
trying to send test callhome message
successfully sent test callhome message
```

The following example sends a test inventory message to the configured destination(s)

```
switch# callhome test inventory
trying to send test callhome message
successfully sent test callhome message
```

|                         |                      |  |
|-------------------------|----------------------|--|
| <b>Related Commands</b> | <b>Command</b>       | <b>Description</b>                         |
|                         | <b>callhome</b>      | Configures Call Home functions.            |
|                         | <b>show callhome</b> | Displays configured Call Home information. |

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## cd

To change the default directory or file system, use the **cd** command.

```
cd { directory | bootflash:[directory] | slot0:[directory] | volatile:[directory] }
```

| Syntax Description |                   |   |
|--------------------|-------------------|---|
|                    | <i>directory</i>  | Name of the directory on the file system.     |
|                    | <b>bootflash:</b> | URI or alias of the bootflash or file system. |
|                    | <b>slot0:</b>     | URI or alias of the slot0 file system.        |
|                    | <b>volatile:</b>  | URI or alias of the volatile file system.     |

**Defaults** The initial default file system is flash:. For platforms that do not have a physical device named flash:, the keyword flash: is aliased to the default Flash device.

If you do not specify a directory on a file system, the default is the root directory on that file system.

**Command Modes** EXEC mode

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

**Usage Guidelines** For all EXEC commands that have an optional file system argument, the system uses the file system specified by the **cd** command when you omit the optional file system argument. For example, the **dir** command, which displays a list of files on a file system, contains an optional file system argument. When you omit this argument, the system lists the files on the file system specified by the **cd** command.

**Examples** The following example sets the default file system to the Flash memory card inserted in slot 0:

```
switch# pwd
bootflash:/
switch# cd slot0:
switch# pwd
slot0:/
```

| Related Commands | Command                  | Description   |
|------------------|--------------------------|---|
|                  | <b>copy</b>              | Copies any file from a source to a destination.                           |
|                  | <b>delete</b>            | Deletes a file on a Flash memory device.                                  |
|                  | <b>dir</b>               | Displays a list of files on a file system.                                |
|                  | <b>pwd</b>               | Displays the current setting of the cd command.                           |
|                  | <b>show file systems</b> | Lists available file systems and their alias prefix names.                |
|                  | <b>undelete</b>          | Recovers a file marked deleted on a Class A or Class B Flash file system. |

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## cdp

Use the **cdp** command to globally configure the Cisco Discovery Protocol parameters. Use the **no** form of this command to revert to factory defaults.

**cdp** {**enable** | **advertise** {**v1** | **v2**} | **holdtime** *holdtime-seconds* | **timer** *timer-seconds*}

**no cdp** {**enable** | **advertise** | **holdtime** *holdtime-seconds* | **timer** *timer-seconds*}

| Syntax Description | enable                  | Enables CDP globally on all interfaces on the switch.   |
|--------------------|-------------------------|---|
|                    | <b>advertise</b>        | Specifies the EXEC command to be executed.  |
|                    | <b>v1</b>               | Specifies CDP version 1.  |
|                    | <b>v2</b>               | Specifies CDP version 2.  |
|                    | <b>holdtime</b>         | Sets the hold time advertised in CDP packets.   |
|                    | <i>holdtime-seconds</i> | Specifies the holdtime in seconds. The default is 180 seconds and the valid range is from 10 to 255 seconds.    |
|                    | <b>timer</b>            | Sets the refresh time interval.   |
|                    | <i>timer-seconds</i>    | Specifies the time interval in seconds. The default is 60 seconds and the valid range is from 5 to 255 seconds. |

### Defaults

CDP is enabled.

The hold time default interval is 180 seconds.

The refresh time interval is 60 seconds.

### Command Modes

Configuration mode.

### Command History

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

### Usage Guidelines

Use the **cdp enable** command to enable the Cisco Discovery Protocol (CDP) feature at the switch level or at the interface level. Use the **no** form of this command to disable this feature. When the interface link is established, CDP is enabled by default

CDP version 1 (v1) and version 2 (v2) are supported in Cisco MDS 9000 Family switches. CDP packets with any other version number are silently discarded when received.

### Examples

The following example disables the CDP protocol on the switch. When CDP is disabled on an interface, one packet is sent to clear out the switch state with each of the receiving devices.

```
switch(config)# no cdp enable
Operation in progress. Please check global parameters
switch(config-console)#
```

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The following example enables (default) the CDP protocol on the switch. When CDP is enabled on an interface, one packet is sent immediately. Subsequent packets are sent at the configured refresh time

```
switch(config)# cdp enable
Operation in progress. Please check global parameters
switch(config)#
```

The following example configures the Gigabit Ethernet interface 8/8 and disables the CDP protocol on this interface. When CDP is disabled on an interface, one packet is sent to clear out the switch state with each of the receiving devices.

```
switch(config)# interface gigbitethernet 8/8
switch(config-if)# no cdp enable
Operation in progress. Please check interface parameters
switch(config-console)#
```

The following example enables (default) the CDP protocol on the selected interface. When CDP is enabled on this interface, one packet is sent immediately. Subsequent packets are sent at the configured refresh time.

```
switch(config-if)# cdp enable
Operation in progress. Please check interface parameters
switch(config)#
```

The following example globally configures the refresh time interval for the CDP protocol in seconds. The default is 60 seconds and the valid range is from 5 to 255 seconds.

```
switch# config terminal
switch(config)# cdp timer 100
switch(config)#
```

The following example globally configures the hold time advertised in CDP packet in seconds. The default is 180 seconds and the valid range is from 10 to 255 seconds.

```
switch# config terminal
switch(config)# cdp holdtime 200
switch(config)#
```

The following example globally configures the CDP version. The default is version 2 (v2). The valid options are v1 and v2

```
switch# config terminal
switch(config)# cdp advertise v1
switch(config)#
```

---

**Related Commands**

| Command          | Description   |
|------------------|---|
| <b>clear cdp</b> | Clears global or interface-specific CDP configurations. |
| <b>show cdp</b>  | Displays configured CDP settings and parameters.        |

---

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## cfs distribute

To enable or disable Cisco Fabric Services (CFS) distribution on the switch, use the **cfs distribute** command in configuration mode. To disable this feature, use the **no** form of the command.

**cfs distribute**

**no cfs distribute**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** CFS distribution is enabled.

**Command Modes** Configuration mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.1(1a) | This command was introduced. |

**Usage Guidelines** By default CFS is in the distribute mode. In the distribute mode, fabric wide distribution is enabled. Applications can distribute data/configuration to all CFS-capable switches in the fabric where the application exists. This is the normal mode of operation.

If CFS distribution is disabled, using the **no cfs distribute** command causes the following to occur:

- CFS and the applications using CFS on the switch are isolated from the rest of the fabric even though there is physical connectivity.
- All CFS operations are restricted to the isolated switch.
- All the CFS commands continue to work similar to the case of a physically isolated switch.
- Other CFS operations (for example, lock, commit, and abort) initiated at other switches do not have any effect at the isolated switch.

**Examples** The following example shows how to disable CFS distribution.

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# no cfs distribute
```

The following example shows how to reenab CFS distribution.

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# cfs distribute
```



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**Related Commands**

| <b>Command</b>         | <b>Description</b>  |
|------------------------|---|
| <b>show cfs status</b> | Displays whether CFS distribution is enabled or disabled. |

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## channel mode active

To enable channel mode on a PortChannel interface, use the **channel mode active** command. To disable this feature, use the **no** form of the command.

**channel mode active**

**no channel mode**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** Enabled.

**Command Modes** Interface configuration submode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** This command determines the protocol behavior for all the member ports in the channel group associated with the port channel interface.

**Examples** The following example shows how to disable channel mode on a PortChannel interface.

```
switch# config terminal
switch(config)# interface port-channel 10
switch(config-if)# no channel mode active
```

| Related Commands | Command                            | Description                                 |
|------------------|------------------------------------|---|
|                  | <b>show interface port-channel</b> | Displays PortChannel interface information. |

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## cimservr

Use the **cimservr** command to configure the Common Information Models (CIM) parameters. Use the **no** form of this command to revert to factory defaults.

### cimservr

```
{certificate {bootflash:filename | slot0:filename | volatile:filename} |
clearcertificate filename |
enable |
enablehttp |
enablehttps}
```

### no cimservr

```
{certificate {bootflash:filename | slot0:filename | volatile:filename} |
clearcertificate filename
enable
enablehttp
enablehttps}
```

| Syntax Description      |  |  |
|-------------------------|--|--|
| <b>certificate</b>      | Installs the Secure Socket Layer (SSL) certificate                   |  |
| <b>bootflash:</b>       | Specifies the location for internal bootflash memory.                |  |
| <b>slot0:</b>           | Specifies the location for the CompactFlash memory or PCMCIA card.   |  |
| <b>volatile:</b>        | Specifies the location for the volatile file system.                 |  |
| <i>filename</i>         | The name of the license file with a .pem extension.                  |  |
| <b>clearcertificate</b> | Clears a previously-installed SSL certificate.                       |  |
| <b>enable</b>           | Enables and starts the CIM server.                                   |  |
| <b>enablehttp</b>       | Enables the HTTP (non-secure) protocol for the CIM server—(default). |  |
| <b>enablehttps</b>      | Enables the HTTPS (secure) protocol for the CIM server.              |  |

**Defaults** None.

**Command Modes** Configuration mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**Usage Guidelines** A CIM client is required to access the CIM server. The client can be any client that supports CIM.

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### Examples

The following example installs a Secure Socket Layer (SSL) certificate specified in the file named with a .pem extension.

```
switch# config terminal
switch(config)# cimservers certificateName bootflash:simservers.pem
```

The following example clears the specified SSL certificate.

```
switch(config)# cimservers clearCertificateName bootflash:simservers.pem
```

The following example enables HTTPS (secure protocol).

```
switch(config)# cimservers enablehttps
```

The following example disables HTTPS (default).

```
switch(config)# no cimservers enablehttps
```

The following example

```
switch(config)# cimservers enable
```

The following example disables the CIM server (default).

```
switch(config)# no cimservers enable
```

The following example enables HTTP and reverts to the switch default.

```
switch(config)# cimservers enablehttp
```

The following example disables HTTP and reverts to the switch default.

```
switch(config)# no cimservers enablehttp
```

### Related Commands

| Command                | Description                                      |
|------------------------|--|
| <b>show cimservers</b> | Displays configured CIM settings and parameters. |

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## class

To select a QoS policy map class for configuration, use the **class** command in QoS policy map configuration submode. To disable this feature, use the **no** form of the command.

```
class class-map-name
```

```
no class class-map-name
```

|                           |                       |  |
|---------------------------|-----------------------|--|
| <b>Syntax Description</b> | <i>class-map-name</i> | Selects the QoS policy class map to configure. |
|---------------------------|-----------------------|--|

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

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Command Modes</b> | QoS policy map configuration submode |
|----------------------|--------------------------------------|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | 1.3(1)         | This command was introduced. |

|                         |  |
|-------------------------|--|
| <b>Usage Guidelines</b> | <p>Before you can configure a QoS policy map class you must complete the following:</p> <ul style="list-style-type: none"> <li>• Enable the QoS data traffic feature using the <b>qos enable</b> command.</li> <li>• Configure a QoS class map using the <b>qos class-map</b> command.</li> <li>• Configure a QoS policy map using the <b>qos policy-map</b> command.</li> </ul> <p>After you configure the QoS policy map class, you can configure the Differentiated Services Code Point (DSCP) and priority for frames matching this class map.</p> |
|-------------------------|--|

|                 |  |
|-----------------|--|
| <b>Examples</b> | The following example shows how to select a QoS policy map class to configure. |
|-----------------|--|

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# qos enable
switch(config)# qos class-map class-map1
switch(config)# qos policy-map policyMap1
→ switch(config-pmap)# class class-map1
switch(config-pmap-c)#
```

| <b>Related Commands</b> | <b>Command</b>        | <b>Description</b>                                  |
|-------------------------|-----------------------|---|
|                         | <b>qos enable</b>     | Enables the QoS data traffic feature on the switch. |
|                         | <b>qos class-map</b>  | Configures a QoS class map.                         |
|                         | <b>qos policy-map</b> | Configures a QoS policy map.                        |
|                         | <b>dscp</b>           | Configures the DSCP in the QoS policy map class.    |

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| <b>Command</b>  | <b>Description</b>                                   |
|-----------------|--|
| <b>priority</b> | Configures the priority in the QoS policy map class. |
| <b>show qos</b> | Displays the current QoS settings.                   |

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## clear accounting log

To clear the accounting log, use the **clear accounting log** command.

**clear accounting log**

---

**Syntax Description** This command has no other arguments or keywords.

---

**Defaults** None.

---

**Command Modes** EXEC mode.

---

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | 2.0(1b)        | This command was introduced. |

---

---

**Usage Guidelines** None.

---

**Examples** The following example clears the accounting log.

```
switch# clear accounting session
```

---

| <b>Related Commands</b> | <b>Command</b>             | <b>Description</b>                    |
|-------------------------|----------------------------|---------------------------------------|
|                         | <b>show accounting log</b> | Displays the accounting log contents. |

---

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## clear arp-cache

To clear the ARP cache table entries, use the **clear arp-cache** command in EXEC mode.

**clear arp-cache**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** The ARP table is empty by default.

---

**Command Modes** EXEC mode.

---

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

---

**Examples** The following example shows how to clear the arp-cache table entries.

```
switch# clear arp-cache
```

---

| Related Commands | Command  | Description   |
|------------------|----------|---|
|                  | show arp | Displays Address Resolution Protocol (ARP) entries. |

---



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## clear callhome session

To clear Call Home Cisco Fabric Services (CFS) session configuration and locks, use the **clear callhome session** command.

**clear callhome session**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear the Call Home session configuration and locks.

```
switch# clear callhome session
```

| Related Commands | Command       | Description                     |
|------------------|---------------|---------------------------------|
|                  | show callhome | Displays Call Home information. |

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## clear cdp

Use the **clear cdp** command to delete global or interface-specific CDP configurations.

```
clear cdp {counters | table} [interface {gigabitethernet slot/port | mgmt 0}]
```

### Syntax Description

|                        |   |
|------------------------|---|
| <b>counters</b>        | Enables CDP on globally or on a per-interfaces basis.               |
| <b>table</b>           | Specifies the EXEC command to be executed.                          |
| <b>interface</b>       | Displays CDP parameters for an interface.                           |
| <b>gigabitethernet</b> | Specifies the Gigabit Ethernet interface.                           |
| <i>slot/port</i>       | Specifies the slot number and port number separated by a slash (/). |
| <b>mgmt 0</b>          | Specifies the Ethernet management interface.                        |

### Defaults

None.

### Command Modes

Configuration mode.

### Command History

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

### Usage Guidelines

You can issue this command for a specified interface or for all interfaces (management and Gigabit Ethernet interfaces)

### Examples

The following example clears CDP traffic counters for all interfaces.

```
switch# clear cdp counters
switch#
```

The following example clears CDP entries for the specified Gigabit Ethernet interface.

```
switch# clear cdp table interface gigabitethernet 4/1
switch#
```

### Related Commands

| Command         | Description  |
|-----------------|--|
| <b>cdp</b>      | Configures global or interface-specific CDP settings and parameters. |
| <b>show cdp</b> | Displays configured CDP settings and parameters.                     |

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## clear cores

To clear all core dumps for the switch, use the **clear cores** command in EXEC mode.

**clear cores**

---

**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** The system software keeps the last few cores per service and per slot and clears all other cores present on the active supervisor module.

---

**Examples** The following example shows how to clear all core dumps for the switch.

```
switch# clear cores
```

---

| <b>Related Commands</b> | <b>Command</b>    | <b>Description</b>                       |
|-------------------------|-------------------|--|
|                         | <b>show cores</b> | Displays core dumps that have been made. |

---

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## clear counters (EXEC mode)

To clear the interface counters, use the **clear counters** command in EXEC mode.

```
clear counters {all | interface {fc | mgmt | port-channel | sup-fc | vsan} number}
```

| Syntax Description |                  |   |
|--------------------|------------------|---|
|                    | <b>all</b>       | Clears all interface counters.  |
|                    | <b>interface</b> | Clears interface counters for the specified interface.                                  |
|                    | <b>type</b>      | Specifies the interface type. See the Keywords table in the “Usage Guidelines” section. |
|                    | <i>number</i>    | Specifies the number of the slot or interface being cleared.                            |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** The following table lists the keywords and number ranges for the **clear counters** interface types:

| Keyword         | Interface Type   | Number                     |
|-----------------|------------------|----------------------------|
| fc              | Fibre Channel    | 1- 2 or 1 - 9 (slot)       |
| gigabitethernet | Gigabit Ethernet | 1- 2 or 1 - 9 (slot)       |
| mgmt            | Management       | 0-0 (management interface) |
| port-channel    | PortChannel      | 1-128 (PortChannel)        |
| sup-fc          | Inband           | 0-0 (Inband interface)     |
| vsan            | VSAN             | 1- 4093 (VSAN ID)          |

This command clears counter displayed in the **show interface** command output.

**Examples** The following example shows how to clear counters for a VSAN interface.

```
switch# clear counters interface vsan 13
```

| Related Commands | Command               | Description                     |
|------------------|-----------------------|---------------------------------|
|                  | <b>show interface</b> | Displays interface information. |

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## clear counters (SAN extension N port configuration mode)

To clear SAN extension tuner N port counters, use the **clear counters** command.

**clear counters**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** SAN extension N port configuration submode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear SAN extension tuner N port counters.

```
switch# san-ext-tuner
switch(san-ext)# nwwn 10:00:00:00:00:00:00
switch(san-ext)# nport pwn 12:00:00:00:00:00:00:56 vsan 13 interface gigabitethernet 1/2
switch(san-ext-nport)# clear counters
```

| Related Commands | Command                   | Description                               |
|------------------|---------------------------|---|
|                  | <b>show san-ext-tuner</b> | Displays SAN extension tuner information. |

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## clear crypto ike domain ipsec sa

To clear the IKE tunnels for IPsec, use the **clear crypto ike domain ipsec sa** command.

```
clear crypto ike domain ipsec sa [tunnel-id]
```

|                           |                  |  |
|---------------------------|------------------|--|
| <b>Syntax Description</b> | <i>tunnel-id</i> | Specifies a tunnel ID. The range is 1 to 2147483647. |
|---------------------------|------------------|--|

|                 |       |  |
|-----------------|-------|--|
| <b>Defaults</b> | None. |  |
|-----------------|-------|--|

|                      |            |  |
|----------------------|------------|--|
| <b>Command Modes</b> | EXEC mode. |  |
|----------------------|------------|--|

| <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.<br>If the tunnel ID is not specified, all IKE tunnels are cleared. |  |
|-------------------------|--|--|

|                 |  |  |
|-----------------|--|--|
| <b>Examples</b> | The following example shows how to clear all IKE tunnels.<br>switch# <b>clear crypto ike domain ipsec sa</b> |  |
|-----------------|--|--|

| <b>Related Commands</b> | <b>Command</b>                      | <b>Description</b>                             |
|-------------------------|-------------------------------------|--|
|                         | <b>crypto ike domain ipsec</b>      | Configures IKE information.                    |
|                         | <b>crypto ike enable</b>            | Enables the IKE protocol.                      |
|                         | <b>show crypto ike domain ipsec</b> | Displays IKE information for the IPsec domain. |

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## clear crypto sa domain ipsec

To clear the security associations for IPsec, use the **clear crypto sa domain ipsec** command.

```
clear crypto sa domain ipsec interface gigabitethernet slot/port {inbound | outbound}
sa sa-index
```

| Syntax Description                                   |   |  |
|--|---|--|
| <b>interface gigabitethernet</b><br><i>slot/port</i> | Specifies the Gigabit Ethernet interface.                               |  |
| <b>inbound</b>                                       | Specifies clearing inbound associations.                                |  |
| <b>outbound</b>                                      | Specifies clearing output associations.                                 |  |
| <b>sa sa-index</b>                                   | Specifies the security association index. The range is 1 to 2147483647. |  |

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** To clear security associations, IPsec must be enabled using the **crypto ipsec enable** command.

**Examples** The following example shows how to clear a security association for an interface.

```
switch# clear crypto sa domain ipsec interface gigabitethernet 1/2 inbound sa 1
```

| Related Commands | Command                             | Description   |
|------------------|-------------------------------------|---|
|                  | <b>show crypto sad domain ipsec</b> | Displays IPsec security association database information. |

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## clear debug-logfile

To delete the debug logfile, use the **clear debug-logfile** command in EXEC mode.

```
clear debug-logfile filename
```

|                           |                 |   |
|---------------------------|-----------------|---|
| <b>Syntax Description</b> | <i>filename</i> | The name (restricted to 80 characters) of the log file to be cleared. The maximum size of the log file is 1024 bytes. |
|---------------------------|-----------------|---|

|                 |       |
|-----------------|-------|
| <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>Examples</b> | The following example shows how to clear the debug logfile. |
|-----------------|---|

```
switch# clear debug-logfile debuglog
```

|                         |                           |                                |
|-------------------------|---------------------------|--------------------------------|
| <b>Related Commands</b> | <b>Command</b>            | <b>Description</b>             |
|                         | <b>show debug logfilw</b> | Displays the logfile contents. |



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## clear device-alias

To clear device alias information, use the **clear device-alias** command.

```
clear device-alias {session | statistics}
```

| Syntax Description | session    | Clears session information.     |
|--------------------|------------|---------------------------------|
|                    | statistics | Clears device alias statistics. |

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear the device alias session.

```
switch# clear device-alias session
```

| Related Commands | Command           | Description                                 |
|------------------|-------------------|---|
|                  | show device-alias | Displays device alias database information. |

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## clear dpvm

To clear Dynamic Port VSAN Membership (DPVM) information, use the **clear dpvm** command.

```
clear dpvm { auto-learn [pwwn pwwn-id] | session }
```

| Syntax Description | Parameter                  | Description   |
|--------------------|----------------------------|---|
|                    | <b>auto-learn</b>          | Clears automatically learned (autolearn) DPVM entries.  |
|                    | <b>pwwn</b> <i>pwwn-id</i> | Specifies the pWWN ID. The format is <i>hh:hh:hh:hh:hh:hh:hh:hh</i> , where <i>h</i> is a hexadecimal number. |
|                    | <b>session</b>             | Clears the DPVM session and locks.  |

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** To use this command, DVPM must be enabled using the **dpvm enable** command.

**Examples** The following example shows how to clear a single autolearned entry.

```
switch# clear dpvm auto-learn pwwn 21:00:00:20:37:9c:48:e5
```

The following example shows how to clear all autolearn entries.

```
switch# clear dpvm auto-learn
```

The following example shows how to clear a session.

```
switch# clear dpvm session
```

| Related Commands | Command            | Description                         |
|------------------|--------------------|-------------------------------------|
|                  | <b>dpvm enable</b> | Enables DPVM.                       |
|                  | <b>show dpvm</b>   | Displays DPVM database information. |

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## clear fabric-binding statistics

To clear fabric binding statistics in a FICON enabled VSAN, use the **clear fabric-binding statistics** command in EXEC mode.

**clear fabric-binding statistics vsan** *vsan-id*

| <b>Syntax Description</b>                  | <b>vsan</b> <i>vsan-id</i> Specifies the FICON-enabled VSAN. The ID of the VSAN is from 1 to 4093.  |         |             |  |  |
|--|---|---------|-------------|--|--|
| <b>Defaults</b>                            | None  |         |             |  |  |
| <b>Command Modes</b>                       | EXEC mode   |         |             |  |  |
| <b>Command History</b>                     | This command was introduced in Cisco MDS SAN-OS Release 1.3(1).   |         |             |  |  |
| <b>Usage Guidelines</b>                    | None.   |         |             |  |  |
| <b>Examples</b>                            | The following example clears existing fabric binding statistics in VSAN 1.<br><pre>switch# clear fabric-binding statistics vsan 1</pre>   |         |             |  |  |
| <b>Related Commands</b>                    | <table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>show fabric-binding efmd statistics</b></td> <td>Displays existing fabric binding statistics information.</td> </tr> </tbody> </table> | Command | Description | <b>show fabric-binding efmd statistics</b> | Displays existing fabric binding statistics information. |
| Command                                    | Description   |         |             |  |  |
| <b>show fabric-binding efmd statistics</b> | Displays existing fabric binding statistics information.  |         |             |  |  |

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## clear fcanalyzer

To clear the entire list of configured hosts for remote capture, use the **clear fcanalyzer** command in EXEC mode.

**clear fcanalyzer**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** None.

---

**Command Modes** EXEC.

---

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

---

**Usage Guidelines** This command clears only the list of configured hosts. Existing connections are not terminated.

---

**Examples** The following example shows how to clear the entire list of configured hosts for remote capture.

```
switch# clear fcanalyzer
```

---

| Related Commands | Command                | Description   |
|------------------|------------------------|---|
|                  | <b>show fcanalyzer</b> | Displays the list of hosts configured for a remote capture. |

---

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## clear fcflow stats

To clear Fibre Channel flow statistics, use the **clear fcflow stats** command in EXEC mode.

```
clear fcflow stats [aggregated] module module-number index flow-number
```

| Syntax Description |                      |  |
|--------------------|----------------------|--|
|                    | <b>aggregated</b>    | Clears the Fibre Channel flow aggregated statistics.               |
|                    | <b>module</b>        | Clears the statistics for a specified module.                      |
|                    | <i>module-number</i> | Specifies the module number.                                       |
|                    | <b>index</b>         | Clears the Fibre Channel flow counters for a specified flow index. |
|                    | <i>flow-number</i>   | Specifies the flow index number.                                   |

**Defaults** None.

**Command Modes** EXEC.

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

**Examples** The following example shows how to clear aggregated Fibre Channel flow statistics for flow index 1 of module 2.

```
switch(config)# # clear fcflow stats aggregated module 2 index 1
```

| Related Commands | Command            | Description                     |
|------------------|--------------------|---------------------------------|
|                  | <b>show fcflow</b> | Displays the fcflow statistics. |

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## clear fcns statistics

To clear the name server statistics, use the **clear fcns statistics** command in EXEC mode.

```
clear fcns statistics vsan vsan-id
```

| Syntax Description | vsan vsan-id | FCS statistics are to be cleared for a specified VSAN ranging from 1 to 4093. |
|--------------------|--------------|---|
|--------------------|--------------|---|

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

| Command Modes | EXEC. |
|---------------|-------|
|---------------|-------|

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

| Examples | The following example shows how to clear the name server statistics. |
|----------|--|
|----------|--|

```
switch# show fcns statistics

Name server statistics for vsan 1
=====
registration requests received = 0
deregistration requests received = 0
queries received = 23
queries sent = 27
reject responses sent = 23
RSCNs received = 0
RSCNs sent = 0

switch# clear fcns statistics vsan 1

switch# show fcns statistics

Name server statistics for vsan 1
=====
registration requests received = 0
deregistration requests received = 0
queries received = 0
queries sent = 0
reject responses sent = 0
RSCNs received = 0
RSCNs sent = 0
switch#
```

| Related Commands | Command                     | Description                          |
|------------------|-----------------------------|--------------------------------------|
|                  | <b>show fcns statistics</b> | Displays the name server statistics. |

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## clear fcs statistics

To clear the fabric configuration server statistics, use the **clear fcs statistics** command in EXEC mode.

```
clear fcs statistics vsan vsan-id
```

|                           |                            |   |
|---------------------------|----------------------------|---|
| <b>Syntax Description</b> | <b>vsan</b> <i>vsan-id</i> | FCS statistics are to be cleared for a specified VSAN ranging from 1 to 4093. |
|---------------------------|----------------------------|---|

|                 |       |
|-----------------|-------|
| <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>Examples</b> | The following example shows how to clear the fabric configuration server statistics for VSAN 10.<br><pre>switch# <b>clear fcs statistics vsan 10</b></pre> |
|-----------------|--|

|                         |                            |  |
|-------------------------|----------------------------|--|
| <b>Related Commands</b> | <b>Command</b>             | <b>Description</b>   |
|                         | <b>show fcs statistics</b> | Displays the fabric configuration server statistics information. |

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## clear fctimer session

To clear fctimer Cisco Fabric Services (CFS) session configuration and locks, use the **clear fctimer session** command.

### clear fctimer session

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear fctimer session.

```
switch# clear fctimer session
```

| Related Commands | Command      | Description                   |
|------------------|--------------|-------------------------------|
|                  | show fctimer | Displays fctimer information. |



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## clear ficon

Use the **clear ficon** command in EXEC mode to clear the FICON information for the specified VSAN.

```
clear ficon vsan vsan-id [allegiance | timestamp]
```

| Syntax Description | Parameter                  | Description   |
|--------------------|----------------------------|---|
|                    | <b>vsan</b> <i>vsan-id</i> | Specifies the FICON-enabled VSAN. The ID of the VSAN is from 1 to 4093. |
|                    | <b>allegiance</b>          | Clears FICON device allegiance.   |
|                    | <b>timestamp</b>           | Clears FICON VSAN specific timestamp.                                   |

**Defaults** None.

**Command Modes** EXEC mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**Usage Guidelines** The **clear ficon vsan** *vsan-id* **allegiance** command aborts the currently-executing session.

**Examples** The following example clears the current device allegiance for VSAN 1.

```
switch# clear ficon vsan 1 allegiance
```

The following example clears the VSAN clock for VSAN 20.

```
switch# clear ficon vsan 20 timestamp
```

| Related Commands | Command           | Description                        |
|------------------|-------------------|------------------------------------|
|                  | <b>show ficon</b> | Displays configured FICON details. |

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## clear fspf counters

To clear the Fabric Shortest Path First statistics, use the **clear fspf counters** command in EXEC mode.

```
clear fspf counters vsan vsan-id [interface type]
```

| Syntax Description           |  |  |
|------------------------------|--|--|
| <b>vsan</b>                  |  | Indicates that the counters are to be cleared for a VSAN.  |
| <i>vsan-id</i>               |  | The ID of the VSAN is from 1 to 4093.  |
| <b>interface</b> <i>type</i> |  | (Optional). The counters are to be cleared for an interface. The interface types are fc for Fibre Channel, and port-channel for PortChannel. |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** If the interface is not specified, then all of the counters of a VSAN are cleared. If the interface is specified, then the counters of the specific interface are cleared.

**Examples** The following example clears the FSPF t statistics on VSAN 1.

```
switch# clear fspf counters vsan 1
```

The following example clears FSPF statistics specific to the Fibre Channel interface in VSAN 1, Slot 9 Port 32.

```
switch# clear fspf counters vsan 1 interface fc 9/32
```

| Related Commands | Command          | Description   |
|------------------|------------------|---|
|                  | <b>show fspf</b> | Displays global FSPF information for a specific VSAN. |

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## clear ip access-list counters

To clear IP access list counters, use the **clear ip access-list counters** command in EXEC mode.

**clear ip access-list counters** *list-name*

| <b>Syntax Description</b>  | <i>list-name</i> Specifies the IP access list name (maximum 64 characters).   |         |             |                            |                                      |
|----------------------------|---|---------|-------------|----------------------------|--------------------------------------|
| <b>Defaults</b>            | None.   |         |             |                            |                                      |
| <b>Command Modes</b>       | EXEC.   |         |             |                            |                                      |
| <b>Command History</b>     | This command was introduced in Cisco MDS SAN-OS Release 1.1(1).   |         |             |                            |                                      |
| <b>Examples</b>            | The following example clears the counters for an IP access list.<br><pre>switch# clear ip access-list counters adminlist</pre>  |         |             |                            |                                      |
| <b>Related Commands</b>    | <table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>show ip access-list</b></td> <td>Displays IP access list information.</td> </tr> </tbody> </table> | Command | Description | <b>show ip access-list</b> | Displays IP access list information. |
| Command                    | Description   |         |             |                            |                                      |
| <b>show ip access-list</b> | Displays IP access list information.  |         |             |                            |                                      |

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## clear ips arp

To clear ARP caches, use the **clear ips arp** command in EXEC mode.

```
clear ips arp {address ip-address| interface gigabitethernet module-number}
```

| Syntax Description | address                                    | Clears fcfow aggregated statistics.                        |
|--------------------|--|--|
|                    | <i>ip-address</i>                          | Enters the peer IP address.                                |
|                    | <b>interface</b><br><b>gigabitethernet</b> | Specifies the Gigabit Ethernet interface.                  |
|                    | <i>module-number</i>                       | Specifies slot and port of the Gigabit Ethernet interface. |

**Defaults** None.

**Command Modes** EXEC.

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

**Examples** The ARP cache can be cleared in two ways: clearing just one entry or clearing all entries in the ARP cache.

The following example clears one ARP cache entry:

```
switch# clear ips arp address 10.2.2.2 interface gigabitethernet 8/7
arp clear successful
```

The following example clears all ARP cache entries

```
switch# clear ips arp interface gigabitethernet 8/7
arp clear successful
```

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## clear ivr fcdomain database

To clear the IVR fcdomain database, use the **clear ivr fcdomain database** command in EXEC mode.

```
clear ivr fcdomain database
```

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** None.

---

**Command Modes** EXEC mode.

---

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.1(2)  | This command was introduced. |

---

---

**Usage Guidelines** None.

---

**Examples** The following example clears all IVR fcdomain database information.

```
switch# clear ivr fcdomain database
```

---

| Related Commands | Command                    | Description                                       |
|------------------|----------------------------|---|
|                  | show ivr fcdomain database | Displays IVR fcdomain database entry information. |

---

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## clear ivr zone database

To clear the Inter-VSAN Routing (IVR) zone database, use the **clear ivr zone database** command in EXEC mode.

**clear ivr zone database**

---

**Syntax Description** This command has no arguments or keywords.

---

**Defaults** None.

---

**Command Modes** EXEC.

---

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

---

**Examples** The following example clears all configured IVZ information.

```
switch# clear ivr zone database
```

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## clear license

To uninstall a license, use the **clear license** command in EXEC mode.

**clear license** *filename*

|                           |                 |   |
|---------------------------|-----------------|---|
| <b>Syntax Description</b> | <i>filename</i> | Specifies the license file to be uninstalled. |
|---------------------------|-----------------|---|

|                 |       |
|-----------------|-------|
| <b>Defaults</b> | None. |
|-----------------|-------|

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

|                        |   |
|------------------------|---|
| <b>Command History</b> | This command was modified in Cisco MDS SAN-OS Release 1.3(2). |
|------------------------|---|

|                 |  |
|-----------------|--|
| <b>Examples</b> | The following example clears a specific license. |
|-----------------|--|

```
switch# clear license Ficon.lic
Clearing license Ficon.lic:
SERVER this_host ANY
VENDOR cisco
# An example fcports license
INCREMENT SAN_EXTN_OVER_IP cisco 1.000 permanent 1 HOSTID=VDH=ABCD \
    NOTICE=<LicFileID>san_extn2.lic</LicFileID><LicLineID>1</LicLineID> \
    SIGN=67CB2A8CCAC2

Do you want to continue? (y/n) y
Clearing license ..done
switch#
```

|                         |                |                               |
|-------------------------|----------------|-------------------------------|
| <b>Related Commands</b> | <b>Command</b> | <b>Description</b>            |
|                         | show license   | Displays license information. |

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## clear line

To clear VTY sessions, use the **clear line** command in EXEC mode.

**clear line** *vtty-name*

| Syntax Description |  |
|--------------------|--|
|                    | <i>vtty-name</i> Specifies the VTY name (maximum 64 characters). |

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

| Command Modes | EXEC. |
|---------------|-------|
|---------------|-------|

| Command History | This command was introduced in Cisco MDS SAN-OS Release 1.2(1). |
|-----------------|---|
|-----------------|---|

| Examples | The following example clears one ARP cache entry: |
|----------|---|
|----------|---|

```
switch# clear line Aux
arp clear successful
```

| Related Commands | Command   | Description                |
|------------------|-----------|----------------------------|
|                  | show line | Displays line information. |



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## clear logging

To delete the SYSLOG information, use the **clear logging** command in EXEC mode.

```
clear logging {logfile | nvram}
```

| Syntax Description |                |                           |
|--------------------|----------------|---------------------------|
|                    | <b>logfile</b> | Clears log file messages. |
|                    | <b>nvram</b>   | Clears NVRAM logs.        |

**Defaults** None.

**Command Modes** EXEC.

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

**Examples** The following example shows how to clear the debug logfile.

```
switch# clear logging logfile
```

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

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## clear ntp

To clear Network Time Protocol (NTP) information, use the **clear ntp** command in EXEC mode.

```
clear ntp {session | statistics {all-peers | io | local | memory}}
```

| Syntax Description |                   |   |
|--------------------|-------------------|---|
|                    | <b>session</b>    | Clears NTP CFS session configuration and locks. |
|                    | <b>statistics</b> | Clears NTP statistics.                          |
|                    | <b>all-peers</b>  | Clears I/O statistics for all peers.            |
|                    | <b>io</b>         | Clears I/O statistics for I/O devices.          |
|                    | <b>local</b>      | Clears I/O statistics for local devices.        |
|                    | <b>memory</b>     | Clears I/O statistics for memory.               |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** None mode.

**Examples** The following example shows how to clear NTP statistics for all peers.

```
switch# clear ntp statistics all-peers
```

The following example shows how to clear NTP statistics for I/O devices.

```
switch# clear ntp statistics io
```

The following example shows how to clear NTP statistics for local devices.

```
switch# clear ntp statistics local
```

The following example shows how to clear NTP statistics for memory.

```
switch# clear ntp statistics memory
```

| Related Commands | Command         | Description   |
|------------------|-----------------|---|
|                  | <b>show ntp</b> | Displays the configured server and peer associations. |

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## clear port-security

To clear the port security information on the switch, use the **clear port-security** command in EXEC mode.

```
clear port-security {database auto-learn {interface fc slot/port | port-channel port} | session |
statistics} vsan vsan-id
```

| Syntax Description            |  |  |
|-------------------------------|--|--|
| <b>database</b>               |  | Clears the port security active configuration database.            |
| <b>session</b>                |  | Clears the port security CFS configuration session and locks.      |
| <b>statistics</b>             |  | Clears the port security counters.                                 |
| <b>auto-learn</b>             |  | Clears the auto-learned entries for a specified interface or VSAN. |
| <b>interface fc slot/port</b> |  | Clears entries for a specified interface.                          |
| <b>port-channel port</b>      |  | Clears entries for a specified PortChannel. The range is 1 to 128. |
| <b>vsan vsan-id</b>           |  | Clears entries for a specified VSAN ID. The range is 1 to 4093.    |

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                     |
|-----------------|---------|----------------------------------|
|                 | 1.2(1)  | This command was introduced.     |
|                 | 2.0(1b) | Added the <b>session</b> option. |

**Usage Guidelines** The active database is read-only and **clear port-security database** command can be used when resolving conflicts.

**Examples** The following example clears all existing statistics from the port security database for a specified VSAN.

```
switch# clear port-security statistics vsan 1
```

The following example clears learnt entries in the active database for a specified interface within a VSAN.

```
switch# clear port-security database auto-learn interface fc1/1 vsan 1
```

The following example clears learnt entries in the active database up to for the entire VSAN.

```
switch# clear port-security database auto-learn vsan 1
```

**clear port-security**

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**Related Commands**

| <b>Command</b>            | <b>Description</b>                                 |
|---------------------------|--|
| <b>show port-security</b> | Displays the configured port security information. |

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## clear processes log

To clear the log files on the switch, use the **clear processes log** command in EXEC mode.

```
clear processes log {all | pid pid-number}
```

| Syntax Description | all               | Description   |
|--------------------|-------------------|---|
|                    | <b>all</b>        | Deletes all of the log files.                                 |
|                    | <b>pid</b>        | Deletes the log files of a specific process.                  |
|                    | <i>pid-number</i> | Specifies the process ID, which must be from 0 to 2147483647. |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** None.

**Examples** The following examples show how to clear all of the log files on the switch.

```
switch# clear processes log all
```

| Related Commands | Command               | Description  |
|------------------|-----------------------|--|
|                  | <b>show processes</b> | Displays the detailed running or log information of processes or high availability applications. |

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## clear qos statistics

To clear the quality of services statistics counters, use the **clear qos statistics** command in EXEC mode.

```
clear qos statistics
```

---

**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** None.

---

**Examples** The following examples shows how to clear the quality of service counters.

```
switch# clear qos statistics
```

---

| Related Commands | Command                    | Description  |
|------------------|----------------------------|--|
|                  | <b>show qos statistics</b> | Displays the current QoS settings, along with a number of frames marked high priority. |

---

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## clear radius session

To clear RADIUS Cisco Fabric Services (CFS) session configuration and locks, use the **clear radius session** command.

**clear radius session**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear RADIUS session.

```
switch# clear radius session
```

| Related Commands | Command     | Description  |
|------------------|-------------|--|
|                  | show radius | Displays RADIUS CFS distribution status and other details. |

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## clear rlr

To clear the Registered Link Incident Report (RLIR), use the **clear rlr** command in EXEC mode.

```
clear rlr {history | recent {interface fc slot/port | portnumber port-number} |
          statistics vsan vsan-id}
```

| Syntax Description            |  |  |
|-------------------------------|--|--|
| <b>history</b>                |  | Clears RLIR link incident history.                                     |
| <b>recent</b>                 |  | Clears recent link incidents.  |
| <b>interface fc slot/port</b> |  | Clears entries for a specified interface.                              |
| <b>portnumber port-number</b> |  | Displays the port number for the link incidents.                       |
| <b>statistics</b>             |  | Clears RLIR statistics.  |
| <b>vsan vsan-id</b>           |  | Specifies the VSNA ID for which the RLIR statistics are to be cleared. |

**Defaults** None.

**Command Modes** EXEC mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**Usage Guidelines** None.

**Examples** The following example clears all existing statistics for a specified VSAN.

```
switch# clear rlr statistics vsan 1
```

The following example clears the link incident history.

```
switch# clear rlr history
```

The following example clears recent RLIR information for a specified interface.

```
switch# clear rlr recent interface fc 1/2
```

The following example clears recent RLIR information for a specified port number.

```
switch# clear rlr recent portnumber 16
```

| Related Commands | Command          | Description                |
|------------------|------------------|----------------------------|
|                  | <b>show rscn</b> | Displays RSCN information. |



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## clear role session

To clear authentication role Cisco Fabric Services (CFS) session configuration and locks, use the **clear role session** command.

**clear role session**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** None.

**Examples** The following example shows how to clear authentication role CFS session.

```
switch# clear role session
```

| Related Commands | Command   | Description                              |
|------------------|-----------|--|
|                  | show role | Displays role configuration information. |

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## clear rscn statistics

To clear the registered state change notification statistics for a specified VSAN, use the **clear rscn statistics** command in EXEC mode.

```
clear rscn statistics vsan vsan-id
```

### Syntax Description

|                       |  |
|-----------------------|--|
| <b>vsan</b>           | The RSCN statistics are to be cleared for a VSAN.                |
| <b><i>vsan-id</i></b> | The ID for the VSAN for which you want to clear RSCN statistics. |

### Defaults

None.

### Command Modes

EXEC 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 clear rscn statistics for VSAN 1.

```
switch# clear rscn statistics 1
```

### Related Commands

| Command          | Description                |
|------------------|----------------------------|
| <b>show rscn</b> | Displays RSCN information. |

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## clear scheduler logfile

To clear the command scheduler logfile, use the **clear scheduler logfile** command.

**clear scheduler logfile**

---

**Syntax Description** This command has no other arguments or keywords.

---

**Defaults** None.

---

**Command Modes** EXEC mode.

---

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | 2.0(1b)        | This command was introduced. |

---

---

**Usage Guidelines** None.

---

**Examples** The following example shows how to clear the command scheduler logfile.

```
switch# clear scheduler logfile
```

---

| <b>Related Commands</b> | <b>Command</b>        | <b>Description</b>                      |
|-------------------------|-----------------------|---|
|                         | <b>show scheduler</b> | Displays command scheduler information. |

---

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## clear screen

To clear the terminal screen, use the **clear screen** command in EXEC mode.

**clear screen**

---

**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** None.

---

**Examples** The following example shows how to clear the terminal screen.

```
switch# clear screen
```

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## clear scsi-flow statistics

To clear the SCSI flow statistics counters, use the **clear scsi-flow statistics** command.

```
clear scsi-flow statistics flow-id flow-id
```

|                           |                               |   |
|---------------------------|-------------------------------|---|
| <b>Syntax Description</b> | <b>flow-id</b> <i>flow-id</i> | Configures the SCSI flow identification number. |
|---------------------------|-------------------------------|---|

|                 |       |  |
|-----------------|-------|--|
| <b>Defaults</b> | None. |  |
|-----------------|-------|--|

|                      |            |  |
|----------------------|------------|--|
| <b>Command Modes</b> | EXEC mode. |  |
|----------------------|------------|--|

| <b>Command History</b> | <b>Release</b> | <b>Modification</b>          |
|------------------------|----------------|------------------------------|
|                        | 2.0(2)         | This command was introduced. |

|                         |       |  |
|-------------------------|-------|--|
| <b>Usage Guidelines</b> | None. |  |
|-------------------------|-------|--|

|                 |  |  |
|-----------------|--|--|
| <b>Examples</b> | The following example shows how to clear the SCSI flow statistics counters for SCSI flow ID 3. |  |
|                 | <pre>switch# clear scsi-flow statistics flow-id 3</pre>  |  |

| <b>Related Commands</b> | <b>Command</b>        | <b>Description</b>                           |
|-------------------------|-----------------------|--|
|                         |                       | <b>scsi-flow flow-id</b>                     |
|                         | <b>show scsi-flow</b> | Displays SCSI flow configuration and status. |

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## clear ssh hosts

To clear trusted SSH hosts, use the **clear ssh hosts** command in EXEC mode.

**clear ssh hosts**

---

**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 1.2(1).

---

**Usage Guidelines** None.

---

**Examples** The following example shows how to clear reset-reason information from NVRAM and volatile storage.

```
switch# clear ssh hosts
```

---

| Related Commands | Command        | Description                    |
|------------------|----------------|--------------------------------|
|                  | show ssh hosts | Displays SSH host information. |

---

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## clear system reset-reason

To clear the reset-reason information stored in NVRAM and volatile persistent storage, use the **clear system reset-reason** command in EXEC mode.

**clear system reset-reason**

**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 1.3(2a).

**Usage Guidelines** Use this command as listed below:

- In a Cisco MDS 9500 Series switch, this command clears the reset-reason information stored in NVRAM and volatile persistent storage in the active and standby supervisor modules.
- In a Cisco MDS 9200 Series switch, this command clears the reset-reason information stored in NVRAM and volatile persistent storage in the active supervisor module.

**Examples** The following example shows how to clear trusted SSH hosts.

```
switch# clear system reset-reason
```

| Related Commands | Command                  | Description                               |
|------------------|--------------------------|---|
|                  | show system reset-reason | Displays system reset-reason information. |

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## clear tacacs+ session

To clear TACACS+ Cisco Fabric Services (CFS) session configuration and locks, use the **clear tacacs+ session** command.

**clear tacacs+ session**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** To use this command, TACACS+ must be enabled using the **tacacs+ enable** command.

**Examples** The following example shows how to clear the TACACS+ session.

```
switch# clear tacacs+ session
```

| Related Commands | Command               | Description   |
|------------------|-----------------------|---|
|                  | <b>show tacacs+</b>   | Displays TACACS+ CFS distribution status and other details. |
|                  | <b>tacacs+ enable</b> | Enables TACACS+.  |



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## clear tlport alpa-cache

To clear the entire contents of the alpa-cache, use the **clear tlport alpa-cache** command in EXEC mode.

**clear tlport alpa-cache**

---

**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 1.3(5).

---

**Usage Guidelines** None.

---

**Examples** The following example shows how to clear a TL port ALPA cache.

```
switch# clear tlport alpa-cache
```

---

| <b>Related Commands</b> | <b>Command</b>                      | <b>Description</b>                       |
|-------------------------|-------------------------------------|--|
|                         | <code>show tlport alpa-cache</code> | Displays TL port alpa-cache information. |

---

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## clear user

To clear trusted SSH hosts, use the **clear user** command in EXEC mode.

**clear user** *username*

| Syntax Description |                                   |
|--------------------|-----------------------------------|
| <i>username</i>    | Specifies the user name to clear. |

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

| Command Modes |            |
|---------------|------------|
|               | EXEC mode. |

| Command History |   |
|-----------------|---|
|                 | This command was introduced in Cisco MDS SAN-OS Release 1.2(1). |

| Usage Guidelines |       |
|------------------|-------|
|                  | None. |

| Examples |  |
|----------|--|
|          | The following example shows how to log out a specified user. |

```
switch# clear user vsam
```

| Related Commands | Command           | Description                |
|------------------|-------------------|----------------------------|
|                  | <b>show users</b> | Displays user information. |

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## clear vrrp

To clear all the software counters for the specified virtual router, use the **clear vrrp** command in EXEC mode.

```
clear vrrp {statistics | vr number interface {gigabitethernet port/slot | mgmt 0 |
port-channel portchannel-id | vsan vsan-id}}
```

| Syntax Description |  |  |
|--------------------|--|--|
|                    | <b>statistics</b>                            | Clears global VRRP statistics.   |
|                    | <b>vr</b>                                    | Clears specific VR statistics.   |
|                    | <i>number</i>                                | Specifies a VR number from 1 to 255.   |
|                    | <b>interface</b>                             | Specifies an interface.  |
|                    | <b>gigabitethernet</b><br><i>port/slot</i>   | Specifies a gigabitethernet interface.   |
|                    | <b>mgmt 0</b>                                | Specifies the management interface.  |
|                    | <b>port-channel</b><br><i>portchannel-id</i> | Specifies a port-channel interface. The ID of the port-channel interface is from 1 to 128. |
|                    | <b>vsan</b> <i>vsan-id</i>                   | Specifies a VSAN. The ID of the VSAN is from 1 to 4093.                                    |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** None.

**Examples** The following examples shows how to clear all the software counters for virtual router 7 on VSAN 2.

```
switch# clear vrrp 7 interface vsan2
```

| Related Commands | Command          | Description                              |
|------------------|------------------|--|
|                  | <b>show vrrp</b> | Displays VRRP configuration information. |

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## clear zone

To clear all configured information in the zone server for a specified VSAN, use the **clear zone** command in EXEC mode.

```
clear zone {database | statistics {lun-zoning | read-only-zoning}} vsan vsan-id
```

| Syntax Description |                         |   |
|--------------------|-------------------------|---|
|                    | <b>database</b>         | Clears zone server database information.    |
|                    | <b>statistics</b>       | Clears zone server statistics.              |
|                    | <b>lun-zoning</b>       | Clears LUN-zoning related statistics.       |
|                    | <b>read-only-zoning</b> | Clears read-only zoning related statistics. |
|                    | <b>vsan</b>             | Clears zone information for a VSAN.         |
|                    | <i>vsan-id</i>          | The ID of the VSAN is from 1 to 4093.       |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** After issuing a **clear zone database** command, you need to explicitly issue the **copy running-config startup-config** to ensure that the running configuration is used when you next start the switch.

**Examples** The following examples shows how to clear all configured information in the zone server for VSAN 1.

```
switch# clear zone database vsan 1
```

| Related Commands | Command          | Description   |
|------------------|------------------|---|
|                  | <b>show zone</b> | Displays zone information for any configured interface. |

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## clock

To configure the time zone and the summer time of day, use the **clock** command in configuration mode. To disable the daylight saving time adjustment, use the **no** form of the command.

**clock** {**summer-time** | **time-zone** *daylight-timezone-name start-week start-day start-month start-time end-week end-day end-month end-time daylight-offset-to-be-added-in-minutes*}

**no clock** {**summer-time** | **time-zone** *daylight-timezone-name start-week start-day start-month start-time end-week end-day end-month end-time daylight-offset-to-be-added-in-minutes*}

### Syntax Description

|   |  |
|---|--|
| <b>summer-time</b>                            | Adjusts the daylight savings time for the Pacific time zone by 60 minutes starting the first Sunday in April at 2 a.m. and ending the last Sunday in October at 2 a.m. |
| <b>time-zone</b>                              | Sets the time zone for a specified time zone name.   |
| <i>daylight-timezone-name</i>                 | The 8-character name of the time zone  |
| <i>start-week</i><br><i>end-week</i>          | The week ranging from 1 through 5  |
| <i>start-day</i><br><i>end-day</i>            | The day ranging from Sunday through Saturday   |
| <i>start-month</i><br><i>end-month</i>        | The month ranging from January through December  |
| <i>start-time</i><br><i>end-time</i>          | The time ranging from  |
| <i>daylight-offset-to-be-added-in-minutes</i> | The daylight offset ranges from 1 through 1440 minutes that will be added to the start time and deleted from the end time  |

### Defaults

Coordinated Universal Time (UTC), which is the same as Greenwich Mean Time (GMT).

### Command Modes

Configuration mode.

### Command History

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

### Usage Guidelines

Use this command if you need to change the UTC or GMT time or time zone.

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### Examples

The following example shows how to configure the time zone and summer time of day.

```
switch# config terminal
switch(config)# clock timezone <daylight timezone name> <start week> <start day> <start
month> <start time> <end week> <end day> <end month> <end time> <daylight offset to be
added in minutes>
switch(config)# clock summer-time Pacific 1 Sun Apr 02:00 5 Sun Oct 02:00 60
switch(config)# no clock summer-time
switch(config)# exit
switch#
```

### Related Commands

| Command           | Description  |
|-------------------|--|
| <b>clock set</b>  | Changes the default time on the switch.  |
| <b>show clock</b> | Displays the current date and time.  |
| <b>show run</b>   | Displays changes made to the time zone configuration along with other configuration information. |

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## code-page

Use the **code-page** command to configure the EBCDIC format. To disable the configuration or to revert to factory defaults, use the **no** form of the command.

**code-page** **brazil** | **france** | **france** | **international-5** | **italy** | **japan** | **spain-latinamerica** | **uk** | **us-canada**

| Syntax Description | code-page                 | Configures code page on a FICON-enabled VSAN            |
|--------------------|---------------------------|---|
|                    | <b>brazil</b>             | Configures the <b>brazil</b> EBCDIC format.             |
|                    | <b>france</b>             | Configures the <b>france</b> EBCDIC format.             |
|                    | <b>international-5</b>    | Configures the <b>international-5</b> EBCDIC format.    |
|                    | <b>italy</b>              | Configures the <b>italy</b> EBCDIC format.              |
|                    | <b>japan</b>              | Configures the <b>japan</b> EBCDIC format.              |
|                    | <b>spain-latinamerica</b> | Configures the <b>spain-latinamerica</b> EBCDIC format. |
|                    | <b>uk</b>                 | Configures the <b>uk</b> EBCDIC format.                 |
|                    | <b>us-canada</b>          | Configures the <b>us-canada</b> EBCDIC format.          |

**Defaults** None.

**Command Modes** Configuration mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**Usage Guidelines** This is an optional configuration. If you are not sure of the EBCDIC format to be used, we recommend retaining the **us-canada** (default) option.

**Examples** The following example configures the **italy** EBCDIC format.

```
switch(config)# ficon vsan 2
switch(config-ficon)# code-page italy
```

The following example reverts to the factory default of using the **us-canada** EBCDIC format.

```
switch(config-ficon)# no code-page
```

| Related Commands | Command                   | Description                          |
|------------------|---------------------------|--------------------------------------|
|                  | <b>show ficon</b>         | Displays configured FICON details.   |
|                  | <b>ficon vsan vsan-id</b> | Enables FICON on the specified VSAN. |

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## clock set

To change the system time on a Cisco MDS 9000 Family switch, use the **clock set** command in EXEC mode.

**clock set** *HH:MM:SS DD Month YYYY*

| Syntax Description |              |   |
|--------------------|--------------|---|
|                    | <i>HH</i>    | The two-digit time in hours in military format (15 for 3 p.m.). |
|                    | <i>MM</i>    | The two-digit time in minutes (58).                             |
|                    | <i>SS</i>    | The two-digit time in seconds(15).                              |
|                    | <i>DD</i>    | The two-digit date (12).  |
|                    | <i>Month</i> | The month in words (August).                                    |
|                    | <i>YYYY</i>  | The four-digit year (2002).                                     |

**Defaults** None.

**Command Modes** EXEC mode.

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

**Usage Guidelines** Generally, if the system is synchronized by a valid outside timing mechanism, such as an NTP clock source, or if you have a switch with calendar capability, you do not need to set the system clock. Use this command if no other time sources are available. The time specified in this command is relative to the configured time zone.

The **clock set** command changes are saved across system resets.

**Examples** The following example displays the **clock set** command:

```
switch# clock set 15:58:15 12 August 2002
Mon Aug 12 15:58:00 PDT 2002
```



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## code-page

Use the **code-page** command to configure the EBCDIC format. To disable the configuration or to revert to factory defaults, use the **no** form of the command.

```
code-page { brazil | france | france | international-5 | italy | japan | spain-latinamerica | uk |
us-canada }
```

| Syntax Description |                           |  |
|--------------------|---------------------------|--|
|                    | <b>brazil</b>             | Specifies <b>brazil</b> EBCDIC format.             |
|                    | <b>france</b>             | Specifies <b>france</b> EBCDIC format.             |
|                    | <b>international-5</b>    | Specifies <b>international-5</b> EBCDIC format.    |
|                    | <b>italy</b>              | Specifies <b>italy</b> EBCDIC format.              |
|                    | <b>japan</b>              | Specifies <b>japan</b> EBCDIC format.              |
|                    | <b>spain-latinamerica</b> | Specifies <b>spain-latinamerica</b> EBCDIC format. |
|                    | <b>uk</b>                 | Specifies <b>uk</b> EBCDIC format.                 |
|                    | <b>us-canada</b>          | Specifies <b>us-canada</b> EBCDIC format.          |

**Defaults** us-canada

**Command Modes** Configuration mode.

**Command History** This command was introduced in Cisco MDS SAN-OS Release 1.3(1).

**Usage Guidelines** This is an optional configuration. If you are not sure of the EBCDIC format to be used, we recommend retaining the **us-canada** (default) option.

**Examples** The following example configures the **italy** EBCDIC format.

```
switch(config)# ficon vsan 2
switch(config-ficon)# code-page italy
```

The following example reverts to the factory default of using the **us-canada** EBCDIC format.

```
switch(config-ficon)# no code-page
```

| Related Commands | Command                   | Description                          |
|------------------|---------------------------|--------------------------------------|
|                  | <b>show ficon</b>         | Displays configured FICON details.   |
|                  | <b>ficon vsan vsan-id</b> | Enables FICON on the specified VSAN. |

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# commit

To apply the pending configuration pertaining to the Call Home configuration session in progress, use the **commit** command in Call Home configuration submode.

**commit**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** None.

**Command Modes** Call Home configuration submode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** CFS distribution must be enabled before you can commit the Call Home configuration.

**Examples** The following example shows how to commit the Call Home configuration commands.

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# callhome
switch(config-callhome)# commit
```

| Related Commands | Command              | Description  |
|------------------|----------------------|--|
|                  | <b>callhome</b>      | Configures the Call Home function.                           |
|                  | <b>callhome test</b> | Sends a dummy test message to the configured destination(s). |
|                  | <b>show callhome</b> | Displays configured Call Home information.                   |

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## contract-id

To configure the service contract ID of the customer with the Call Home function, use the **contract-id** command in Call Home configuration submode. To disable this feature, use the **no** form of the command.

**contract-id** *customer-id*

**no contract-id** *customer-id*

| <b>Syntax Description</b> | <i>contract-id</i>   | (Optional) Configures the service contract ID of the customer. Allows up to 64 characters for the contract number. |              |                 |                                    |                      |  |                      |  |  |
|---------------------------|--|--|--------------|-----------------|------------------------------------|----------------------|--|----------------------|--|--|
| <b>Defaults</b>           | None.  |  |              |                 |                                    |                      |  |                      |  |  |
| <b>Command Modes</b>      | Call Home configuration submode  |  |              |                 |                                    |                      |  |                      |  |  |
| <b>Command History</b>    | <table border="1"> <thead> <tr> <th>Release</th> <th>Modification</th> </tr> </thead> <tbody> <tr> <td>1.0(2)</td> <td>This command was introduced.</td> </tr> </tbody> </table>   | Release  | Modification | 1.0(2)          | This command was introduced.       |                      |  |                      |  |  |
| Release                   | Modification   |  |              |                 |                                    |                      |  |                      |  |  |
| 1.0(2)                    | This command was introduced.   |  |              |                 |                                    |                      |  |                      |  |  |
| <b>Usage Guidelines</b>   | None.  |  |              |                 |                                    |                      |  |                      |  |  |
| <b>Examples</b>           | <p>The following example shows how to configure the contract ID in the Call Home configuration.</p> <pre>switch# <b>config terminal</b> Enter configuration commands, one per line. End with CNTL/Z. switch(config)# <b>callhome</b> switch(config-callhome)# <b>contract-id Customer1234</b></pre>  |  |              |                 |                                    |                      |  |                      |  |  |
| <b>Related Commands</b>   | <table border="1"> <thead> <tr> <th>Command</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td><b>callhome</b></td> <td>Configures the Call Home function.</td> </tr> <tr> <td><b>callhome test</b></td> <td>Sends a dummy test message to the configured destination(s).</td> </tr> <tr> <td><b>show callhome</b></td> <td>Displays configured Call Home information.</td> </tr> </tbody> </table> | Command  | Description  | <b>callhome</b> | Configures the Call Home function. | <b>callhome test</b> | Sends a dummy test message to the configured destination(s). | <b>show callhome</b> | Displays configured Call Home information. |  |
| Command                   | Description  |  |              |                 |                                    |                      |  |                      |  |  |
| <b>callhome</b>           | Configures the Call Home function.   |  |              |                 |                                    |                      |  |                      |  |  |
| <b>callhome test</b>      | Sends a dummy test message to the configured destination(s).   |  |              |                 |                                    |                      |  |                      |  |  |
| <b>show callhome</b>      | Displays configured Call Home information.   |  |              |                 |                                    |                      |  |                      |  |  |

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# configure terminal

To enter the configuration mode, use the **configure terminal** command in EXEC mode.

**configure terminal**

---

**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** None.

---

**Examples** The following example enters the configuration mode:

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

The following example enters the configuration mode using an abbreviated format of the command:

```
switch# config terminal  
switch(config)#
```

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## copy

To save a backup of the system software, use the **copy** command in EXEC mode.

```
copy source-URL destination-URL
```

### Syntax Description

|                        |   |
|------------------------|---|
| <i>source-URL</i>      | The location URL or alias of the source file or directory to be copied. |
| <i>destination-URL</i> | The destination URL or alias of the copied file or directory.           |

The following table lists the aliases for source and destination URLs.

|                       |  |
|-----------------------|--|
| <b>running-config</b> | Specifies the configuration currently running on the switch. The <b>system:running-config</b> keyword represents the current running configuration file.   |
| <b>startup-config</b> | Specifies the configuration used during initialization (startup). You can copy the startup configuration from NVRAM. The <b>nvram:startup-config</b> keyword represents the configuration file used during initialization.   |
| <b>bootflash:</b>     | Specifies the location for internal bootflash memory.  |
| <b>log:</b>           | Specifies the location for the log file system.  |
| <b>slot0:</b>         | Specifies the location for the CompactFlash memory or PCMCIA card.   |
| <b>volatile:</b>      | Specifies the location for the volatile file system.   |
| <b>system:</b>        | Specifies the location for system memory, which includes the running configuration.  |
| <b>fabric</b>         | Specifies a fabric wide startup configuration update using Cisco Fabric Services (CFS) where all the remote switches in the fabric copy their running configuration (source) file into their startup configuration (destination) file. The syntax for this command is <b>copy running-config startup-config fabric</b> . |
| <b>tftp:</b>          | Specifies the location for a Trivial File Transfer Protocol (TFTP) network server. The syntax for this alias is <b>tftp:[<i>///location</i>]/<i>directory</i>]/<i>filename</i></b> .   |
| <b>ftp:</b>           | Specifies the location for a File Transfer Protocol (FTP) network server. The syntax for this alias is <b>ftp:[<i>///location</i>]/<i>directory</i>]/<i>filename</i></b> .   |
| <b>scp:</b>           | Specifies the location for a secure copy (scp) network server. The syntax for this alias is <b>scp:[<i>///location</i>]/<i>directory</i>]/<i>filename</i></b> .  |
| <b>sftp:</b>          | Specifies the location for a Secure Trivial File Transfer Protocol (SFTP) network server. The syntax for this alias is <b>sftp:[<i>///location</i>]/<i>directory</i>]/<i>filename</i></b> .  |
| <b>log:</b>           | Specifies the location for log files stored in the same directory.   |
| <b>debug:</b>         | Specifies the location for the debug files stored in the debug partition   |
| <b>nvram:</b>         | Specifies the switch NVRAM.  |
| <b>core:</b>          | Specifies the location of the cores from any switching or supervisor module to an external flash (slot 0) or a TFTP server.  |
| <i>filename</i>       | The name of the Flash file.  |
| <b>sup-1</b>          | The number of the supervisor module, where sup-1 is the slot 5 supervisor (active) and sup-2 is the slot 6 supervisor (standby).   |
| <b>sup-2</b>          |  |

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**Defaults** None.

**Command Modes** EXEC mode.

| Command History | Release | Modification                                       |
|-----------------|---------|--|
|                 | 1.3(4)  | Command modified.                                  |
|                 | 2.1(1a) | Added the <b>fabric</b> keyword and functionality. |

### Usage Guidelines

This command makes the running and the backup copy of the software identical.

A file can only be copied from an active supervisor to a standby supervisor, not from standby to active.

This command does not allow 127.x.x.x IP addresses.

The copy function will not be completed if the required space is not available in the directory. First change to the required directory (for example, **cd bootflash:**) and verify the available space (for example, **dir bootflash:**).

The entire copying process may take several minutes.

Do not copy a file from an external source directly to the standby supervisor. You must copy from the external source to the active supervisor, and then copy the saved file to the standby supervisor.

You can save cores (from the active supervisor module, the standby supervisor module, or any switching module) to an external flash (slot 0) or to a TFTP server in one of two ways:

- On demand—to copy a single file based on the provided process ID.
- Periodically—to copy core files periodically as configured by the user.

You copy the logfile to a different location using the **copy log:messages** command.

The debug partition contains debugging files created by the software for troubleshooting purposes.

The **running-config startup-config fabric** parameters allow you to use CFS to force every switch in the Fibre Channel fabric to copy their running configuration (source) to their startup configuration (destination).



### Note

If any remote switch fails to complete the **copy running-config startup-config fabric** process, the initiator switch also does not complete saving its startup-configuration. This means, both the remote switch and the initiator switch have failed to save their startup-configuration (the old startup-configuration reverts back). All the other switches in the network would have succeeded.

### Examples

The following example saves your configuration to the startup configuration.

```
switch# copy system:running-config nvram:startup-config
```

The following example copies the file called samplefile from the slot0 directory to the mystorage directory.

```
switch# copy slot0:samplefile slot0:mystorage/samplefile
```

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The following example copies a file from the current directory level.

```
switch# copy samplefile mystorage/samplefile
```

If the current directory is slot0:mydir, this command copies slot0:mydir/samplefile to slot0:mydir/mystorage/samplefile.

The following example downloads a configuration file from an external CompactFlash to the running configuration.

```
switch copy slot0:dns-config.cfg system:running-config
```

The following example saves a running configuration file to an external CompactFlash.

```
switch# copy system:running-config slot0:dns-config.cfg
```

The following example saves a startup configuration file to an external CompactFlash.

```
switch# copy system:startup-config slot0:dns-config.cfg
```

The following example uses CFS to cause all switches in the fabric to copy their running configuration (source) file to their startup configuration (destination) file.

```
switch# copy running-config startup-config fabric
[#####] 100%
switch#
```

**Note**

If any remote switch fails to complete the **copy running-config startup-config fabric** process, the initiator switch also does not complete saving its startup-configuration. This means, both the remote switch and the initiator switch have failed to save their startup-configuration (the old startup-configuration reverts back). All the other switches in the network would have succeeded.

The following example creates a backup copy of the binary configuration.

```
switch# copy nvram:startup-config nvram:snapshot-config
```

The following example copies an image in bootflash on the active supervisor to the bootflash on the standby supervisor.

```
switch# copy bootflash:myimage bootflash://sup-2/myimage
```

The following example creates a running configuration copy in bootflash.

```
switch# copy system:running-config bootflash:my-config
```

The following examples creates a startup configuration copy in bootflash.

```
switch# copy nvram:startup-config bootflash:my-config
```

**Related Commands**

| Command             | Description   |
|---------------------|---|
| <b>cd</b>           | Changes the default directory or file system.           |
| <b>dir</b>          | Displays a list of files on a file system.              |
| <b>reload</b>       | Reloads the operating system.                           |
| <b>show version</b> | Displays the version of the running configuration file. |

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## copy licenses

To save a backup of the installed license files, use the **copy licenses** command in EXEC mode.

**copy licenses** *source-URL destination-URL*

### Syntax Description

|                        |   |
|------------------------|---|
| <i>source-URL</i>      | The location URL or alias of the source file or directory to be copied. |
| <i>destination-URL</i> | The destination URL or alias of the copied file or directory.           |

The following table lists the aliases for source and destination URLs.

|                   |  |
|-------------------|--|
| <b>bootflash:</b> | Specifies the location for internal bootflash memory.              |
| <b>slot0:</b>     | Specifies the location for the CompactFlash memory or PCMCIA card. |
| <b>volatile:</b>  | Specifies the location for the volatile file system.               |
| <i>filename</i>   | Specifies the name of the license file with a.tar extension.       |

### Defaults

None.

### Command Modes

EXEC mode.

### Command History

This command was introduced in Cisco MDS SAN-OS Release 1.3(4).

### Usage Guidelines

The copy function will not be completed if the required space is not available in the directory. First change to the required directory (for example, **cd bootflash:**) and verify the available space (for example, **dir bootflash:**).

We recommend backing-up your license files immediately after installing them and just before issuing a **write erase** command.

### Examples

The following example saves a file called Enterprise.tar to the bootflash: directory.

```
switch# copy licenses bootflash:/Enterprise.tar
Backing up license done
```

### Related Commands

| Command                | Description                                   |
|------------------------|---|
| <b>cd</b>              | Changes the default directory or file system. |
| <b>dir</b>             | Displays a list of files on a file system.    |
| <b>install license</b> | Installs a license file.                      |



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# crypto global domain ipsec security-association lifetime

To configure global parameters for IPsec, use the **crypto global domain ipsec security-association lifetime** command. To revert to the default, use the **no** form of the command.

```
crypto global domain ipsec security-association lifetime { gigabytes number | kilobytes number |
megabytes number | seconds number }
```

```
no crypto global domain ipsec security-association lifetime { gigabytes | kilobytes | megabytes
| seconds }
```

| Syntax Description | Parameter               | Description  |
|--------------------|-------------------------|--|
|                    | <b>gigabytes number</b> | Specifies a volume-based key duration in gigabytes. The range is 1 to 4095.          |
|                    | <b>kilobytes number</b> | Specifies a volume-based key duration in kilobytes. The range is 2560 to 2147483647. |
|                    | <b>megabytes number</b> | Specifies a volume-based key duration in megabytes. The range is 3 to 4193280.       |
|                    | <b>seconds number</b>   | Specifies a time-based key duration in seconds. The range is 120 to 86400.           |

**Defaults** 450 gigabytes and 3600 seconds

**Command Modes** Configuration mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** To use this command, IPsec must be enabled using the **crypto ipsec enable** command. The global security association lifetime value can be overridden for individual IPsec crypto maps using the **set** command in IPsec crypto map configuration submode.

**Examples** The following example shows how to configure the system default before the IPsec.

```
switch# config terminal
switch(config)# crypto global domain ipsec security-association lifetime gigabytes 500
```

| Related Commands | Command   | Description                                   |
|------------------|---|---|
|                  | <b>crypto ipsec enable</b>                          | Enables IPsec.                                |
|                  | <b>set (IPsec crypto map configuration submode)</b> | Configures IPsec crypto map entry parameters. |
|                  | <b>show crypto global domain ipsec</b>              | Displays the global attributes for IPsec.     |

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## crypto ike domain ipsec

To enter IKE configuration submode, use the **crypto ike domain ipsec** command.

**crypto ike domain ipsec**

**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** To configure IKE protocol attributes, IKE must be enabled using the **crypto ike enable** command.

**Examples** The following example shows how enter IKE configuration mode.

```
switch# config terminal
switch(config)# crypto ike domain ipsec
switch(config-ike-ipsec)#
```

| Related Commands | Command                             | Description                                    |
|------------------|-------------------------------------|--|
|                  | <b>crypto ike enable</b>            | Enables the IKE protocol.                      |
|                  | <b>show crypto ike domain ipsec</b> | Displays IKE information for the IPsec domain. |

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## crypto ike domain ipsec rekey sa

To rekey an IKE crypto security association (SA) in the IPsec domain, use the **crypto ike domain ipsec rekey sa** command.

**crypto ike domain ipsec rekey sa** *sa-index*

|                           |                 |   |
|---------------------------|-----------------|---|
| <b>Syntax Description</b> | <i>sa-index</i> | Specifies the SA index. The range is 1 to 2147483647. |
|---------------------------|-----------------|---|

|                 |       |
|-----------------|-------|
| <b>Defaults</b> | None. |
|-----------------|-------|

|                      |            |
|----------------------|------------|
| <b>Command Modes</b> | EXEC mode. |
|----------------------|------------|

| <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, IKE must be enabled using the <b>crypto ike enable</b> command. |
|-------------------------|--|

|                 |   |
|-----------------|---|
| <b>Examples</b> | The following example rekeys an IKE crypto SA.<br>switch# <b>crypto ike domain ipsec rekey sa 100</b> |
|-----------------|---|

| <b>Related Commands</b>             | <b>Command</b>                                 | <b>Description</b>        |
|-------------------------------------|--|---------------------------|
|                                     | <b>crypto ike enable</b>                       | Enables the IKE protocol. |
| <b>show crypto ike domain ipsec</b> | Displays IKE information for the IPsec domain. |                           |

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## crypto ike enable

To enable IKE, use the **crypto ike enable** command. To disable IKE, use the **no** form of the command.

**crypto ike enable**

**no crypto ike enable**

**Syntax Description** This command has no other arguments or keywords.

**Defaults** Disabled.

**Command Modes** Configuration mode.

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

**Usage Guidelines** The IKE protocol cannot be disabled unless IPsec is disabled.

The configuration and verification commands for the IKE protocol are only available when the IKE protocol is enabled on the switch. When you disable this feature, all related configurations are automatically discarded.

**Examples** The following example shows how to enable the IKE protocol.

```
switch# config terminal
switch(config)# crypto ike enable
```

| Related Commands | Command                                 | Description                                    |
|------------------|---|--|
|                  | <b>clear crypto ike domain ipsec sa</b> | Clears IKE protocol information clear IKE SAs. |
|                  | <b>crypto ipsec enable</b>              | Enables IPsec.                                 |
|                  | <b>show crypto ike domain ipsec</b>     | Displays IKE information for the IPsec domain. |

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## crypto ipsec enable

To enable IPsec, use the **crypto ipsec enable** command. To disable IPsec, use the **no** form of the command.

**crypto ipsec enable**

**no crypto ipsec enable**

### Syntax Description

This command has no other arguments or keywords.

### Defaults

Disabled.

### Command Modes

Configuration mode.

### Command History

| Release | Modification                 |
|---------|------------------------------|
| 2.0(1b) | This command was introduced. |

### Usage Guidelines

To enable the IPsec, the IKE protocol must be enabled using the **crypto ike enable** command.

The configuration and verification commands for IPsec are only available when IPsec is enabled on the switch. When you disable this feature, all related configurations are automatically discarded.

### Examples

The following example shows how to enable IPsec.

```
switch# config terminal
switch(config)# crypto ipsec enable
```

### Related Commands

| Command                                       | Description                                      |
|---|--|
| <b>show crypto global domain ipsec</b>        | Displays IPsec crypto global information.        |
| <b>show crypto map domain ipsec</b>           | Displays IPsec crypto map information.           |
| <b>show crypto transform-set domain ipsec</b> | Displays IPsec crypto transform set information. |

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## crypto map domain ipsec (configuration mode)

To specify an IPsec crypto map and enter IPsec crypto map configuration mode, use the **crypto map domain ipsec** command. To delete an IPsec crypto map or a specific entry in an IPsec crypto map, use the **no** form of the command.

```
crypto map domain ipsec map-name seq-number
```

```
no crypto map domain ipsec map-name [seq-number]
```

| Syntax Description |                   |   |
|--------------------|-------------------|---|
|                    | <i>map-name</i>   | Specifies the map name. Maximum length is 63 characters.                  |
|                    | <i>seq-number</i> | Specifies the sequence number for the map entry. The range is 1 to 65535. |

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

| Command Modes | Configuration mode. |
|---------------|---------------------|
|---------------|---------------------|

| Command History | Release | Modification                 |
|-----------------|---------|------------------------------|
|                 | 2.0(1b) | This command was introduced. |

| Usage Guidelines | To use this command, IPsec must be enabled using the <b>crypto ipsec enable</b> command.<br>The sequence number determines the order in which IPsec crypto map entries are applied. |
|------------------|---|
|------------------|---|

| Examples | The following example specifies entry 1 for IPsec crypto map IPsecMap and enters IPsec crypto map configuration mode. |
|----------|---|
|----------|---|

```
switch# config terminal
switch(config)# crypto map domain ipsec IPsecMap 1
switch(config-crypto-map-ip)#
```

The following example deletes an IPsec crypto map entry.

```
switch# config terminal
switch(config)# no crypto map domain ipsec IPsecMap 1
```

The following example deletes the entire IPsec crypto map.

```
switch# config terminal
switch(config)# no crypto map domain ipsec IPsecMap
```

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| <b>Related Commands</b> | <b>Command</b>                                      | <b>Description</b>                                    |
|-------------------------|---|---|
|                         | <b>crypto ipsec enable</b>                          | Enables IPsec.  |
|                         | <b>crypto transform-set domain ipsec</b>            | Configures the transform set for an IPsec crypto map. |
|                         | <b>set (IPsec crypto map configuration submenu)</b> | Configures IPsec crypto map entry parameters.         |
|                         | <b>show crypto map domain ipsec</b>                 | Displays IPsec crypto map information.                |

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## crypto map domain ipsec (interface configuration submode)

To configure an IPsec crypto map on a Gigabit Ethernet interface, use the **crypto map domain ipsec** command in interface configuration submode. To remove the IPsec crypto map, use the **no** form of the command.

**crypto map domain ipsec** *map-name*

**no crypto map domain ipsec**

|                           |                 |  |
|---------------------------|-----------------|--|
| <b>Syntax Description</b> | <i>map-name</i> | Specifies the map name. Maximum length is 63 characters. |
|---------------------------|-----------------|--|

|                 |       |  |
|-----------------|-------|--|
| <b>Defaults</b> | None. |  |
|-----------------|-------|--|

|                      |                                  |  |
|----------------------|----------------------------------|--|
| <b>Command Modes</b> | Interface 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, IPsec must be enabled using the <b>crypto ipsec enable</b> command.<br>The sequence number determines the order in which crypto maps are applied. |  |
|-------------------------|--|--|

|                 |   |  |
|-----------------|---|--|
| <b>Examples</b> | The following example shows how to specify an IPsec crypto map for a Gigabit Ethernet interface.  |  |
|                 | <pre>switch# <b>config terminal</b> switch(config)# <b>interface gigabitethernet 1/2</b> switch(config-if)# <b>crypto map domain ipsec IPsecMap</b></pre> |  |

| <b>Related Commands</b> | <b>Command</b>                      | <b>Description</b>                     |
|-------------------------|-------------------------------------|--|
|                         | <b>crypto ipsec enable</b>          | Enables IPsec.                         |
|                         | <b>show crypto map domain ipsec</b> | Displays IPsec crypto map information. |
|                         | <b>show interface</b>               | Displays interface information.        |



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## crypto transform-set domain ipsec

To create and configure IPsec transform sets, use the **crypto transform-set domain ipsec** command. To delete an IPsec transform set, use the **no** form of the command.

```
crypto transform-set domain ipsec set-name { esp-3des | esp-des } [ esp-aes-xcbc-mac |
    esp-md5-hmac | esp-sha1-hmac ]
```

```
crypto transform-set domain ipsec set-name esp-aes { 128 | 256 } [ ctr { esp-aes-xcbc-mac |
    esp-md5-hmac | esp-sha1-hmac } | esp-aes-xcbc-mac | esp-md5-hmac | esp-sha1-hmac ]
```

```
crypto transform-set domain ipsec set-name [ { esp-3des | esp-des } [ esp-aes-xcbc-mac |
    esp-md5-hmac | esp-sha1-hmac ] ]
```

```
crypto transform-set domain ipsec set-name esp-aes [ { 128 | 256 } [ ctr { esp-aes-xcbc-mac |
    esp-md5-hmac | esp-sha1-hmac } | esp-aes-xcbc-mac | esp-md5-hmac | esp-sha1-hmac ] ]
```

### Syntax Description

|                         |  |
|-------------------------|--|
| <i>set-name</i>         | Specifies the transform set name. Maximum length is 63 characters. |
| <b>esp-3des</b>         | Specifies ESP transform using the 3DES cipher (128 bits).          |
| <b>esp-des</b>          | Specifies ESP transform using the DES cipher (56 bits).            |
| <b>esp-aes-xcbc-mac</b> | Specifies ESP transform using AES-XCBC-MAC authentication.         |
| <b>esp-md5-hmac</b>     | Specifies ESP transform using MD5-HMAC authentication.             |
| <b>esp-sha1-hmac</b>    | Specifies ESP transform using SHA1-HMAC authentication.            |
| <b>esp-aes</b>          | Specifies ESP transform using the AES cipher (128 or 256 bits).    |
| <b>128</b>              | Specifies ESP transform using AES 128-bit cipher.                  |
| <b>256</b>              | Specifies ESP transform using AES 256-bit cipher.                  |
| <b>ctr</b>              | Specifies AES in counter mode.                                     |

### Defaults

None.

The default mode of AES is CBC (Cyber Block Chaining).

### Command Modes

Configuration mode.

### Command History

| Release | Modification                 |
|---------|------------------------------|
| 2.0(1b) | This command was introduced. |

### Usage Guidelines

To use this command, IPsec must be enabled using the **crypto ipsec enable** command.

You can use this command to modify existing IPsec transform sets. If you change a transform set definition, the change is only applied to crypto map entries that reference the transform set. The change is not applied to existing security associations, but used in subsequent negotiations to establish new security associations. If you want the new settings to take effect sooner, you can clear all or part of the security association database using the **clear crypto sa domain ipsec** command.

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**Examples**

The following example shows how to configure an IPsec transform set.

```
switch# config terminal  
switch(config)# crypto transform-set domain ipsec Set1 esp-aes 128
```

---

**Related Commands**

| Command                                       | Description                                      |
|---|--|
| <b>clear crypto sa domain ipsec</b>           | Clears security associations.                    |
| <b>crypto ipsec enable</b>                    | Enables IPsec.                                   |
| <b>show crypto transform-set domain ipsec</b> | Displays IPsec crypto transform set information. |

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## customer-id

To configure the customer ID with the Call Home function, use the **customer-id** command in Call Home configuration submode. To disable this feature, use the **no** form of the command.

**customer-id** *customer-id*

**no customer-id** *customer-id*

| Syntax Description | <i>customer-id</i> | (Optional) Specifies the customer ID. The maximum length is 64 alphanumeric characters in free format. |
|--------------------|--------------------|--|
|--------------------|--------------------|--|

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

| Command Modes | Call Home configuration submode. |
|---------------|----------------------------------|
|---------------|----------------------------------|

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

| Usage Guidelines | None. |
|------------------|-------|
|------------------|-------|

**Examples** The following example shows how to configure the customer ID in the Call Home configuration submode.

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# callhome
switch(config-callhome)# customer-id Customer1234
```

| Related Commands | Command              | Description  |
|------------------|----------------------|--|
|                  | <b>callhome</b>      | Configures the Call Home function.                           |
|                  | <b>callhome test</b> | Sends a dummy test message to the configured destination(s). |
|                  | <b>show callhome</b> | Displays configured Call Home information.                   |

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