Show Commands

The commands in this chapter apply to the Cisco MDS 9000 Family of multilayer directors and fabric switches. All commands are shown here in alphabetical order regardless of command mode. See the "Command Modes" section to determine the appropriate mode for each command. For more information, refer to the *Cisco MDS 9000 Family Configuration Guide*.

show accounting

To display configured accounting information, use the **show accounting** command.

show accounting {config | log | logsize}

Syntax Description

config	Shows RADIUS accounting configuration information.
log	Shows accounting log.
logsize	Shows local accounting log file size.

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

To display configured accounting parameters.

```
switch# show accounting config
RADIUS accounting not enabled
local accounting enabled
```

To display configured log size.

```
switch# show accounting logsize
maximum local accounting log size:29000
```

To display the entire log file.

```
switch# show accounting log
2002:stop:snmp_1033151784_171.71.49.83:admin:
Fri Sep 27 18:36:24 2002:start:_1033151784:root
Fri Sep 27 18:36:28 2002:update:::fcc configuration requested
Fri Sep 27 18:36:33 2002:start:snmp_1033151793_171.71.49.83:admin
Fri Sep 27 18:36:33 2002:stop:snmp_1033151793_171.71.49.83:admin:
Fri Sep 27 18:39:28 2002:start:snmp_1033151968_171.71.49.96:admin
Fri Sep 27 18:39:28 2002:stop:snmp_1033151968_171.71.49.96:admin:
Fri Sep 27 18:39:28 2002:start:_1033151968:root
Fri Sep 27 18:39:31 2002:update:::fcc configuration requested
Fri Sep 27 18:39:37 2002:start:snmp_1033151977_171.71.49.96:admin
Fri Sep 27 18:39:37 2002:stop:snmp_1033151977_171.71.49.96:admin:
Fri Sep 27 18:39:37 2002:start:snmp_1033151977_171.71.49.96:admin
Fri Sep 27 18:42:12 2002:start:snmp_1033152132_171.71.49.96:admin
Fri Sep 27 18:42:12 2002:stop:snmp_1033152132_171.71.49.96:admin:
Fri Sep 27 18:42:12 2002:start:snmp_1033152132_171.71.49.96:admin
Fri Sep 27 18:42:40 2002:start:snmp_1033152160_171.71.49.96:admin
```

show arp

To view Address Resolution Protocol (ARP) entries, use the **show arp** command.

show arp

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

This displays the ARP table.

```
switch# show arp
Protocol Address           Age (min)      Hardware Addr  Type  Interface
Internet  171.1.1.1        0              0006.5bec.699c  ARPA  mgmt0
Internet  172.2.0.1        4              0000.0c07.ac01  ARPA  mgmt0
```

Related Commands

Command	Description
clear arp-cache	Clears the arp-cache table entries.

show authentication

To display the configured authentication methods, use the **show authentication** command.

show authentication

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 displays authentication information.

```
switch# show authentication
authentication method:none
         console:not enabled
         telnet/ssh:not enabled
authentication method:radius
         console:not enabled
         telnet/ssh:not enabled
authentication method:local
         console:enabled
         telnet/ssh:enabled
```

show auto-copy

To display state of the auto-copy feature, use the **show auto-copy** command.

show auto-copy [list]

Syntax Description

show auto-copy	Displays if the auto-copy feature is enabled of disabled.
list	Displays the list of files to be auto-copied

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 displays the current state of the auto-copy feature.

```
switch# show boot auto-copy
Boot variables Auto-Copy ON
```

The following example displays the ilc1.bin image being copied to the standby supervisor module's bootflash, and once this is successful, the next file will be lasilc1.bin. This command only displays files on the active supervisor module.

```
switch# show boot auto-copy list
File: /bootflash/ilc1.bin
Bootvar: ilce

File:/bootflash/lasilc1.bin
Bootvar: lasilc
```

The following example displays a typical message when the auto-copy option is disabled or if no files are copied.

```
switch# show boot auto-copy list
No file currently being auto-copied
```

show boot

To display the boot variables, use the **show boot** command.

show boot [auto-copy (list) | sup-1 | sup-2]

Syntax Description

show boot	Displays the boot variables in any Cisco MDS 9000 Family switch.
auto-copy	Copies the boot variable images present in the active supervisor module (but not in the standby supervisor module) to the standby supervisor module.
list	Displays the image files being copied.
sup-1	Displays the boot variables for the active supervisor module in any Cisco MDS 9500 Series switch.
sup-2	Displays the boot variables for the standby supervisor module in any Cisco MDS 9500 Series switch.

Defaults

None.

Command Modes

EXEC mode.

Command History

This command was modified in Release 1.2(1).

Usage Guidelines

None.

Examples

The following example displays the current contents of the boot variable.

```
switch# show boot
sup-1
KICKSTART variable = bootflash:/kickstart-image
SYSTEM variable = bootflash:/system-image;
sup-2
KICKSTART variable = bootflash:/kickstart-image
SYSTEM variable = bootflash:/system-image;
```

The following examples displays the state of the **auto-copy** option

```
switch# show boot auto-copy
Boot variables Auto-Copy ON

switch# show boot auto-copy
Boot variables Auto-Copy OFF
```

The following example displays image1.bin being copied to the standby supervisor module's bootflash, and once this is successful, the next file will beimage2.bin. This command only displays files on the active supervisor module.

```
switch# show boot auto-copy list
File: /bootflash/image1.bin
Bootvar: IMAGE1_VARIABLE

File:/bootflash/image2.bin
Bootvar: IMAGE2_VARIABLE
```

The following example displays a typical message when the auto-copy option is disabled or if no files are copied.

```
switch# show boot auto-copy list
No file currently being auto-copied
```

show callhome

To display related Call Home information configured on a switch, use the **show callhome** command.

show callhome [**destination-profile** *profile*] [**transport-email**]

Syntax Description

destination-profile *profile*	Shows callhome destination profile information for the specified profile.
transport-email	Shows callhome email transport information.

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 displays configured callhome information.

```
switch# show callhome
callhome enabled
Callhome Information:
contact person name:who@where
contact person's email:person@place.com
contact person's phone number:310-408-4000
street addr:1234 Picaboo Street, Any city, Any state, 12345
site id:Site1ManhattanNewYork
customer id:Customer1234
contract id:Andiamo1234
switch priority:0
```

The following example displays destination profile information.

```
switch# show callhome destination-profile
XML destination profile information
maximum message size:250000
email addresses configured:
findout@.cisco.com

Short-txt destination profile information
maximum message size:4000
email addresses configured:
person1@epage.company.com

full-txt destination profile information
maximum message size:250000
email addresses configured:
person2@company2.com
```

The following example displays the full-text profile.

```
switch# show callhome destination-profile profile full-txt-destination
full-txt destination profile information
maximum message size:250000
email addresses configured:
person2@company2.com
```

The following example displays the short-text profile.

```
switch# show callhome destination-profile profile short-txt-destination
Short-txt destination profile information
maximum message size:4000
email addresses configured:
person2@company2.com
```

The following example displays the XML destination profile.

```
switch# show callhome destination-profile profile XML-destination
XML destination profile information
maximum message size:250000
email addresses configured:
findout@.cisco.com
```

The following example displays e-mail and SMTP information.

```
switch# show callhome transport-email
from email addr:user@company1.com
reply to email addr:pointer@company.com
return receipt email addr:user@company1.com
smtp server:server.company.com
smtp server port:25
```

show cdp

To display CDP parameters configured globally or for a specific interface, use the **show cdp** command.

show cdp { all | entry [all | name *cdp-name* **] | global | interface [gigbitethernet** *slot-port* **| mgmt 0] | neighbors [detail | interface (gigbitethernet** *slot-port* **| mgmt 0)] | traffic interface [gigbitethernet** *slot-port* **| mgmt 0]}**

Syntax Description

all	Displays all enabled CDP interfaces.
entry	Displays CDP database entries.
all	Displays all CDP entries in the database
name	Displays CDP entries that match a specified name.
cdp-name	Specifies the name matching a CDP entry (restricted to 256 characters).
global	Displays global CDP parameters.
interface	Displays CDP parameters for an interface.
gigabitethernet	Specifies the Gigabit Ethernet interface.
slot-port	Specifies the slot number and port number separated by a slash (/).
mgmt 0	Specifies the Ethernet management interface.
neighbors	Displays all CDP neighbors.
detail	Displays detailed information for all CDP neighbors
interface	Displays CDP information for neighbors on a specified interface.
traffic	Displays CDP traffic statistics for an interface.

Defaults

None

Command Modes

EXEC

Command History

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

Usage Guidelines

This command is allowed only on the active supervisor module in the Cisco MDS 9500 Series.

Examples

The following example displays all CDP capable interfaces and parameters.

```
switch# show cdp all
GigabitEthernet4/1 is up
    CDP enabled on interface
    Sending CDP packets every 60 seconds
    Holdtime is 180 seconds
GigabitEthernet4/8 is down
    CDP enabled on interface
    Sending CDP packets every 60 seconds
    Holdtime is 180 seconds
mgmt0 is up
    CDP enabled on interface
    Sending CDP packets every 100 seconds
    Holdtime is 200 seconds
```

The following example displays all CDP neighbor entries.

```
switch# show cdp entry all
----------------------------------------
Device ID:069038747(Kiowa3)
Entry address(es):
    IP Address: 172.22.92.5
Platform: WS-C5500, Capabilities: Trans-Bridge Switch
Interface: mgmt0, Port ID (outgoing port): 5/22
Holdtime: 136 sec

Version:
WS-C5500 Software, Version McpSW: 2.4(3) NmpSW: 2.4(3)
Copyright (c) 1995-1997 by Cisco Systems

Advertisement Version: 1
```

The following example displays the specified CDP neighbor.

```
switch# show cdp entry name 0
----------------------------------------
Device ID:0
Entry address(es):
    IP Address: 0.0.0.0
Platform: DS-X9530-SF1-K9, Capabilities: Host
Interface: GigabitEthernet4/1, Port ID (outgoing port): GigabitEthernet4/1
Holdtime: 144 sec

Version:
1.1(0.144)

Advertisement Version: 2
Duplex: full
```

The following example displays global CDP parameters.

```
switch# show cdp global
Global CDP information:
    CDP enabled globally
    Sending CDP packets every 60 seconds
    Sending a holdtime value of 180 seconds
    Sending CDPv2 advertisements is enabled
```

The following example displays CDP parameters for the management interface.

```
switch# show cdp interface mgmt 0
mgmt0 is up
    CDP enabled on interface
    Sending CDP packets every 60 seconds
    Holdtime is 180 seconds
```

The following example displays CDP parameters for the Gigabit Ethernet interface.

```
switch# show cdp interface gigabitethernet 4/1
GigabitEthernet4/1 is up
    CDP enabled on interface
    Sending CDP packets every 80 seconds
    Holdtime is 200 seconds
```

The following example displays CDP Neighbors (brief).

```
switch# show cdp neighbors
Capability Codes: R - Router, T - Trans-Bridge, B - Source-Route-Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater

Device ID        Local Intrfce   Hldtme  Capability  Platform      Port ID
0                Gig4/1          135     H           DS-X9530-SF1- Gig4/1
069038732(Kiowa2 mgmt0           132     T S         WS-C5500      8/11
069038747(Kiowa3 mgmt0           156     T S         WS-C5500      6/20
069038747(Kiowa3 mgmt0           158     T S         WS-C5500      5/22
```

The following example displays CDP neighbors (detail).

```
switch# show CDP neighbor detail
----------------------------------------
Device ID:0
Entry address(es):
    IP Address: 0.0.0.0
Platform: DS-X9530-SF1-K9, Capabilities: Host
Interface: GigabitEthernet4/1, Port ID (outgoing port): GigabitEthernet4/1
Holdtime: 162 sec

Version:
1.1(0.144)

Advertisement Version: 2
Duplex: full
----------------------------------------
Device ID:069038732(Kiowa2)
Entry address(es):
    IP Address: 172.22.91.5
Platform: WS-C5500, Capabilities: Trans-Bridge Switch
Interface: mgmt0, Port ID (outgoing port): 8/11
Holdtime: 132 sec

Version:
WS-C5500 Software, Version McpSW: 2.4(3) NmpSW: 2.4(3)
Copyright (c) 1995-1997 by Cisco Systems

Advertisement Version: 1
```

The following example displays the specified CDP neighbor (detail).

```
switch# show CDP neighbors interface gigabitethernet 4/1 detail
----------------------------------------
Device ID:0
Entry address(es):
    IP Address: 0.0.0.0
Platform: DS-X9530-SF1-K9, Capabilities: Host
Interface: GigabitEthernet4/1, Port ID (outgoing port): GigabitEthernet4/1
Holdtime: 144 sec

Version:
1.1(0.144)

Advertisement Version: 2
Duplex: full
```

The following example displays CDP traffic statistics for the management interface.

```
switch# show cdp traffic interface mgmt 0
----------------------------------------
Traffic statistics for mgmt0
Input Statistics:
    Total Packets: 1148
    Valid CDP Packets: 1148
        CDP v1 Packets: 1148
        CDP v2 Packets: 0
    Invalid CDP Packets: 0
        Unsupported Version: 0
        Checksum Errors: 0
        Malformed Packets: 0

Output Statistics:
    Total Packets: 2329
        CDP v1 Packets: 1164
        CDP v2 Packets: 1165
    Send Errors: 0
```

The following example displays CDP traffic statistics for the Gigabit Ethernet interface

```
switch# show cdp traffic interface gigabitethernet 4/1
----------------------------------------
Traffic statistics for GigabitEthernet4/1
Input Statistics:
    Total Packets: 674
    Valid CDP Packets: 674
        CDP v1 Packets: 0
        CDP v2 Packets: 674
    Invalid CDP Packets: 0
        Unsupported Version: 0
        Checksum Errors: 0
        Malformed Packets: 0

Output Statistics:
    Total Packets: 674
        CDP v1 Packets: 0
        CDP v2 Packets: 674
    Send Errors: 0
```

show clock

To show the system date and time and verify the time zone configuration., use the **show clock** command.

show clock

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

```
switch# show clock
Fri Mar 14 01:31:48 UTC 2003
```

show cores

To shows all the cores presently available for upload from active sup, use the **show cores** command.

show 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

None.

Examples

In the following example, an FSPF core was generated on the active supervisor (slot 5), an FCC core on the standby supervisor (slot 6) and acltcam and fib on module (slot 8).

```
switch# show cores

Module-num     Process-name       PID     Core-create-time
----------     ------------       ---     ----------------
5               fspf             1524     Jan 9 03:11
6               fcc               919     Jan 9 03:09
8               acltcam           285     Jan 9 03:09
8               fib               283     Jan 9 03:08
```

show environment

To display all environment-related switch information (status of chassis clock, chassis fan modules, power supply modules, power supply redundancy mode and power usage summary, module temperature thresholds and alarm status, use the **show environment** command.

show environment [clock | fan | power | temperature]

Syntax Description

clock	Displays status of chassis clock modules
fan	Displays status of chassis fan modules
power	Displays status of power supply modules, power supply redundancy mode and power usage summary.
temperature	Displays module temperature thresholds and alarm status of temperature sensors.

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 displays the status and alarm states of the clock, fan, power supply and temperature sensors.

```
switch# show environment
switch-180# show env
Clock:
--------------------------------------------------------------
Clock           Model                Hw         Status
--------------------------------------------------------------
A               DS-C9500-CL          0.0        ok/active
B               DS-C9500-CL          0.0        ok/standby


Fan:
-----------------------------------------------------
Fan             Model                Hw         Status
-----------------------------------------------------
Chassis         WS-9SLOT-FAN         0.0        ok
PS-1            --                   --         ok
PS-2            --                   --         ok
```

```
Temperature:
-----------------------------------------------------------------
Module   Sensor   MajorThresh   MinorThres   CurTemp     Status
                  (Celsius)     (Celsius)    (Celsius)
-----------------------------------------------------------------
1        Outlet   75            60           38          ok
1        Intake   65            50           35          ok

5        Outlet   75            60           36          ok
5        Intake   65            50           36          ok

6        Outlet   75            60           40          ok
6        Intake   65            50           33          ok

9        Outlet   75            60           28          ok
9        Intake   65            50           40          ok

Power Supply:
-----------------------------------------------------
PS  Model                Power     Power       Status
                         (Watts)   (Amp @42V)
-----------------------------------------------------
1   DS-CAC-2500W         1153.32   27.46       ok
2   WS-CAC-2500W         1153.32   27.46       ok

Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp @42V)  (Watts)   (Amp @42V)
--- -------------------  -------   ----------  --------- ----------  ----------
1    DS-X9016            220.08    5.24        220.08    5.24        powered-up
5    DS-X9530-SF1-K9     220.08    5.24        220.08    5.24        powered-up
6    DS-X9530-SF1-K9     220.08    5.24        220.08    5.24        powered-up
9    DS-X9016            220.08    5.24        220.08    5.24        powered-up

Power Usage Summary:
--------------------
Power Supply redundancy mode:                  non-redundant (combined)

Total Power Capacity                           2306.64  W

Power reserved for Supervisor(s)[-]            440.16   W
Power reserved for Fan Module(s)[-]            210.00   W
Power currently used by Modules[-]             440.16   W

                                               -------
Total Power Available                          1216.32  W
                                               -------
```

Related Commands

Command	Description
show hardware	Displays all hardware components on a system.

show fc2

To display fc2 information, use the **show fc2** command.

show fc2 {bind | classf | exchange | exchresp | flogi | nport | plogi | plogi_pwwn | port | port brief | socket | sockexch | socknotify | socknport | vsan}

Syntax Description

bind	Shows fc2 socket bindings.
classf	Shows fc2 classf sessions.
exchange	Shows fc2 active exchanges.
exchresp	Shows fc2 active responder exchanges.
flogi	Shows fc2 flogi table.
nport	Shows fc2 local Nports.
plogi	Shows fc2 plogi sessions.
plogi_pwwn	Shows fc2 plogi pwwn entries.
port ***brief***	Shows fc2 physical port table.
socket	Shows fc2 active sockets.
sockexch	Shows fc2 active exchanges for each socket.
socknotify	Shows fc2 local nport plogi/logo notifications per each socket.
socknport	Shows fc2 local nports per each socket.
vsan	Shows fc2 vsan table.

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

```
switch# show fc2 socket
SOCKET   REFCNT PROTOCOL       PID   RCVBUF  RMEM_USED      QLEN    NOTSK
b2a64b20        2        0     1421    65535          0         0        0
b2a647e0        3        0     1418   262142          0         0        0
b2a644a0        3        0     1417    65535          0         0        0
b2a64160        3        0     1417   262142          0         0        0
b294b180        3        0     1411    65535          0         0        0
b294ae40        3        0     1411    65535          0         0        0
b294a7c0        3        0     1410    65535          0         0        0
b294a480        2        7     1410    65535          0         0        0
b294a140        3        0     1409   262142          0         0        0
b278bb20        3        0     1409   262142          0         0        0
b278b4a0        3        0     1407    65535          0         0        0
b278b160        3        0     1407   256000          0         0        0
b278ae20        3        0     1407    65535          0         0        0
b1435b00        3        0     1408    65535          0         0        0
b1434e00        3        0     1406    65535          0         0        0
b1434ac0        3        0     1406   131072          0         0        0
b1434780        3        0     1406    65535          0         0        0
b1434440        2        0     1405   131072          0         0        0
b1434100        3        0     1405   262142          0         0 b1434440
b22e2420        2        0     1372    65535          0         0        0
...
switch# show fc2 bind
  SOCKET RULE   SINDEX   VSAN     D_ID     MASK TYPE  SUBTYPE M_VALUES
b23ba0c0   16  6081000      1        0        0    0 00:00:00 00:00:00:00:00:00:00:00
b2a647e0    7 ffffffff  65535   fffffd   ffffff   22 03:01:00 14:15:16:00:00:00:00:00
b294b180    7 ffffffff  65535   fffffd   ffffff    1 02:01:00 61:62:00:00:00:00:00:00
b294ae40    7 ffffffff  65535   fffc00   ffff00   22 01:01:00 1b:00:00:00:00:00:00:00
b294a7c0    7 ffffffff  65535   fffffd   ffffff    1 01:01:00 10:00:00:00:00:00:00:00
...
switch# show fc2 nport
REF   VSAN   D_ID   MASK   FL   ST  IFINDEX   CF   TC 2-SO   IC   RC   RS   CS
 EE 3-SO   IC   RC   RS   CS   EE
  1  65535 fffffd ffffff    3    0 ffffffff c800 0128 8000 0000 0000 2112 0064 0
008 8000 0000 0000 2112 0064 0000
  6  65535 fffc00 ffff00  18b    0 ffffffff c800 0128 8000 0000 0000 2112 0064 0
008 8000 0000 0000 2112 0064 0000
  2  65535 fffffa ffffff    3    0 ffffffff c800 0128 8000 0000 0000 2112 0064 0
008 8000 0000 0000 2112 0064 0000
  1  65535 fffffc ffffff    3    0 ffffffff c800 0128 8000 0000 0000 2112 0064 0
008 8000 0000 0000 2112 0064 0000
...
switch# show fc2 plogi
HIX  ADDRESS   VSAN   S_ID   D_ID  IFINDEX   FL  STATE   CF   TC 2-SO   IC   RC
  RS   CS   EE 3-SO   IC   RC   RS   CS   EE EECNT TCCNT 2CNT 3CNT REFCNT
2157 af364064      1 fffc6c 123400 ffffffff 0000      0 0000 0001 8000 0000 2000
 0256 0001 0001 8000 0000 2000 0256 0001 0000     0     0    0    0      1

switch# show fc2 port
 IX ST MODE EMUL   TXPKTS   TXDROP    TXERR   RXPKTS   RXDROP  R_A_TOV  E_D_TOV
F-SO   RC   RS   CS   EE 2-SO   RS 3-SO   RS
  0  D    1    0        0        0        0        0        0    10000     2000
8000 0000 2112 0001 0001 8000 0256 8000 0256
  1  D    1    0        0        0        0        0        0    10000     2000
8000 0000 2112 0001 0001 8000 0256 8000 0256
  2  D    1    0        0        0        0        0        0    10000     2000
8000 0000 2112 0001 0001 8000 0256 8000 0256
  3  D    1    0        0        0        0        0        0    10000     2000
8000 0000 2112 0001 0001 8000 0256 8000 0256
  4  D    1    0        0        0        0        0        0    10000     2000
8000 0000 2112 0001 0001 8000 0256 8000 0256
...
```

```
switch# show fc2 socknotify
  SOCKET  ADDRESS REF   VSAN   D_ID   MASK   FL   ST  IFINDEX
b2a64160 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff
b294a7c0 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff
af8a3a60 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff

switch# show fc2 socknport
  SOCKET  ADDRESS REF   VSAN   D_ID   MASK   FL   ST  IFINDEX
b2a64160 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff
b294b180 b27f0294   1  65535 fffffd ffffff    3    0 ffffffff
b294a7c0 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff
b278ae20 b27f0134   2  65535 fffffa ffffff    3    0 ffffffff
b1434e00 b27f0134   2  65535 fffffa ffffff    3    0 ffffffff
b1434780 b27f0084   1  65535 fffffc ffffff    3    0 ffffffff
af8a3a60 b27f01e4   6  65535 fffc00 ffff00  18b    0 ffffffff

switch# show fc2 vsan
  VSAN      X_ID  E_D_TOV  R_A_TOV                      WWN
     1         4     2000    10000  20:01:00:05:30:00:58:1f
     2         1     2000    10000  20:02:00:05:30:00:58:1f
     3         1     2000    10000  20:03:00:05:30:00:58:1f
     4         1     2000    10000  20:04:00:05:30:00:58:1f
     5         1     2000    10000  20:05:00:05:30:00:58:1f
     6         1     2000    10000  20:06:00:05:30:00:58:1f
     7         1     2000    10000  20:07:00:05:30:00:58:1f
     8         1     2000    10000  20:08:00:05:30:00:58:1f
     9         1     2000    10000  20:09:00:05:30:00:58:1f
    10         1     2000    10000  20:0a:00:05:30:00:58:1f
    11         1     2000    10000  20:0b:00:05:30:00:58:1f
    12         1     2000    10000  20:0c:00:05:30:00:58:1f
    13         1     2000    10000  20:0d:00:05:30:00:58:1f
    14         1     2000    10000  20:0e:00:05:30:00:58:1f
    15         1     2000    10000  20:0f:00:05:30:00:58:1f
    16         1     2000    10000  20:10:00:05:30:00:58:1f
    17         1     2000    10000  20:11:00:05:30:00:58:1f
    18         1     2000    10000  20:12:00:05:30:00:58:1f
....
```

show fcalias

Use the **show fcalias** command to display fcalias configuration.

show fcalias [name *string***] [active] [vsan** *vsan-range***]**

Syntax Description

name *string*	Shows members of a specified fcalias
active	Shows aliases which are part of active zoneset
vsan *vsan-range*	Shows aliases belonging to the specified VSAN range. The VSAN ID range 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 example displays fcalias configuration.

```
switch# show fcalias vsan 1
fcalias name Alias2 vsan 1

fcalias name Alias1 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:9c:48:e5
```

show fcanalyzer

Use the **show fcanalyzer** command to display the list of hosts configured for a remote capture.

show fcanalyzer

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 `DEFAULT` keyword shown with an `ActiveClient` entry specifies that the default port is used in attempting the connection to the client.

Examples

Displays Configured Hosts

```
switch# show fcanalyzer
PassiveClient = 10.21.0.3
PassiveClient = 10.21.0.3
ActiveClient = 10.21.0.3, DEFAULT
```

show fcc

Use the **show fcc** commands to view FCC settings.

show fcc

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

Displays Configured FCC Information

```
switch# show fcc
fcc is disabled
fcc is applied to frames with priority up to 4
```

show fcdomain

To show the fcdomain information, use the **show fcdomain** command.

show fcdomain {address-allocation [cache] | domain-list | fcid persistent | statistics | interface | vsan [*vsan-id* | *vsan-range***]}**

Syntax Description

address-allocation	Shows statistics for the fcid allocation
cache	The cache is used by the principle switch to reassign the FC IDs for a device (disk or host) that exited and reentered the fabric. In the cache content, VSAN refers to the VSAN that contains the device, WWN refers to the device that owned the FC IDs, and mask refers to a single or entire area of FC IDs.
domain-list	Shows list of domain ids granted by the principal sw
fcid persistent	Shows persistent FCIDs (across reboot)
statistics *interface*	Shows the statistics of fcdomain
vsan *vsan-id* | *vsan-range*	The ID or range of the VSAN (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

Issuing the **show fcdomain** with no arguments shows all VSANs. The VSANs should be active or you will get an error.

Examples

switch# **show fcdomain vsan 1**

```
The local switch is a Subordinated Switch.

Local switch run time information:
        State: Stable
        Local switch WWN:    20:01:00:05:30:00:51:1f
        Running fabric name: 10:00:00:60:69:22:32:91
        Running priority: 128
        Current domain ID: 0x64(100) ß verify domain id

Local switch configuration information:
        State: Enabled
        Auto-reconfiguration: Disabled
        Contiguous-allocation: Disabled
        Configured fabric name: 41:6e:64:69:61:6d:6f:21
        Configured priority: 128
        Configured domain ID: 0x64(100) (preferred)
```

```
Principal switch run time information:
        Running priority: 2

Interface               Role          RCF-reject
----------------    -------------    ------------
fc2/1               Downstream       Disabled
fc2/2               Downstream       Disabled
fc2/7               Upstream         Disabled
----------------    -------------    ------------

switch# show fcdomain domain-list vsan 1

Number of domains: 5
Domain ID              WWN
---------    -----------------------
 0x61(97)    10:00:00:60:69:50:0c:fe
 0x62(98)    20:01:00:05:30:00:47:9f
 0x63(99)    10:00:00:60:69:c0:0c:1d
0x64(100)    20:01:00:05:30:00:51:1f [Local]
0x65(101)    10:00:00:60:69:22:32:91 [Principal]
---------    -----------------------

switch# show fcdomain vsan 1
The local switch is a Subordinated Switch.

Local switch run time information:
        State: Stable
        Local switch WWN:    20:01:00:05:30:00:47:9f
        Running fabric name: 10:00:00:60:69:22:32:91
        Running priority: 128
        Current domain ID: 0x62(98) ß verify domain

Local switch configuration information:
        State: Enabled
        Auto-reconfiguration: Disabled
        Contiguous-allocation: Disabled
        Configured fabric name: 41:6e:64:69:61:6d:6f:21
        Configured priority: 128
        Configured domain ID: 0x62(98) (preferred)

Principal switch run time information:

        Running priority: 2

Interface               Role          RCF-reject
----------------    -------------    ------------
fc1/1               Upstream         Disabled
fc1/3               Non-principal    Disabled
fc1/6               Non-principal    Disabled
----------------    -------------    ------------
```

show fcdroplatency

To view the configured latency parameters, use the **show fcdroplatency** command.

show fcdroplatency [network | switch]

Syntax Description

network	Network latency in milliseconds.
switch	Switch latency in milliseconds.

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

```
switch# show fcdroplatency
switch latency value:4000 milliseconds
network latency value:5000 milliseconds
```

show fcflow stats

To view the configured fcflow information, use the **show fcflow stats** command.

show fcflow stats

Syntax Description

aggregated	Shows aggregated fcflow statistics.
module *module-number*	Shows fcflow statistics for a specified module. The module number is a number from 1-9.
usage	Shows flow index usage

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 displays aggregated fcflow details for the specified module.

```
switch# show fcflow stats aggregated module 2
Idx  VSAN # frames # bytes
---- ---- -------- -------
0000 4    387,653  674,235,875
0001 6    34,402   2,896,628
```

The following example displays fcflow details for the specified module.

```
switch# show fcflow stats module 2
Idx  VSAN D ID        S ID        mask      # frames # bytes
---- ---- ----------- ----------- -----     -------- -------
0000 4    032.001.002 007.081.012 ff.ff.ff   387,653  674,235,875
0001 6    004.002.001 019.002.004 ff.00.00   34,402   2,896,628
```

The following example displays fcflow index usage for the specified module.

```
switch# show fcflow stats usage module 2
2 flows configured
configured flow : 3,7
```

show fcfwd

To view the configured fcfwd tables and statistics, use the **show fcfwd** command.

show fcfwd {idxmap [interface-toport | port-to-interface | statistics] | pcmap [interface] |sfib [multicast | statistics | unicast] | spanmap [rx | tx]}

Syntax Description

idxmap	Shows FC fwd index tables.
interface-to-port	Shows interface index to port index table.
port-to-interface	Shows port index to interface index table.
statistics	Shows index table statistics.
pcmap	Shows FC fwd PortChannel table.
interface	Shows PortChannel table for an interface.
sfib	Shows software forwarding tables.
multicast	Shows multicast software forwarding tables.
statistics	Shows software forwarding statistics.
unicast	Shows unicast software forwarding tables.
spanmap	Shows spanmap tables.
rx	Shows spanmap table in ingress -rx direction.
tx	Shows spanmap table in egress -tx direction.

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

```
switch# show fcfwd spanmap rx
SPAN source information: size [c8]
dir source                vsan   bit   drop_thresh destination

switch# show fcfwd idxmap statistics
idxmap statistics:
```

show fcip profile

You can check the status of an interface at any time by using the **show interface** command.

show fcip profile [*profile-id*

Syntax Description

fcip profile	Shows the information for all FCIP profiles.
profile-id	Shows the information for the specified profile from 1 to 255.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following example displays all FCIP profiles.

```
switch# show fcip profile
-----------------------------------------------------
ProfileId       Ipaddr          TcpPort
-----------------------------------------------------
1               41.1.1.2        3225
2               10.10.100.154   3225
3               43.1.1.2        3225
4               44.1.1.100      3225
6               46.1.1.2        3225
7               47.1.1.2        3225
```

The following example displays information for a specified FCIP profile.

```
switch# show fcip profile 7
FCIP Profile 7
    Internet Address is 47.1.1.2 (interface GigabitEthernet4/7)
    Listen Port is 3225
    TCP parameters
        SACK is disabled
        PMTU discovery is enabled, reset timeout is 3600 sec
        Keep alive is 60 sec
        Minimum retransmission timeout is 300 ms
        Maximum number of re-transmissions is 4
        Send buffer size is 0 KB
        Maximum allowed bandwidth is 1000000 kbps
        Minimum available bandwidth is 15000 kbps
        Estimated round trip time is 1000 usec
```

show fcns database

Use the **show fcns database** command to display the results of the discovery, or to display the name server database for a specified VSAN or for all VSANs.

show fcns database {detail [vsan *vsan-id*] **| domain** *domain-id* **[detail] vsan** *vsan-range* **|** *fcid fcid-id* **|** *local [detail]vsan vsan-range]* **|** *vsan vsan-id}*

Syntax Description

detail	Shows all objects in each entry.
vsan *vsan-id*	Shows entries for a specified VSAN or VSANs (from 1 to 4093.).
domain *domain-id*	Shows entries in a domain.
fcid *fcid-id*	Shows entry for the given port.
local	Shows local entries.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

The discovery can take several minutes to complete, especially if the fabric is large fabric or if several devices are slow to respond.

Examples

```
switch# show fcns database
VSAN 1:
-----------------------------------------------------------------------
FCID        TYPE  PWWN                    (VENDOR)        FC4-TYPE:FEATURE
-----------------------------------------------------------------------
0x9c0000    N     21:00:00:e0:8b:08:96:22 (Company 1)        scsi-fcp:init
0x9c0100    N     10:00:00:05:30:00:59:1f (Company 2)       ipfc
0x9c0200    N     21:00:00:e0:8b:07:91:36 (Company 3)        scsi-fcp:init
0x9c03d6    NL    21:00:00:20:37:46:78:97 (Company 4)       scsi-fcp:target
0x9c03d9    NL    21:00:00:20:37:5b:cf:b9 (Company 4)       scsi-fcp:target
0x9c03da    NL    21:00:00:20:37:18:6f:90 (Company 4)       scsi-fcp:target
0x9c03dc    NL    21:00:00:20:37:5a:5b:27 (Company 4)       scsi-fcp:target
0x9c03e0    NL    21:00:00:20:37:36:0b:4d (Company 4)       scsi-fcp:target
0x9c03e1    NL    21:00:00:20:37:39:90:6a (Company 4)       scsi-fcp:target
0x9c03e2    NL    21:00:00:20:37:18:d2:45 (Company 4)       scsi-fcp:target
0x9c03e4    NL    21:00:00:20:37:6b:d7:18 (Company 4)       scsi-fcp:target
0x9c03e8    NL    21:00:00:20:37:38:a7:c1 (Company 4)       scsi-fcp:target
0x9c03ef    NL    21:00:00:20:37:18:17:d2 (Company 4)       scsi-fcp:target

Total number of entries = 13
```

show fcns statistics

Use the **show fcns statistics** command to display the statistical information for a specified VSAN or for all VSANs.

show fcns statistics [detail] vsan *vsan-range*

Syntax Description

detail	Shows detailed statistics.
vsan *vsan-range*	Shows statistics for the specified VSAN or VSANs (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

```
switch# show fcns statistics
registration requests received = 27
deregistration requests received = 0
queries received = 57
queries sent = 10
reject responses sent = 14
RSCNs received = 0
RSCNs sent = 0
switch#
```

show fcroute

Use the **show fcroute** command to view specific information about existing Fibre Channel and FSPF configurations.

show fcroute [distance | label [*label***] vsan** *vsan-id* **| multicast vsan** *vsan-id* **|summary vsan** *vsan-id* **| unicast** *fc-id* **vsan** *vsan-id* **| unicast vsan** *vsan-id***]**

Syntax Description

distance	Shows FC route preference.
label	Shows label routes.
multicast	Shows FC multicast routes.
summary	Shows FC routes summary.
unicast	Shows FC unicast routes.
vsan *vsan-id*	The ID of the VSAN (from 1 to 4093).
fcid-id	The Fibre Channel ID.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

When the number of routes are displayed in the command output, both visible and hidden routes are included in the total number of routes.

Examples

The following example displays administrative distance.

```
switch# show fcroute distance

        Route
UUID    Distance        Name
----    --------        ----
10      20              RIB
22      40              FCDOMAIN
39      80              RIB-CONFIG
12      100             FSPF
17      120             FLOGI
21      140             TLPM
14      180             MCAST
64      200             RIB-TEST
```

The following example displays multicast routing information.

```
switch# show fcroute multicast
VSAN FC ID    # Interfaces
---- -------- ------------
1    0xffffff 0
2    0xffffff 1
3    0xffffff 1
4    0xffffff 0
5    0xffffff 0
6    0xffffff 0
7    0xffffff 0
8    0xffffff 0
9    0xffffff 0
10   0xffffff 0
```

The following example displays FCID information for a specified VSAN.

```
switch# show fcroute multicast vsan 3

VSAN FC ID    # Interfaces
---- -------- ------------
3    0xffffff 1
```

The following example displays FCID and interface information for a specified VSAN.

```
switch# show fcroute multicast 0xffffff vsan 2

VSAN FC ID    # Interfaces
---- -------- ------------
2    0xffffff 1
  fc1/1
```

The following example displays unicast routing information.

```
switch# show fcroute unicast
D:direct R:remote P:permanent V:volatile A:active N:non-active
                                                  # Next
Protocol VSAN    FC ID/Mask     RCtl/Mask Flags Hops   Cost
-------- ---- -------- -------- ---- ---- ----- ------ ----
static   1    0x010101 0xffffff 0x00 0x00 D P A 1      10
static   2    0x111211 0xffffff 0x00 0x00 R P A 1      10
fspf     2    0x730000 0xff0000 0x00 0x00 D P A 4      500
fspf     3    0x610000 0xff0000 0x00 0x00 D P A 4      500
static   4    0x040101 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040102 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040103 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040104 0xffffff 0x00 0x00 R P A 1      103
static   4    0x111211 0xffffff 0x00 0x00 D P A 1      10
```

The following example displays unicast routing information for a specified VSAN.

```
switch# show fcroute unicast vsan 4

D:direct R:remote P:permanent V:volatile A:active N:non-active
                                                  # Next
Protocol VSAN    FC ID/Mask     RCtl/Mask Flags Hops   Cost
-------- ---- -------- -------- ---- ---- ----- ------ ----
static   4    0x040101 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040102 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040103 0xffffff 0x00 0x00 R P A 1      103
static   4    0x040104 0xffffff 0x00 0x00 R P A 1      103
static   4    0x111211 0xffffff 0x00 0x00 D P A 1      10
```

The following example displays unicast routing information for a specified FCID.

```
switch# show fcroute unicast 0x040101 0xffffff vsan 4

D:direct R:remote P:permanent V:volatile A:active N:non-active
                                                    # Next
Protocol VSAN    FC ID/Mask     RCtl/Mask Flags Hops   Cost
-------- ---- -------- -------- ---- ---- ----- ------ ----
static   4    0x040101 0xffffff 0x00 0x00 R P A 1      103
  fc1/2 Domain 0xa6(166)
```

The following example displays route database information.

```
switch# show fcroute summary

FC route database created Tue Oct 29 01:24:23 2002
VSAN    Ucast   Mcast   Label   Last Modified Time
----    -----   -----   -----   ------------------
1       2       1       0       Tue Oct 29 18:07:02 2002
2       3       1       0       Tue Oct 29 18:33:24 2002
3       2       1       0       Tue Oct 29 18:10:07 2002
4       6       1       0       Tue Oct 29 18:31:16 2002
5       1       1       0       Tue Oct 29 01:34:39 2002
6       1       1       0       Tue Oct 29 01:34:39 2002
7       1       1       0       Tue Oct 29 01:34:39 2002
8       1       1       0       Tue Oct 29 01:34:39 2002
9       1       1       0       Tue Oct 29 01:34:39 2002
10      1       1       0       Tue Oct 29 01:34:39 2002
Total   19      10      0
```

The following example displays route database information for a specified VSAN.

```
switch# show fcroute summary vsan 4

FC route database created Tue Oct 29 01:24:23 2002
VSAN    Ucast   Mcast   Label   Last Modified Time
----    -----   -----   -----   ------------------
4       6       1       0       Tue Oct 29 18:31:16 2002
Total   6       1       0
```

show fcs

Use the **show fcs** commands to display the status of the fabric configuration.

show fcs {database vsan *vsan-range* **| ie [nwwn** *wwn* **vsan** *vsan-range* **| vsan** *vsan-range*] **|**
platform [name *string* **vsan** *vsan-range* **| vsan** *vsan-range]* **| port [pwwn** *wwn* **vsan**
vsan-range **| vsan** *vsan-range]* **| statistics vsan** *vsan-range* **| vsan}**

Syntax Description

database	Shows local database of FCS.
ie	Shows Interconnect Element Objects Information.
platform	Shows Platform Objects Information.
port	Shows Port Objects Information.
statistics	Shows statistics for FCS packets.
vsan	Shows list of all the VSANs and plat-check-mode for each.
vsan-range	Range of the required VSANs (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 example displays FCS database information.

```
switch# show fcs database

FCS Local Database in VSAN: 1
------------------------------
Switch WWN               : 20:01:00:05:30:00:16:df
Switch Domain Id         : 0x7f(127)
Switch Mgmt-Addresses    : snmp://172.22.92.58/eth-ip
                           http://172.22.92.58/eth-ip
Fabric-Name              : 20:01:00:05:30:00:16:df
Switch Logical-Name      : 172.22.92.58
Switch Information List  : [Cisco Systems*DS-C9509*0*20:00:00:05:30:00
Switch Ports:
--------------------------------------------------------------------
Interface  pWWN                      Type     Attached-pWWNs
--------------------------------------------------------------------
fc2/1      20:41:00:05:30:00:16:de  TE       20:01:00:05:30:00:20:de
fc2/2      20:42:00:05:30:00:16:de  Unknown  None
fc2/17     20:51:00:05:30:00:16:de  TE       20:0a:00:05:30:00:20:de
```

```
FCS Local Database in VSAN: 5
------------------------------
Switch WWN               : 20:05:00:05:30:00:12:5f
Switch Domain Id         : 0xef(239)
Switch Mgmt-Addresses    : http://172.22.90.171/eth-ip
                           snmp://172.22.90.171/eth-ip
                           http://10.10.15.10/vsan-ip
                           snmp://10.10.15.10/vsan-ip
Fabric-Name              : 20:05:00:05:30:00:12:5f
Switch Logical-Name      : 172.22.90.171
Switch Information List  : [Cisco Systems*DS-C9509**20:00:00:05:30:00:12:5e]
Switch Ports:
-------------------------------------------------------------------
Interface  pWWN                     Type     Attached-pWWNs
-------------------------------------------------------------------
fc3/1      20:81:00:05:30:00:12:5e  TE       22:01:00:05:30:00:12:9e
fc3/2      20:82:00:05:30:00:12:5e  TE       22:02:00:05:30:00:12:9e
fc3/3      20:83:00:05:30:00:12:5e  TE       22:03:00:05:30:00:12:9e
```

The following example displays Interconnect Element object information for a specific VSAN.

```
switch# show fcs ie vsan  1

IE List for VSAN: 1
-------------------------------------------------------------------
IE-WWN                   IE-Type                          Mgmt-Id
-------------------------------------------------------------------
20:01:00:05:30:00:16:df  Switch (Local)                   0xfffc7f
20:01:00:05:30:00:20:df  Switch (Adjacent)                0xfffc64
[Total 2 IEs in Fabric]
```

This command displays Interconnect Element object information for a specific WWN.

```
switch# show fcs ie nwwn 20:01:00:05:30:00:16:df vsan 1
IE Attributes
-------------
Domain-Id = 0x7f(127)
Management-Id = 0xfffc7f
Fabric-Name = 20:01:00:05:30:00:16:df
Logical-Name = 172.22.92.58
Management Address List =
        snmp://172.22.92.58/eth-ip
        http://172.22.92.58/eth-ip
Information List:
        Vendor-Name = Cisco Systems
        Model Name/Number = DS-C9509
        Release-Code = 0
```

This command displays platform information.

```
switch# show fcs platform name SamplePlatform vsan 1
Platform Attributes
-------------------
Platform Node Names:
        11:22:33:44:55:66:77:88
Platform Type = Gateway
Platform Management Addresses:
        1.1.1.1
```

This command displays platform information within a specified VSAN.

```
switch# show fcs platform vsan 1
Platform List for VSAN: 1
Platform-Names
--------------
SamplePlatform
[Total 1 Platforms in Fabric]
```

This command displays FCS port information within a specified VSAN.

```
switch# show fcs port vsan 24
Port List in VSAN: 24
                -- IE WWN: 20:18:00:05:30:00:16:df  --
------------------------------------------------------------------------
Port-WWN                Type      Module-Type            Tx-Type
------------------------------------------------------------------------
20:41:00:05:30:00:16:de  TE_Port   SFP with Serial Id      Shortwave Laser

20:51:00:05:30:00:16:de  TE_Port   SFP with Serial Id      Shortwave Laser

[Total 2 switch-ports in IE]
                -- IE WWN: 20:18:00:05:30:00:20:df  --
------------------------------------------------------------------------
Port-WWN                Type      Module-Type            Tx-Type
------------------------------------------------------------------------
20:01:00:05:30:00:20:de  TE_Port   SFP with Serial Id      Shortwave Laser

20:0a:00:05:30:00:20:de  TE_Port   SFP with Serial Id      Shortwave Laser

[Total 2 switch-ports in IE]
```

This command displays ports within a specified WWN.

```
switch# show fcs port pwwn 20:51:00:05:30:00:16:de vsan 24
Port Attributes
---------------
Port Type = TE_Port
Port Number = 0x1090000
Attached-Port-WWNs:
        20:0a:00:05:30:00:20:de
Port State = Online
```

This command displays FCS statistics.

```
switch# show fcs statistics

FCS Statistics for VSAN: 1
---------------------------
FCS Rx Get Reqs   :2
FCS Tx Get Reqs   :7
FCS Rx Reg Reqs   :0
FCS Tx Reg Reqs   :0
FCS Rx Dereg Reqs :0
FCS Tx Dereg Reqs :0
FCS Rx RSCNs      :0
FCS Tx RSCNs      :3
FCS Rx RJTs       :3
FCS Tx RJTs       :0
FCS Rx ACCs       :4
FCS Tx ACCs       :2
FCS No Response   :0
FCS Retransmit    :0

FCS Statistics for VSAN: 30
---------------------------
FCS Rx Get Reqs   :2
FCS Tx Get Reqs   :2
FCS Rx Reg Reqs   :0
FCS Tx Reg Reqs   :0
FCS Rx Dereg Reqs :0
FCS Tx Dereg Reqs :0
FCS Rx RSCNs      :0
FCS Tx RSCNs      :0
FCS Rx RJTs       :0
FCS Tx RJTs       :0
FCS Rx ACCs       :2
FCS Tx ACCs       :2
FCS No Response   :0
FCS Retransmit    :0
```

show fctimer

To view the Fibre Channel timers, use the **show fctimer** command.

show fctimer [D_S_TOV | E_D_TOV | F_S_TOV | R_A_TOV]

Syntax Description

D_S_TOV	D_S_TOV in milliseconds
E_D_TOV	E_D_TOV in milliseconds
F_S_TOV	F_S_TOV in milliseconds
R_A_TOV	R_A_TOV in milliseconds

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

```
switch# show fctimer
F_S_TOV : 5000 milliseconds
D_S_TOV : 5000 milliseconds
E_D_TOV : 2000 milliseconds
R_A_TOV : 10000 milliseconds
```

show fc-tunnel

To view configured Fibre Channel tunnel information, use the **show fc-tunnel** command.

show fc-tunnel [explicit-path (*name* **) | tunnel-id-map]**

Syntax Description

fc-tunnel	Displays the configured state of the FC tunnel feature
explicit-path	Displays all configured explicit paths.
name	Displays the specified explicit path.
tunnel-id-map	Displays the mapping information for the outgoing interface.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

Multiple tunnel IDs can terminate at the same interface.

Examples

The following example displays the FC tunnel status

```
switch# show fc-tunnel
fc-tunnel is enabled
```

The following example displays the FC tunnel egress mapping information.

```
switch# show fc-tunnel tunnel-id-map
tunnel id egress interface
    150    fc3/1
    100     fc3/1
```

The following example displays explicit mapping information of the FC tunnel.

```
switch# show fc-tunnel explicit-path
Explicit path name: Alternate1
       10.20.1.2 loose
       10.20.1.3 strict
Explicit path name: User2
       10.20.50.1 strict
       10.20.50.4 loose
```

show file

To display the contents of a specified file in the file system, use the **show file** command.

show file *filename*

Syntax Description

filename	The name of the file for which you want to display contents.

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 displays the contents of the test file that resides in the slot0 directory.

```
switch# show file slot0:test
config t
Int fc1/1
no shut
end
show int
```

The following example displays the contents of a file residing in the current directory.

```
switch# show file myfile
```

show flogi database

To list all the flogi sessions through all interfaces across all vsans, use the **show flogi database** command.

show flogi database [fcid *fcid-id* **| interface** *interface* **| vsan** *vsan-id***]**

Syntax Description

fcid	Optional - filters flogi based on the fcid allocated.
interface	Optional - filters flogi based on the logged in interface.
vsan	Optional - filters flogi based on the vsan.
vsan-id	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

Output of this command is first sorted on interface and then on vsans.

In a Fibre Channel fabric, each host or disk requires an FC ID. Use the **show flogi** command to verify if a storage device is displayed in the Fabric login (FLOGI) table as in the examples below. If the required device is displayed in the FLOGI table, the fabric login is successful. Examine the flogi database on a switch that is directly connected to the host HBA and connected ports.

Examples

This command displays details on the FLOGI database.

```
switch# show flogi database
--------------------------------------------------------------------------------
INTERFACE  VSAN    FCID           PORT NAME               NODE NAME
--------------------------------------------------------------------------------
sup-fc0    2     0xb30100  10:00:00:05:30:00:49:63  20:00:00:05:30:00:49:5e
fc9/13     1     0xb200e2  21:00:00:04:cf:27:25:2c  20:00:00:04:cf:27:25:2c
fc9/13     1     0xb200e1  21:00:00:04:cf:4c:18:61  20:00:00:04:cf:4c:18:61
fc9/13     1     0xb200d1  21:00:00:04:cf:4c:18:64  20:00:00:04:cf:4c:18:64
fc9/13     1     0xb200ce  21:00:00:04:cf:4c:16:fb  20:00:00:04:cf:4c:16:fb
fc9/13     1     0xb200cd  21:00:00:04:cf:4c:18:f7  20:00:00:04:cf:4c:18:f7

Total number of flogi = 6.
```

This command displays the FLOGI interface.

```
switch# show flogi database interface fc1/11
INTERFACE       VSAN    FCID           PORT NAME               NODE NAME
--------------------- ---- -------- ----------------------- ---------------------
fc9/13     1 0xa002ef 21:00:00:20:37:18:17:d2 20:00:00:20:37:18:17:d2
fc9/13     1 0xa002e8 21:00:00:20:37:38:a7:c1 20:00:00:20:37:38:a7:c1
fc9/13     1 0xa002e4 21:00:00:20:37:6b:d7:18 20:00:00:20:37:6b:d7:18
fc9/13     1 0xa002e2 21:00:00:20:37:18:d2:45 20:00:00:20:37:18:d2:45
fc9/13     1 0xa002e1 21:00:00:20:37:39:90:6a 20:00:00:20:37:39:90:6a
fc9/13     1 0xa002e0 21:00:00:20:37:36:0b:4d 20:00:00:20:37:36:0b:4d
fc9/13     1 0xa002dc 21:00:00:20:37:5a:5b:27 20:00:00:20:37:5a:5b:27
fc9/13     1 0xa002da 21:00:00:20:37:18:6f:90 20:00:00:20:37:18:6f:90
fc9/13     1 0xa002d9 21:00:00:20:37:5b:cf:b9 20:00:00:20:37:5b:cf:b9
fc9/13     1 0xa002d6 21:00:00:20:37:46:78:97 20:00:00:20:37:46:78:97

Total number of flogi = 10.
```

This command displays the FLOGI VSAN.

```
switch# show flogi database vsan 1
--------------------------------------------------------------------------------
INTERFACE  VSAN    FCID           PORT NAME               NODE NAME
--------------------------------------------------------------------------------
fc9/13       1     0xef02ef  22:00:00:20:37:18:17:d2  20:00:00:20:37:18:17:d2
fc9/13       1     0xef02e8  22:00:00:20:37:38:a7:c1  20:00:00:20:37:38:a7:c1
fc9/13       1     0xef02e4  22:00:00:20:37:6b:d7:18  20:00:00:20:37:6b:d7:18
fc9/13       1     0xef02e2  22:00:00:20:37:18:d2:45  20:00:00:20:37:18:d2:45
fc9/13       1     0xef02e1  22:00:00:20:37:39:90:6a  20:00:00:20:37:39:90:6a
fc9/13       1     0xef02e0  22:00:00:20:37:36:0b:4d  20:00:00:20:37:36:0b:4d
fc9/13       1     0xef02dc  22:00:00:20:37:5a:5b:27  20:00:00:20:37:5a:5b:27
fc9/13       1     0xef02da  22:00:00:20:37:18:6f:90  20:00:00:20:37:18:6f:90
fc9/13       1     0xef02d9  22:00:00:20:37:5b:cf:b9  20:00:00:20:37:5b:cf:b9
fc9/13       1     0xef02d6  22:00:00:20:37:46:78:97  20:00:00:20:37:46:78:97

Total number of flogi = 10.
```

This command displays the FLOGI FCID.

```
switch# show flogi database fcid 0xef02e2
--------------------------------------------------------------------------------
INTERFACE  VSAN    FCID           PORT NAME               NODE NAME
--------------------------------------------------------------------------------
fc9/13       1     0xef02e2  22:00:00:20:37:18:d2:45  20:00:00:20:37:18:d2:45

Total number of flogi = 1.
```

Related Commands

Command	Description
show fcns database	Shows all the local and remote name server entries

show fspf

To display global FSPF information, use the **show fspf** command. This information includes:

- the domain number of the switch
- the autonomous region for the switch
- Min_LS_arrival: the minimum time that must elapse before the switch accepts LSR updates
- Min_LS_interval: the minimum time that must elapse before the switch can transmit an LSR
- LS_refresh_time: the interval lapse between refresh LSR transmissions
- Max_age: the maximum time aa LSR can stay before being deleted

show fspf database [vsan *vsan-id***] [domain** *domain-id* **[detail]**

show fspf interface

show fspf [vsan *vsan-id]* [**interface** [*interface range*]]

Syntax Description

database	To display information of fspf database for a VSAN. If no other parameters are given all the LSRs in the database are displayed. If more specific information is required then the domain number of the owner of the LSR may be given. Detail gives more detailed information on each LSR.
domain *domain-id*	The domain of the database. The parameter *domain_num* is unsigned integers in the range 0-255.
interface *interface*	Display FSPF interface information for a given VSAN. If the interface number is specified information on the neighbor on that interface is displayed. If no interface is specified information on all interfaces are displayed. The parameter *interface_range* is of the format fcslot/port - fcslot/port
vsan	Specifies the VSAN.
vsan-id	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

```
switch# show fspf vsan 1 interface fc 2/14
FSPF interface fc2/14 in VSAN 1
FSPF routing administrative state is active
Interface cost is 500
Timer intervals configured, Hello 20 s, Dead 80 s, Retransmit 5 s
FSPF State is FULL
Neighbor Domain Id is 0x03(3), Neighbor Interface index is 0x0001060d

Statistics counters :
   Number of packets received :LSU  184  LSA  184  Hello 5477  Error packets 0
   Number of packets transmitted :LSU  184  LSA  184  Hello 5478  Retransmitted
 LSU  0
  Number of times inactivity timer expired for the interface = 0
```

The following example displays FSPF interface information.

```
switch# show fspf interface vsan 1 fc1/1
FSPF interface fc1/1 in VSAN 1
FSPF routing administrative state is active
Interface cost is 500
Timer intervals configured, Hello 20 s, Dead 80 s, Retransmit 5 s
FSPF State is FULL
Neighbor Domain Id is 0x0c(12), Neighbor Interface index is 0x0f100000

Statistics counters :
   Number of packets received : LSU  8  LSA  8  Hello 118  Error packets 0
   Number of packets transmitted : LSU  8  LSA  8  Hello 119  Retransmitted LSU
 0
  Number of times inactivity timer expired for the interface = 0
```

The following example displays FSPF database information.

```
switch# show fspf database vsan 1

FSPF Link State Database for VSAN 1 Domain 0x0c(12)
LSR Type                = 1
Advertising domain ID   = 0x0c(12)
LSR Age                 = 1686
LSR Incarnation number  = 0x80000024
LSR Checksum            = 0x3caf
Number of links         = 2
 NbrDomainId      IfIndex   NbrIfIndex    Link Type         Cost
-------------------------------------------------------------------------------
   0x65(101) 0x0000100e     0x00001081               1          500
   0x65(101) 0x0000100f     0x00001080               1          500

FSPF Link State Database for VSAN 1 Domain 0x65(101)
LSR Type                = 1
Advertising domain ID   = 0x65(101)
LSR Age                 = 1685
LSR Incarnation number  = 0x80000028
LSR Checksum            = 0x8443
Number of links         = 6
 NbrDomainId      IfIndex   NbrIfIndex    Link Type         Cost
-------------------------------------------------------------------------------
   0xc3(195) 0x00001085     0x00001095               1          500
   0xc3(195) 0x00001086     0x00001096               1          500
   0xc3(195) 0x00001087     0x00001097               1          500
   0xc3(195) 0x00001084     0x00001094               1          500
    0x0c(12) 0x00001081     0x0000100e               1          500
    0x0c(12) 0x00001080     0x0000100f               1          500
```

```
FSPF Link State Database for VSAN 1 Domain 0xc3(195)
LSR Type                = 1
Advertising domain ID   = 0xc3(195)
LSR Age                 = 1686
LSR Incarnation number  = 0x80000033
LSR Checksum            = 0x6799
Number of links         = 4
 NbrDomainId      IfIndex   NbrIfIndex    Link Type         Cost
--------------------------------------------------------------------------------
   0x65(101) 0x00001095     0x00001085               1          500
   0x65(101) 0x00001096     0x00001086               1          500
   0x65(101) 0x00001097     0x00001087               1          500
   0x65(101) 0x00001094     0x00001084               1          500
```

This command displays FSPF information for a specified VSAN.

```
switch# show fspf vsan 1
FSPF routing for VSAN 1
FSPF routing administration status is enabled
FSPF routing operational status is UP
It is an intra-domain router
Autonomous region is 0
SPF hold time is 0 msec
MinLsArrival = 1000 msec , MinLsInterval = 5000 msec
Local Domain is 0x65(101)
Number of LSRs = 3, Total Checksum = 0x0001288b

Protocol constants :
   LS_REFRESH_TIME = 1800 sec
   MAX_AGE         = 3600 sec

Statistics counters :
   Number of LSR that reached MaxAge = 0
   Number of SPF computations        = 7
   Number of Checksum Errors         = 0
   Number of Transmitted packets :  LSU 65 LSA 55 Hello 474 Retranmsitted LSU 0
   Number of received packets :  LSU 55 LSA 60 Hello 464 Error packets 10
```

show hardware

Use the **show hardware** command to display switch hardware inventory details.

show hardware [ipc-channel status]

Syntax Description

ipc-channel	Identifies the interprocess communication (IPC) channels.
status	Displays the status of the IPC channels.

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

```
switch# show hardware
Cisco Storage Area Networking Operating System (SAN-OS) Software
TAC support:http://www.cisco.com/tac
Copyright (c) 1986-2002 by cisco Systems, Inc. All rights reserved.
The copyright for certain works contained herein are owned by
Andiamo Systems, Inc. and/or other third parties and are used and
distributed under license.

Software
  BIOS:     version 0.0.0
  loader:   version 1.0(0.259)
  kickstart:version 1.0(2) [build 1.0(0.280)]
  system:   version 1.0(2) [build 1.0(0.280)]

  BIOS compile time:      10/10/02
  kickstart image file is:bootflash:/boot-280
  kickstart compile time: 11/20/2002 6:00:00
  system image file is:   isan-280
  system compile time:    11/20/2002 6:00:00

Hardware
  RAM 963108 kB

  bootflash:503808 blocks (block size 512b)
  slot0:         0 blocks (block size 512b)

  172.22.92.28 uptime is 0 days 0 hour 31 minute(s) 23 second(s)

  Last reset
    Reason:Watchdog Timeout/External Reset
    System version:1.0(2)
```

```
This supervisor carries Pentium processor with 963108 kB of memory
Intel(R) Pentium(R) III CPU at 800MHz with 512 KB L2 Cache
Rev:Family  6, Model  11 stepping  1

512K bytes of non-volatile memory.
503808 blocks of internal bootflash (block size 512b)
```

Displays the status of the IPC channel:

```
switch# show hardware ipc-channel status
Active IPC-Channel:            A
```

show hosts

Use the **show hosts** command to display configured DNS host configuration details details.

show 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 1.0(2).

Usage Guidelines

None.

Examples

The following example displays the configures hosts including the default domain, domain list, and name servers.

```
switch# show hosts
Default domain is cisco.com
Domain list: ucsc.edu harvard.edu yale.edu stanford.edu
Name/address lookup uses domain service
Name servers are 15.1.0.1 15.2.0.0
```

show incompatibility

To display the HA compatibility status between the two supervisor modules, use the **show incompatibility** command.

show incompatibility [system (bootflash: | slot0: | volatile:) *image-filename*]

Syntax Description

show incompatibility	Displays the switch configuration incompatibilites.
bootflash:	Source or destination location for internal bootflash memory
slot0:	Source or destination location for the CompactFlash memory or PCMCIA card.
volatile:	Source or destination location for the volatile directory.
image-filename	The name of the system or kickstart image.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

If the HA compatibility is `strict` on an active supervisor module, the standby supervisor module synchronization may not suceed and may move into an inconsistent state.

If the HA compatibility is `loose`, the synchronization may happen without erros, but some resources may become unusable when a switchover happens.

Examples

The following examples display kernel core settings.

```
switch# show incompatibility system bootflash:old-image-y
The following configurations on active are incompatible with the system image
1) Feature Index : 67 , Capability : CAP_FEATURE_SPAN_FC_TUNNEL_CFG
Description : SPAN - Remote SPAN feature using fc-tunnels
Capability requirement : STRICT
2) Feature Index : 119 , Capability : CAP_FEATURE_FC_TUNNEL_CFG
Description : fc-tunnel is enabled
Capability requirement : STRICT
```

show install all impact

To view the software compatibility matrix of a specific image, use the **show install all impact** command.

show install all impact *image-filename* **[bootflash: | slot0:]**

Syntax Description

image-filename	The name of the system or kickstart image.
bootflash:	Source location for internal bootflash memory
slot0:	Source location for the CompactFlash memory or PCMCIA card.

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

Use the **show install all impact** command to view the effect of updating the system from the running image to another specified image.

```
switch# show install all impact

Verifying image bootflash:/ilc1.bin
[####################] 100% -- SUCCESS

Verifying image bootflash:/vk73a
[####################] 100% -- SUCCESS

Verifying image bootflash:/vs73a
[####################] 100% -- SUCCESS

Extracting "slc" version from image bootflash:/vs73a.
[####################] 100% -- SUCCESS

Extracting "slc" version from image bootflash:/vs73a.
[####################] 100% -- SUCCESS

Extracting "system" version from image bootflash:/vs73a.
[####################] 100% -- SUCCESS

Extracting "kickstart" version from image bootflash:/vk73a.
[####################] 100% -- SUCCESS

Extracting "loader" version from image bootflash:/vk73a.
[####################] 100% -- SUCCESS
```

```
Extracting "slc" version from image bootflash:/vs73a.
[####################] 100% -- SUCCESS

Compatibility check is done:
Module  bootable          Impact  Install-type  Reason
------  --------  --------------  ------------  ------
     2       yes  non-disruptive          none
     4       yes  non-disruptive          none
     6       yes  non-disruptive          none
     9       yes  non-disruptive          none

Images will be upgraded according to following table:
Module       Image       Running-Version           New-Version  Upg-Required
------  ----------  --------------------  --------------------  ------------
     2         slc                1.2(1)                1.2(1)            no
     2        bios      v1.0.7(03/20/03)      v1.0.7(03/20/03)            no
     4         slc                1.2(1)                1.2(1)            no
     4        ilce                1.2(1)                1.2(1)            no
     4        bios      v1.0.7(03/20/03)      v1.0.7(03/20/03)            no
     6      system                1.2(1)                1.2(1)            no
     6   kickstart                1.2(1)                1.2(1)            no
     6        bios      v1.0.7(03/20/03)      v1.0.7(03/20/03)            no
     6      loader               1.0(3a)               1.0(3a)            no
     9         slc                1.2(1)                1.2(1)            no
     9        bios      v1.0.7(03/20/03)      v1.0.7(03/20/03)            no
```

The following command displays the error message that is displayed if a wrong image is provided.

```
switch# show install all impact system_image bootflash:
Compatibility check failed. Return code 0x40930003 (Invalid bootvar specified in
 the input).
```

show in-order-gaurantee

Use the **show in-order-gaurantee** command to display the present configured state of the in-order delivery feature.

show in-order-gaurantee

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 displays the present configuration status of the in-order delivery feature.

```
switch# show in-order-guarantee
inorder delivery is not guaranteed
```

show interface

You can check the status of an interface at any time by using the **show interface** command.

show interface
fc *slot/port* **| fc-tunnel** *tunnel-id* **| fcip** *interface-number* **| gigabitethernet | iscsi | mgmt| port-channel | sup-fc | transceiver | trunk vsan** [*vsan-id*] **| vsan** *vsan-id* [*interface range*] [**brief | counters | description**]

Syntax Description

interface range	Displays the interfaces in the specified range.
brief	Displays brief info of interface.
counters	Displays the interface counter information.
description	Displays a description of interface.
fc *slot/port*	Displays the Fibre Channel interface in the specified slot/port.
fc-tunnel *tunnel-id*	Displays description of the specified FC tunnel from 1 to 4095.
fcip *interface-number*	Displays the description of the specified FCIP interface from 1 to 255.
gigabitethernet *slot/port*	Displays the description of the Gigabit Ethernet interface in the specified slot/ port.
iscsi *slot/port*	Displays the description of the iSCSI interface in the specified slot/ port.
mgmt	Displays the description of the management interface.
port-channel	Displays the description of the PortChannel interface.
sup-fc	Displays the inband interface details.
transceiver	Displays the transceiver information for interface.
trunk vsan	Displays the the trunking status of all VSANs.
vsan-id	Displays the the trunking status of the specified VSANs.
vsan *vsan-id*	Displays the VSAN interface (brief, counters, or description for a specified interface or a range of interfaces)

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

```
switch# show interface fc1/11
fc1/11 is up
    Hardware is Fibre Channel
    Port WWN is 20:0b:00:05:30:00:59:de
    Admin port mode is ST
    Port mode is ST
    Port vsan is 1
    Speed is 1 Gbps
    Rspan tunnel is fc-tunnel 100
    Beacon is turned off
    5 minutes input rate 248 bits/sec, 31 bytes/sec, 0 frames/sec
    5 minutes output rate 176 bits/sec, 22 bytes/sec, 0 frames/sec
      6862 frames input, 444232 bytes
        0 discards, 0 errors
        0 CRC, 0 unknown class
        0 too long, 0 too short
      6862 frames output, 307072 bytes
        0 discards, 0 errors
      0 input OLS, 0 LRR, 0 NOS, 0 loop inits
      0 output OLS, 0 LRR, 0 NOS, 0 loop inits

switch# show int sup-fc0
sup-fc0 is up
    Hardware is FastEthernet, address is 0000.0000.0000
    MTU 2596 bytes, BW 1000000 Kbit
    66 packets input, 7316 bytes
    Received 0 multicast frames, 0 compressed
    0 input errors, 0 frame, 0 overrun 0 fifo
    64 packets output, 28068 bytes, 0 underruns
    0 output errors, 0 collisions, 0 fifo
    0 carrier errors

switch# show int vsan 2
vsan2 is up, line protocol is up
    WWPN is 10:00:00:05:30:00:59:1f, FCID is 0xb90100
    Internet address is 10.1.1.1/24
    MTU 1500 bytes, BW 1000000 Kbit
    0 packets input, 0 bytes, 0 errors, 0 multicast
    0 packets output, 0 bytes, 0 errors, 0 dropped

switch# show interface description
fc1/1
    no description
fc1/2
    no description
fc1/15
fcAnl

sup-fc0 is up

mgmt0 is up

vsan1 - IPFC interface

port-channel 15
no description

port-channel 98
no description
```

```
switch# show interface fc2/1 - 5 brief
-------------------------------------------------------------------------------
Interface  Vsan   Admin  Admin   Status          Oper  Oper    Port-channel
                  Mode   Trunk                   Mode  Speed
                         Mode                          (Gbps)
-------------------------------------------------------------------------------
fc1/1      1      auto   on      down            --    --      --
fc1/2      1      auto   on      fcotAbsent      --    --      --
fc1/3      1      F      --      notConnected    --    --      --
fc1/4      1      auto   on      fcotAbsent      --    --      --
fc1/5      1      F      --      up              F     2       --
fc1/6      1      auto   on      fcotAbsent      --    --      --
fc1/7      1      auto   on      down            --    --      --
fc1/8      1      auto   on      fcotAbsent      --    --      --
fc1/9      1      auto   on      fcotAbsent      --    --      --
fc1/10     1      auto   on      fcotAbsent      --    --      --
fc1/11     1      auto   on      down            --    --      --
fc1/12     1      auto   on      fcotAbsent      --    --      --
fc1/13     1      auto   on      down            --    --      --
fc1/14     1      auto   on      fcotAbsent      --    --      --
fc1/15     1      auto   on      down            --    --      --
fc1/16     1      auto   on      fcotAbsent      --    --      --
-------------------------------------------------------------------------------
Interface          Status   IP Address              Speed        MTU
-------------------------------------------------------------------------------
sup-fc0            up       --                      1 Gbps       2596
-------------------------------------------------------------------------------
Interface          Status   IP Address              Speed        MTU
-------------------------------------------------------------------------------
mgmt0              up       173.95.112/24         100 Mbps     1500
-------------------------------------------------------------------------------
Interface          Status   IP Address              Speed        MTU
-------------------------------------------------------------------------------
vsan1                 up    10.1.1.1/24             1 Gbps       1500

switch# show interface fcip 3 counters
fcip3
    TCP Connection Information
      2 Active TCP connections
        Control connection: Local 43.1.1.2:3225, Remote 43.1.1.1:65532
        Data connection: Local 43.1.1.2:3225, Remote 43.1.1.1:65534
      30 Attempts for active connections, 0 close of connections
    TCP Parameters
      Path MTU 1500 bytes
      Current retransmission timeout is 300 ms
      Round trip time: Smoothed 10 ms, Variance: 5
      Advertized window: Current: 122 KB, Maximum: 122 KB, Scale: 1
      Peer receive window: Current: 114 KB, Maximum: 114 KB, Scale: 1
      Congestion window: Current: 2 KB, Slow start threshold: 1048560 KB
    5 minutes input rate 64 bits/sec, 8 bytes/sec, 0 frames/sec
    5 minutes output rate 64 bits/sec, 8 bytes/sec, 0 frames/sec
      910 frames input, 84652 bytes
         910 Class F frames input, 84652 bytes
         0 Class 2/3 frames input, 0 bytes
         0 Error frames timestamp error 0
      908 frames output, 84096 bytes
         908 Class F frames output, 84096 bytes
         0 Class 2/3 frames output, 0 bytes
         0 Error frames 0 reass frames
```

```
switch# show interface counters brief

-------------------------------------------------------------------------------
Interface          Input (rate is 5 min avg)      Output (rate is 5 min avg)
                   ------------------------------ ------------------------------
                   Rate     Total                 Rate     Total
                   MB/s     Frames                MB/s     Frames
-------------------------------------------------------------------------------
fc9/1              0        0                     0        0
fc9/2              0        0                     0        0
fc9/3              0        0                     0        0
fc9/4              0        0                     0        0
...
-------------------------------------------------------------------------------
Interface          Input (rate is 5 min avg)      Output (rate is 5 min avg)
                   ------------------------------ ------------------------------
                   Rate     Total                 Rate     Total
                   MB/s     Frames                MB/s     Frames
-------------------------------------------------------------------------------
iscsi4/1           0        0                     0        0
iscsi4/2           0        0                     0        0
iscsi4/3           0        0                     0        0
iscsi4/4           0        0                     0        0
...
vsan10 is up, line protocol is up
    WWPN is 10:00:00:05:30:00:07:23, FCID is 0xee0001
    Internet address is 10.1.1.5/24
    MTU 1500 bytes, BW 1000000 Kbit
    0 packets input, 0 bytes, 0 errors, 0 multicast
    0 packets output, 0 bytes, 0 errors, 0 dropped

-------------------------------------------------------------------------------
Interface          Input (rate is 5 min avg)      Output (rate is 5 min avg)
                   ------------------------------ ------------------------------
                   Rate     Total                 Rate     Total
                   MB/s     Frames                MB/s     Frames
-------------------------------------------------------------------------------

port-channel 100   0        0                     0        0

-------------------------------------------------------------------------------
Interface          Input (rate is 5 min avg)      Output (rate is 5 min avg)
                   ------------------------------ ------------------------------
                   Rate     Total                 Rate     Total
                   Mbits/s  Frames                Mbits/s  Frames
-------------------------------------------------------------------------------

fcip2              0        0                     0        0
fcip3              9        0                     9        0

fcip6              8        0                     8        0
fcip7              8        0                     8        0
```

```
switch# show interface fcip 3
fcip3 is trunking
    Hardware is GigabitEthernet
    Port WWN is 20:ca:00:05:30:00:07:1e
    Peer port WWN is 20:ca:00:00:53:00:18:1e
    Admin port mode is auto, trunk mode is on
    Port mode is TE
    vsan is 1
    Trunk vsans (allowed active) (1,10)
    Trunk vsans (operational)    (1)
    Trunk vsans (up)             (1)
    Trunk vsans (isolated)       (10)
    Trunk vsans (initializing)   ()
    Using Profile id 3 (interface GigabitEthernet4/3)
    Peer Information
      Peer Internet address is 43.1.1.1 and port is 3225
      Special Frame is disabled
    Maximum number of TCP connections is 2
    Time Stamp is disabled
    B-port mode disabled
    TCP Connection Information
      2 Active TCP connections
        Control connection: Local 43.1.1.2:3225, Remote 43.1.1.1:65532
        Data connection: Local 43.1.1.2:3225, Remote 43.1.1.1:65534
      30 Attempts for active connections, 0 close of connections
    TCP Parameters
      Path MTU 1500 bytes
      Current retransmission timeout is 300 ms
      Round trip time: Smoothed 10 ms, Variance: 5
      Advertized window: Current: 122 KB, Maximum: 122 KB, Scale: 1
      Peer receive window: Current: 114 KB, Maximum: 114 KB, Scale: 1
      Congestion window: Current: 2 KB, Slow start threshold: 1048560 KB
    5 minutes input rate 64 bits/sec, 8 bytes/sec, 0 frames/sec
    5 minutes output rate 64 bits/sec, 8 bytes/sec, 0 frames/sec
      866 frames input, 80604 bytes
         866 Class F frames input, 80604 bytes
         0 Class 2/3 frames input, 0 bytes
         0 Error frames timestamp error 0
      864 frames output, 80048 bytes
         864 Class F frames output, 80048 bytes
         0 Class 2/3 frames output, 0 bytes
         0 Error frames 0 reass frames

switch# show interface gigabitethernet 4/1
GigabitEthernet4/1 is up
    Hardware is GigabitEthernet, address is 0005.3000.2e12
    Internet address is 100.1.1.2/24
    MTU 1500 bytes, BW 1000000 Kbit
    Port mode is IPS
    Speed is 1 Gbps
    Beacon is turned off
    5 minutes input rate 32 bits/sec, 4 bytes/sec, 0 frames/sec
    5 minutes output rate 88 bits/sec, 11 bytes/sec, 0 frames/sec
    637 packets input, 49950 bytes
      0 multicast frames, 0 compressed
      0 input errors, 0 frame, 0 overrun 0 fifo
    659 packets output, 101474 bytes, 0 underruns
      0 output errors, 0 collisions, 0 fifo
      0 carrier errors
```

```
switch# show interface iscsi 2/1
iscsi2/1 is up
    Hardware is GigabitEthernet
    Port WWN is 20:41:00:05:30:00:50:de
    Admin port mode is ISCSI
    Port mode is ISCSI
    Speed is 1 Gbps
    iSCSI initiator is identified by name
    Number of iSCSI session: 7, Number of TCP connection: 7
    Configured TCP parameters
        Local Port is 3260
        PMTU discover is disabled
        Keepalive-timeout is 1 sec
        Minimum-retransmit-time is 300 ms
        Max-retransmissions 8
        Sack is disabled
        Minimum available bandwidth is 0 kbps
        Estimated round trip time is 0 usec
    5 minutes input rate 265184 bits/sec, 33148 bytes/sec, 690 frames/sec
    5 minutes output rate 375002168 bits/sec, 46875271 bytes/sec, 33833 frames/sec
    iSCSI statistics
      6202235 packets input, 299732864 bytes
        Command 6189718 pdus, Data-out 1937 pdus, 1983488 bytes, 0 fragments
      146738794 packets output, 196613551108 bytes
        Response 6184282 pdus (with sense 4), R2T 547 pdus
        Data-in 140543388 pdus, 189570075420 bytes

switch# show interface transceiver
fc1/1 fcot is present but not supported
    name is IBM
    part number is IBM42P21SNY
    revision is AA20
    serial number is 53P148700109D
    vendor specific data (bytes 96-127)
      0x49 0x42 0x4D 0x20 0x53 0x46 0x50 0x53
      0x20 0x41 0x52 0x45 0x20 0x43 0x4C 0x41
      0x53 0x53 0x20 0x31 0x20 0x4C 0x41 0x53
      0x45 0x52 0x20 0x53 0x41 0x46 0x45 0x20
fc1/2 fcot not present
fc1/3 fcot is present but not supported
    name is IBM
    part number is IBM42P21SNY
    revision is AA20
    serial number is 53P1487000ZXR
    vendor specific data (bytes 96-127)
      0x49 0x42 0x4D 0x20 0x53 0x46 0x50 0x53
      0x20 0x41 0x52 0x45 0x20 0x43 0x4C 0x41
      0x53 0x53 0x20 0x31 0x20 0x4C 0x41 0x53
      0x45 0x52 0x20 0x53 0x41 0x46 0x45 0x20

switch# show interface fc-tunnel 200
fc-tunnel 200 is up
Dest   IP Addr: 200.200.200.7   Tunnel ID: 200
Source IP Addr: 200.200.200.4   LSP ID: 1
Explicit Path Name:
```

show ip access-list

To display the IP access control lists (IP-ACLs) currently active, use the **show ip access-list** command.

show ip access-list *list-number* | **usage**

Syntax Description

ip access-list	Displays the information for all IP-ACLs
list-number	Identifies the IP-ACL with an integer ranging from 1 to 256.
usage	Specifies the interface type

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 displays configured IP-ACLs

```
switch# show ip access-list usage
Access List Name/Number          Filters IF   Status    Creation Time
-------------------------------- ------- ---- --------- -------------
abc                              3       7    active    Tue Jun 24 17:51:40 2003
x1                               3       1    active    Tue Jun 24 18:32:25 2003
x3                             0       1    not-ready Tue Jun 24 18:32:28 2003
```

The following example d isplays a summary of the specified IP-ACL

```
switch# show ip access-list abc
ip access-list abc permit tcp any any (0 matches)
ip access-list abc permit udp any any (0 matches)
ip access-list abc permit icmp any any (0 matches)
ip access-list abc permit ip 10.1.1.0 0.0.0.255 (2 matches)
ip access-list abc permit ip 10.3.70.0 0.0.0.255 (7 matches)
```

show ip route

To display the ip routes currently active, use the **show ip route** command.

show ip route

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

```
switch# show ip route

Codes: C - connected, S - static

Default gateway is 172.22.95.1

C 10.0.0.0/24 is directly connected, vsan1
C 172.22.95.0/24 is directly connected, mgmt0
```

show ip routing

To display the ip routing state, use the **show ip routing** command.

show ip routing

show ips arp interface gigabitethernet *slot-number*

Syntax Description

ips	Displays the information for all IP storage configurations.
arp	Displays the ARP table.
interface gigabitethernet	Specifies the interface type
slot-number	Specifies the slot number and port number of the required interface.

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

```
switch# show ip routing
ip routing is disabled
```

show ips arp

You can check the status of an interface at any time by using the **show ips arp** command.

show ips arp interface gigabitethernet *slot-number*

Syntax Description

ips	Displays the information for all IP storage configurations.
arp	Displays the ARP table.
interface gigabitethernet	Specifies the interface type
slot-number	Specifies the slot number and port number of the required interface.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

Use the **show ips arp interface gigabitethernet** command to display the ARP cache on the Gigabit Ethernet interfaces. This command takes the main Ethernet interface and as a parameter and returns the ARP cache for that interface.

Examples

The following example displays ARP caches in the specified interface:

```
switch# show ips arp interface gigabitethernet 4/4
Protocol         Address   Age (min)   Hardware Addr  Type   Interface
Protocol         Address   Age (min)   Hardware Addr  Type   Interface
Internet     172.22.91.1    2    -  00:00:0c:07:ac:01  ARPA  GigabitEthernet4/4
Internet     172.22.91.2    0    -  00:02:7e:6b:a8:08  ARPA  GigabitEthernet4/4
Internet    172.22.91.17    0    -  00:e0:81:20:45:f5  ARPA  GigabitEthernet4/4
Internet    172.22.91.18    0    -  00:e0:81:05:f7:64  ARPA  GigabitEthernet4/4
Internet    172.22.91.30    0    -  00:e0:18:2e:9d:19  ARPA  GigabitEthernet4/4
...
```

show ips ip route

You can check the status of an interface at any time by using the **show ips ip route** command.

show ips ip route interface gigabitethernet *slot-number*

Syntax Description

ips	Displays the information for all IP storage configurations.
ip route	Displays the IP route table.
interface gigabitethernet	Specifies the interface type
slot-number	Specifies the slot number and port number of the required interface.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following example displays all FCIP profiles.

```
switch# show ips ip route interface gigabitethernet 8/1
Codes: C - connected, S - static

No default gateway

C 10.1.3.0/24 is directly connected, GigabitEthernet8/1
```

show ips stats

You can check the status of an interface at any time by using the **show ips stats** command.

show ips stats [buffer | dma-bridge | icmp | ip | mac | tcp (detail)] interface gigabitethernet *slot-number*

Syntax Description

ips	Displays the information for all IP storage configurations.
stats	Displays IP storage statistics for the specified interface.
buffer	Displays IP storage buffer information.
dma-bridge	Displays the direct memory access (DMA) statistics.
icmp	Displays ICMP statistics.
ip	Displays IP statistics.
mac	Displays MAC statistics,
tcp	Displays TCP statistics
detail	Displays all statistical information maintained by the interface.
interface gigabitethernet	Specifies the interface type
slot-number	Specifies the slot number and port number of the required interface.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

Use the **show ips stats icmp interface gigabitethernet** command to obtain ICMP statistics for the selected interface.

Use the **show IPS stats IP interface gigabitethernet 2/1** command to obtain IP statistics for the selected interface.

Use the **show ips stats mac interface gigabitethernet** command to obtain Ethernet statistics for the selected interface.

Use the **show ips stats tcp interface gigabitethernet** command to obtain TCP stats along with the connection list and TCP state or the selected interface.

Examples

The following example displays iSCSI buffer statistics.

```
switch# show ips stats buffer interface gigabitethernet 8/1
```

The following example displays ICMP statistics.

```
switch# show ips stats icmp interface gigabitethernet 8/1
ICMP Statistics for port GigabitEthernet8/1
    2 ICMP messages received
    0 ICMP messages dropped due to errors
    ICMP input histogram
      2 echo request
    ICMP output histogram
      2 echo reply
```

The following example displays IP statistics.

```
switch# show ips stats ip interface gigabitethernet 8/1
Internet Protocol Statistics for port GigabitEthernet8/1
    22511807 total received, 22509468 good, 2459 error
    0 reassembly required, 0 reassembled ok, 0 dropped after timeout
    27935633 packets sent, 0 outgoing dropped, 0 dropped no route
    0 fragments created, 0 cannot fragment
```

The following example displays MAC statistics.

```
switch# show ips stats mac interface gigabitethernet 8/1
Ethernet MAC statistics for port GigabitEthernet8/1
    Hardware Transmit Counters
      28335543 frame 37251751286 bytes
      0 collisions, 0 late collisions, 0 excess collisions
      0 bad frames, 0 FCS error, 0 abort, 0 runt, 0 oversize
    Hardware Receive Counters
      18992406778 bytes, 22835370 frames, 0 multicasts, 2584 broadcasts
      0 bad, 0 runt, 0 CRC error, 0 length error
      0 code error, 0 align error, 0 oversize error
    Software Counters
      22835370 received frames, 28335543 transmit frames
      0 frames soft queued, 0 current queue, 0 max queue
      0 dropped, 0 low memory
```

The following example displays TCP statistics.

```
switch# show ips stats tcp interface gigabitethernet 8/1
TCP Statistics for port GigabitEthernet8/1
    Connection Stats
      0 active openings, 0 accepts
      0 failed attempts, 0 reset received, 0 established
    Segment stats
      23657893 received, 29361174 sent, 0 retransmitted
      0 bad segments received, 0 reset sent

    TCP Active Connections
      Local  Address        Remote Address        State      Send-Q   Recv-Q
      10.1.3.3:3260         10.1.3.106:51935      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51936      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51937      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51938      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51939      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51940      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51941      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51942      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51943      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.106:51944      ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1026       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1027       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1028       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1029       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1030       ESTABLISH  48       0
      10.1.3.3:3260         10.1.3.115:1031       ESTABLISH  48       0
      10.1.3.3:3260         10.1.3.115:1032       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1033       ESTABLISH  0        0
      10.1.3.3:3260         10.1.3.115:1034       ESTABLISH  0        0
      0.0.0.0:3260          0.0.0.0:0             LISTEN     0        0
```

show ips status

You can check the status of an interface at any time by using the **show ips status** command.

show ips status [module *slot-number***]**

Syntax Description

ips	Displays the information for all IP storage configurations.
status	Displays the ARP table.
module *slot-number*	Identifies the module in the specified slot.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following example displays all FCIP profiles.

```
switch# show ips status
        Port 8/1 READY
        Port 8/2 READY
        Port 8/3 READY
        Port 8/4 READY
        Port 8/5 READY
        Port 8/6 READY
        Port 8/7 READY
        Port 8/8 READY

switch# show ips status module 9
        Port 9/1 READY
        Port 98/2 READY
        Port 9/3 READY
        Port 9/4 READY
        Port 9/5 READY
        Port 9/6 READY
        Port 9/7 READY
        Port 9/8 READY
...
```

show iscsi global

The **show iscsi global** command shows all the iSCSI initiators that are configured by the user.

show iscsi global

Syntax Description

iscsi global	Displays information for all configured iSCSI initiators.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following example displays all configured iSCSI initiators

```
switch# show iscsi global
iSCSI Global information
  Authentication:CHAP, NONE
  Import FC Target:Enabled
  Number of target nodes:11
  Number of portals:8
  Number of sessions:10
  Failed sessions:9, Last failed initiator
name:iqn.1987-05.com.cisco:02.0163c91bbc28.host1
```

show iscsi initiator

The **show iscsi initiator** commands shows all the iSCSI nodes that are remote to the switch.

show iscsi initiator [configured | detail | fcp-session | iscsi-session]

Syntax Description

iscsi initiator	Displays iSCSI information for the initiators.
configured	Displays the configured information for the iSCSI initiator.
detail	Displays detailed iSCSI initiator information.
fcp-session	Specifies the Fibre Channel session details.
iscsi-session	Specifies iSCSI session details.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

If no parameter is provided the command lists all the active iSCSI virtual-targets. If the iSCSI node name is provided then the command lists the details of that iscsi virtual-target.

Examples

The following example displays all iSCSI initiators

```
switch# show iscsi initiator
iSCSI Node name is iqn.1987-05.com.cisco.01.15cee6e7925087abc82ed96377653c8
    iSCSI alias name: iscsi7-lnx
    Node WWN is 23:10:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1
    Number of Virtual n_ports: 1
    Virtual Port WWN is 23:12:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag: 0x382
        VSAN ID 1, FCID 0xdc0100

iSCSI Node name is iqn.1987-05.com.cisco:02.91b0ee2e8aa1.iscsi16-w2k
    iSCSI alias name: ISCSI16-W2K
    Node WWN is 23:1f:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1
    Number of Virtual n_ports: 1
    Virtual Port WWN is 23:28:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag: 0x382
        VSAN ID 1, FCID 0xdc0101
```

```
iSCSI Node name is iqn.1987-05.com.cisco.01.b6ca466f8b4d8e848ab17e92f24bf9cc
    iSCSI alias name: iscsi6-lnx
    Node WWN is 23:29:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1, 2, 3, 4
    Number of Virtual n_ports: 1
    Virtual Port WWN is 23:2a:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag: 0x382
        VSAN ID 4, FCID 0xee0000
        VSAN ID 3, FCID 0xee0100
        VSAN ID 2, FCID 0xee0000
        VSAN ID 1, FCID 0xdc0102
...
```

The following example displays detailed Information for all iSCSI initiators

```
switch# show iscsi initiator detail
iSCSI Node name is iqn.1987-05.com.cisco.01.15cee6e7925087abc82ed96377653c8
    iSCSI alias name: iscsi7-lnx
    Node WWN is 23:10:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1
    Number of Virtual n_ports: 1

    Virtual Port WWN is 23:10:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag is 0x382
        VSAN ID 1, FCID 0xdc0100
        No. of FC sessions: 3
        No. of iSCSI sessions: 2

        iSCSI session details

          Target node: iqn.com.domainname.172.22.93.143.08-03.gw.22000020374b5247
          Statistics:
            PDU: Command: 0, Response: 0
            Bytes: TX: 0, RX: 0
            Number of connection: 1
          TCP parameters
            Connection Local 10.1.3.3:3260, Remote 10.1.3.107:34112
            Path MTU 1500 bytes
            Current retransmission timeout is 300 ms
            Round trip time: Smoothed 2 ms, Variance: 1
            Advertised window: Current: 6 KB, Maximum: 6 KB, Scale: 3
            Peer receive window: Current: 250 KB, Maximum: 250 KB, Scale: 2
            Congestion window: Current: 8 KB

          Target node: iqn.com.domainname.172.22.93.143.08-03.gw.22000020374b5247
          Statistics:
            PDU: Command: 0, Response: 0
            Bytes: TX: 0, RX: 0
            Number of connection: 1
          TCP parameters
            Connection Local 10.1.3.3:3260, Remote 10.1.3.107:34112
            Path MTU 1500 bytes
            Current retransmission timeout is 300 ms
            Round trip time: Smoothed 2 ms, Variance: 1
            Advertised window: Current: 6 KB, Maximum: 6 KB, Scale: 3
            Peer receive window: Current: 250 KB, Maximum: 250 KB, Scale: 2
            Congestion window: Current: 8 KB
...
```

The following example displays the iSCSI initiator information

```
switch# show iscsi initiator
iSCSI Node name is iqn.1987-05.com.cisco.01.15cee6e7925087abc82ed9637
    iSCSI alias name: iscsi7-lnx
    Node WWN is 23:10:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1
    Number of Virtual n_ports: 1
    Virtual Port WWN is 23:12:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag: 0x382
        VSAN ID 1, FCID 0xdc0100

iSCSI Node name is iqn.1987-05.com.cisco:02.91b0ee2e8aa1.iscsi16-w2k
    iSCSI alias name: ISCSI16-W2K
    Node WWN is 23:1f:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1
    Number of Virtual n_ports: 1
    Virtual Port WWN is 23:28:00:05:30:00:7e:a0 (dynamic)
      Interface iSCSI 8/3, Portal group tag: 0x382
        VSAN ID 1, FCID 0xdc0101

iSCSI Node name is iqn.1987-05.com.cisco.01.b6ca466f8b4d8e848ab17e92f
    iSCSI alias name: iscsi6-lnx
    Node WWN is 23:29:00:05:30:00:7e:a0 (dynamic)
    Member of vsans: 1, 2, 3, 4
    Number of Virtual n_ports: 1
...
```

show iscsi session

You can check the iSCSI port information by using the **show iscsi port** command.

show iscsi session [detail | incoming | initiator |outgoing | target *word***]**

Syntax Description

iscsi session	Shows the information for all iSCSI ports.
detail	Shows detailed iSCSI session information.
incoming	Shows incoming iscsi sessions
initiator	Shows specific iscsi initiator's session information
outgoing	Shows outgoing iscsi sessions
target	Shows specific iscsi target's session information
word	Specify an existing target name from 1 to 80 characters.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

All the parameters are optional in the **show iscsi session** commands. If no parameter is provided the command lists all the active iSCSI initiator or target sessions. If the IP address or i SCSI node name is provided, then the command lists details of all sessions from that initiator or to that target.

Examples

The following command displays the iSCSI Session.

```
switch# show iscsi session
Initiator iqn.1987-05.com.cisco.01.15cee6e7925087abc82ed96377653c8
  Session #1
    Target iqn.com.domainname.172.22.93.143.08-03.gw.22000020374b5247
    VSAN 1, ISID 000000000000, Status active, no reservation

  Session #2
    Target iqn.com.domainname.172.22.93.143.08-03.gw.220000203738e77d
    VSAN 1, ISID 000000000000, Status active, no reservation

Initiator iqn.1987-05.com.cisco:02.91b0ee2e8aa1.iscsi16-w2k
  Session #1
    Discovery session, ISID 00023d00022f, Status active

  Session #2
    Target iqn.com.domainname.172.22.93.143.08-03.gw.2200002037388bc2
    VSAN 1, ISID 00023d000230, Status active, no reservation
...
```

The following command displays the Specified iSCSI Target.

```
switch# show iscsi session target
iqn.com.domainname.172.22.93.143.08-03.gw.220000203738e77d
Initiator iqn.1987-05.com.cisco.01.15cee6e7925087abc82ed96377653c8
  Session #1
    Target iqn.com.domainname.172.22.93.143.08-03.gw.220000203738e77d
    VSAN 1, ISID 000000000000, Status active, no reservation
```

Note On the IPS module, you can verify what iSCSI initiator iqn has been assigned which pWWN when it logs in by using the **show zone active vsan** *vsan-no* command.

```
switch# zone name iscsi_16_A vsan 16
* fcid 0x7700d4 [pwwn 21:00:00:20:37:c5:2d:6d]
* fcid 0x7700d5 [pwwn 21:00:00:20:37:c5:2e:2e]
* fcid 0x770100 [symbolic-nodename
iqn.1987-05.com.cisco.02.BC3FEEFC431B199F81F33E97E2809C14.NUYEAR]
```

The following command displays the Specified iSCSI Initiator.

```
switch# show iscsi session initiator iqn.1987-05.com.cisco:02.91b0ee2e8aa1.iscsi16-w2k
Initiator iqn.1987-05.com.cisco:02.91b0ee2e8aa1.iscsi16-w2k
  Session #1
    Discovery session, ISID 00023d00022f, Status active

  Session #2
    Target iqn.com.domainname.172.22.93.143.08-03.gw.2200002037388bc2
    VSAN 1, ISID 00023d000230, Status active, no reservation

  Session #3
    Target iqn.com.domainname.172.22.93.143.08-03.gw.210000203739ad7f
    VSAN 1, ISID 00023d000235, Status active, no reservation

  Session #4
    Target iqn.com.domainname.172.22.93.143.08-03.gw.210000203739aa3a
    VSAN 1, ISID 00023d000236, Status active, no reservation

  Session #5
    Target iqn.com.domainname.172.22.93.143.08-03.gw.210000203739ada7
    VSAN 1, ISID 00023d000237, Status active, no reservation

  Session #6
    Target iqn.com.domainname.172.22.93.143.08-03.gw.2200002037381ccb
    VSAN 1, ISID 00023d000370, Status active, no reservation

  Session #7
    Target iqn.com.domainname.172.22.93.143.08-03.gw.2200002037388b54
    VSAN 1, ISID 00023d000371, Status active, no reservation

  Session #8
    Target iqn.com.domainname.172.22.93.143.08-03.gw.220000203738a194
    VSAN 1, ISID 00023d000372, Status active, no reservation

  Session #9
    Target iqn.com.domainname.172.22.93.143.08-03.gw.2200002037360053
    VSAN 1, ISID 00023d000373, Status active, no reservation
```

show iscsi stats

You can check the iSCSI port information by using the **show iscsi port** command.

show iscsi stats [clear session| detail | iscsi]

Syntax Description

iscsi stats	Shows iSCSI statistics.
clear session	Clears iSCSI statistics for a session.
detail	Shows detailed iSCSI statistics.
iscsi	Shows statistics for the specified iSCSI interface.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following command displays brief iSCSI statistics.

```
switch# show iscsi stats
iscsi8/1
    5 minutes input rate 23334800 bits/sec, 2916850 bytes/sec, 2841 frames/sec
    5 minutes output rate 45318424 bits/sec, 5664803 bytes/sec, 4170 frames/sec
    iSCSI statistics
      86382665 packets input, 2689441036 bytes
        3916933 Command pdus, 82463404 Data-out pdus, 2837976576 Data-out bytes,
 0 fragments
      131109319 packets output, 2091677936 bytes
        3916876 Response pdus (with sense 0), 1289224 R2T pdus
        125900891 Data-in pdus, 93381152 Data-in bytes

iscsi8/2
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes
```

```
iscsi8/3
    5 minutes input rate 272 bits/sec, 34 bytes/sec, 0 frames/sec
    5 minutes output rate 40 bits/sec, 5 bytes/sec, 0 frames/sec
    iSCSI statistics
      30 packets input, 10228 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      30 packets output, 1744 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes

iscsi8/4
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes

iscsi8/5
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes

iscsi8/6
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes

iscsi8/7
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes

iscsi8/8
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes
```

The following command displays detailed iSCSI statistics.

```
switch# show iscsi stats detail
iscsi8/1
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes
  iSCSI Forward:
    Command: 0 PDUs (Received: 0)
    Data-Out (Write): 0 PDUs (Received 0), 0 fragments, 0 bytes
  FCP Forward:
    Xfer_rdy: 0 (Received: 0)
    Data-In: 0 (Received: 0), 0 bytes
    Response: 0 (Received: 0), with sense 0
    TMF Resp: 0

  iSCSI Stats:
    Login: attempt: 0, succeed: 0, fail: 0, authen fail: 0
    Rcvd: NOP-Out: 0, Sent: NOP-In: 0
          NOP-In: 0, Sent: NOP-Out: 0
          TMF-REQ: 0, Sent: TMF-RESP: 0
          Text-REQ: 0, Sent: Text-RESP: 0
          SNACK: 0
          Unrecognized Opcode: 0, Bad header digest: 0
          Command in window but not next: 0, exceed wait queue limit: 0
          Received PDU in wrong phase: 0
  FCP Stats:
    Total: Sent: 0
           Received: 0 (Error: 0, Unknown: 0)
    Sent: PLOGI: 0, Rcvd: PLOGI_ACC: 0, PLOGI_RJT: 0
          PRLI: 0, Rcvd: PRLI_ACC: 0, PRLI_RJT: 0, Error resp: 0
          LOGO: 0, Rcvd: LOGO_ACC: 0, LOGO_RJT: 0
          ABTS: 0, Rcvd: ABTS_ACC: 0
          TMF REQ: 0
          Self orig command: 0, Rcvd: data: 0, resp: 0
    Rcvd: PLOGI: 0, Sent: PLOGI_ACC: 0
          LOGO: 0, Sent: LOGO_ACC: 0
          PRLI: 0, Sent: PRLI_ACC: 0
          ABTS: 0

  iSCSI Drop:
    Command: Target down 0, Task in progress 0, LUN map fail 0
             CmdSeqNo not in window 0, No Exchange ID 0, Reject 0
             Persistent Resv 0    Data-Out: 0, TMF-Req: 0
  FCP Drop:
    Xfer_rdy: 0, Data-In: 0, Response: 0

  Buffer Stats:
    Buffer less than header size: 0, Partial: 0, Split: 0
    Pullup give new buf: 0, Out of contiguous buf: 0, Unaligned m_data: 0
```

```
iscsi8/2
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes
  iSCSI Forward:
    Command: 0 PDUs (Received: 0)
    Data-Out (Write): 0 PDUs (Received 0), 0 fragments, 0 bytes
  FCP Forward:
    Xfer_rdy: 0 (Received: 0)
    Data-In: 0 (Received: 0), 0 bytes
    Response: 0 (Received: 0), with sense 0
...
```

The following command displays detailed statistics for the specified iSCSI interface.

```
switch# show iscsi stats iscsi 8/1
iscsi8/1
    5 minutes input rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    5 minutes output rate 0 bits/sec, 0 bytes/sec, 0 frames/sec
    iSCSI statistics
      0 packets input, 0 bytes
        0 Command pdus, 0 Data-out pdus, 0 Data-out bytes, 0 fragments
      0 packets output, 0 bytes
        0 Response pdus (with sense 0), 0 R2T pdus
        0 Data-in pdus, 0 Data-in bytes
```

show iscsi virtual-target

The **show iscsi virtual-target** command shows all the iSCSI nodes that are local to the switch.

show iscsi virtual-target [*name*]

Syntax Description

iscsi virtual-target	Show the information for all iSCSI ports.
name	Show iSCSI information for the specified virtual-target.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

If no parameter is provided the command lists all the active iSCSI virtual-targets. If the iSCSI node name is provided then the command lists the details of that iSCSI virtual-target.

Examples

The following example displays the local iSCSI node.

```
switch# show iscsi virtual-target
target: abc
    Port WWN 00:00:00:00:00:00:00:00
    Configured node
target: abc1
    Port WWN 21:00:00:20:37:a6:b0:bf
    Configured node
target: iqn.com.domainname.172.22.93.143.08-03.gw.22000020374b5247
    Port WWN 22:00:00:20:37:4b:52:47 , VSAN 1
    Auto-created node
target: iqn.com.domainname.172.22.93.143.08-03.gw.220000203738e77d
    Port WWN 22:00:00:20:37:38:e7:7d , VSAN 1
    Auto-created node
target: iqn.com.domainname.172.22.93.143.08-03.gw.220000203700cede
    Port WWN 22:00:00:20:37:00:ce:de , VSAN 1
    Auto-created node
...
target: iqn.com.domainname.172.22.93.143.08-03.gw.210000203739aa39
    Port WWN 21:00:00:20:37:39:aa:39 , VSAN 1
    Auto-created node
```

The following example displays a specified local iSCSI node

```
switch# show iscsi virtual-target
iqn.com.domainname.172.22.93.143.08-03.gw.210000203739a95b
target: iqn.com.domainname.172.22.93.143.08-03.gw.210000203739a95b
    Port WWN 21:00:00:20:37:39:a9:5b , VSAN 1
    Auto-created node
```

show kernel core

To display kernel core configurations, use the **show kernel core** command.

show kernel core detailed

Syntax Description

show install impact	Upgrades the BIOS for a supervisor or switching module.
bootflash:	Source or destination location for internal bootflash memory
slot0:	Source or destination location for the CompactFlash memory or PCMCIA card.
volatile:	Source or destination location for the volatile directory.
image-filename	The name of the system or kickstart image.
detailed	Compares the image to the current running system image instead of the system.bin image

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following examples display kernel core settings.

```
switch# show kernel core limit
2

switch# show kernel core target
10.50.5.5

switch# show kernel core module 5
module 5 core is enabled
         level is header
         dst_ip is 10.50.5.5
         src_port is 6671
         dst_port is 6666
         dump_dev_name is eth1
         dst_mac_addr is 00:00:0C:07:AC:01
```

show license

To display kernel core configurations, use the **show kernel core** command.

show license *filename* **| all | hostid | list**

Syntax Description

show license	Displays license-related information.
filename	Specifies the name of the license.
all	Displays details of all licenses installed on a switch.
hostid	Displays host ID used to request node locked license.
list	Displays a list of license files installed on a switch.

Defaults

None.

Command Modes

EXEC

Command History

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

Usage Guidelines

None.

Examples

The following example displasy a specific license installed on a switch.

```
switch# show license fcports.lic
fcports.lic:
SERVER this_host ANY
VENDOR cisco
FEATURE fcports cisco 1.000 permanent 30 HOSTID=VDH=4C0AF664 \
        SIGN=24B2B68AA676 <---------------------- fcport license
```

The following example displasy a list of license files installed on a switch.

```
switch# show license list
fcports.lic
ficon.lic
```

The following example displays all licenses installed on a switch.

```
switch# show license all
fcports.lic:
SERVER this_host ANY
VENDOR cisco
FEATURE fcports cisco 1.000 permanent 30 HOSTID=VDH=4C0AF664 \
        SIGN=24B2B68AA676 <----------fcport license
ficon.lic:
FEATURE ficon cisco 1.000 permanent uncounted HOSTID=VDH=4C0AF664 \
        SIGN=CB7872B23700 <----------ficon license
```

The following example displays the host IDs, required to request node locked license.

```
switch# show license hostid
License hostid:VDH=4C0AF664
```

show line

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

show line com1 | console

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 1.2(1).

Usage Guidelines

None.

Examples

The following example displays configured console settings.

```
switch## show line console
line Console:
    Speed:        38400 bauds
    Databits:     8 bits per byte
    Stopbits:     1 bit(s)
    Parity:       none
```

The following example displays configured or default COM1 settings.

```
switch# show line com1
line Aux:
    Speed:        9600 bauds
    Databits:     8 bits per byte
    Stopbits:     1 bit(s)
    Parity:       none
    Modem In: Enable
    Modem Init-String -
        default : ATE0Q1&D2&C1S0=1\015
    Statistics:  tx:17     rx:0     Register Bits:RTS|CTS|DTR|DSR|CD|RI
```

Related Commands

Command	Description
line console	Configure primary terminal line.
line aux	Confgiures the auxilary COM 1 port
clear line	Deleted configured line sessions.

show logging

Use the **show logging** command to display the current system message logging configuration.

show logging [console | level [auth | authpriv | callhome | cron | daemon | ftp | kernel | local*n* **|lpr | mail | news | security | syslog | user | uucp | vsan] | info | last** *lines* **| logfile | module | monitor | nvram | server** *servername* **]**

Syntax Description

console	Shows console logging configuration.
info	Shows logging configuration.
last	Shows last few lines of logfile.
level	Shows last few lines of logfile.
logfile	Shows contents of logfile.
module	Shows module logging configuration.
monitor	Shows monitor logging configuration.
nvram	Shows NVRAM log.
server *servername*	Shows server logging configuration.

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 displays current system message logging.

```
switch# show logging

Logging console:                 enabled (Severity: notifications)
Logging monitor:                 enabled (Severity: information)
Logging linecard:                enabled (Severity: debugging)
Logging server:                  enabled
{172.22.0.0}
        server severity:         debugging
        server facility:         local7
{172.22.0.0}
        server severity:         debugging
        server facility:         local7
Logging logfile:                 enabled
        Name - external/sampleLogFile: Severity - notifications Size - 3000000
```

```
syslog_get_levels :: Error(-1) querying severity values for fcmpls at SAP 30
syslog_get_levels :: Error(-1) querying severity values for fcfwd at SAP 38
Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
kern                    6                       4
user                    3                       3
mail                    3                       3
daemon                  7                       7
auth                    0                       0
syslog                  3                       3
lpr                     3                       3
news                    3                       3
uucp                    3                       3
cron                    3                       3
authpriv                3                       3
ftp                     3                       3
local0                  3                       3
local1                  3                       3
local2                  3                       3
local3                  3                       3
local4                  3                       3
local5                  3                       3
local6                  3                       3
local7                  3                       3
fspf                    3                       3
fcdomain                2                       2
module                  5                       5
zone                    2                       2
vni                     2                       2
ipconf                  2                       2
ipfc                    2                       2
xbar                    3                       3
fcns                    2                       2
fcs                     2                       2
acl                     2                       2
tlport                  2                       2
port                    5                       5
port_channel            5                       5
fcmpls                  0                       0
wwn                     3                       3
fcc                     2                       2
qos                     3                       3
vrrp_cfg                2                       2
fcfwd                   0                       0
ntp                     2                       2
platform                5                       5
vrrp_eng                2                       2
callhome                2                       2
mcast                   2                       2
rscn                    2                       2
securityd               2                       2
vhbad                   2                       2
rib                     2                       2
vshd                    5                       5

0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)

Nov  8 16:48:04 excal-113 %LOG_VSHD-5-VSHD_SYSLOG_CONFIG_I: Configuring console
from pts/1 (171.71.58.56)
Nov  8 17:44:09 excal-113 %LOG_VSHD-5-VSHD_SYSLOG_CONFIG_I: Configuring console
from pts/0 (171.71.58.72)
```

The following example displays console logging status.

```
switch# show logging console
Logging console:                enabled (Severity: notifications)
```

The following example displays logging facility status.

```
switch# show logging facility
syslog_get_levels :: Error(-1) querying severity values for fcmpls at SAP 30
syslog_get_levels :: Error(-1) querying severity values for fcfwd at SAP 38
Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
kern                    6                       4
user                    3                       3
mail                    3                       3
daemon                  7                       7
auth                    0                       0
syslog                  3                       3
lpr                     3                       3
news                    3                       3
uucp                    3                       3
cron                    3                       3
authpriv                3                       3
ftp                     3                       3
local0                  3                       3
local1                  3                       3
local2                  3                       3
local3                  3                       3
local4                  3                       3
local5                  3                       3
local6                  3                       3
local7                  3                       3
fspf                    3                       3
fcdomain                2                       2
module                  5                       5
zone                    2                       2
vni                     2                       2
ipconf                  2                       2
ipfc                    2                       2
xbar                    3                       3
fcns                    2                       2
fcs                     2                       2
acl                     2                       2
tlport                  2                       2
port                    5                       5
port_channel            5                       5
fcmpls                  0                       0
wwn                     3                       3
fcc                     2                       2
qos                     3                       3
vrrp_cfg                2                       2
fcfwd                   0                       0
ntp                     2                       2
platform                5                       5
vrrp_eng                2                       2
callhome                2                       2
mcast                   2                       2
rscn                    2                       2
securityd               2                       2
vhbad                   2                       2
rib                     2                       2
vshd                    5                       5
```

```
0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)
```

The following example displays logging information.

```
switch# show logging info

Logging console:                enabled (Severity: notifications)
Logging monitor:                enabled (Severity: information)
Logging linecard:               enabled (Severity: debugging)
Logging server:                 enabled
{172.22.95.167}
        server severity:        debugging
        server facility:        local7
{172.22.92.58}
        server severity:        debugging
        server facility:        local7
Logging logfile:                enabled
        Name - external/sampleLogFile: Severity - notifications Size - 3000000

syslog_get_levels :: Error(-1) querying severity values for fcmpls at SAP 30
syslog_get_levels :: Error(-1) querying severity values for fcfwd at SAP 38
Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
kern                    6                       4
user                    3                       3
mail                    3                       3
daemon                  7                       7
auth                    0                       0
syslog                  3                       3
lpr                     3                       3
news                    3                       3
uucp                    3                       3
cron                    3                       3
authpriv                3                       3
ftp                     3                       3
local0                  3                       3
local1                  3                       3
local2                  3                       3
local3                  3                       3
local4                  3                       3
local5                  3                       3
local6                  3                       3
local7                  3                       3
fspf                    3                       3
fcdomain                2                       2
module                  5                       5
zone                    2                       2
vni                     2                       2
ipconf                  2                       2
ipfc                    2                       2
xbar                    3                       3
fcns                    2                       2
fcs                     2                       2
acl                     2                       2
tlport                  2                       2
port                    5                       5
port_channel            5                       5
fcmpls                  0                       0
wwn                     3                       3
fcc                     2                       2
qos                     3                       3
vrrp_cfg                2                       2
```

```
fcfwd                   0                       0
ntp                     2                       2
platform                5                       5
vrrp_eng                2                       2
callhome                2                       2
mcast                   2                       2
rscn                    2                       2
securityd               2                       2
vhbad                   2                       2
rib                     2                       2
vshd                    5                       5

0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)
```

The following example displays last few lines of a log file.

```
switch# show logging last 2
Nov  8 16:48:04 excal-113 %LOG_VSHD-5-VSHD_SYSLOG_CONFIG_I: Configuring console
from pts/1 (171.71.58.56)
Nov  8 17:44:09 excal-113 %LOG_VSHD-5-VSHD_SYSLOG_CONFIG_I: Configuring console
from pts/0 (171.71.58.72)
```

The following example displays switching module logging status.

```
switch# show logging module
Logging linecard:               enabled (Severity: debugging)
```

The following example displays monitor logging status.

```
switch# show logging monitor
Logging monitor:                enabled (Severity: information)
```

The following example displays server information.

```
switch# show logging server
Logging server:                 enabled
{172.22.95.167}
        server severity:        debugging
        server facility:        local7
{172.22.92.58}
        server severity:        debugging
        server facility:        local7
```

show module

To verify the status of a module, use the **show module** command.

show module [diag | *slot*]

Syntax Description

diag	Shows module-related information.
slot	Slot number for the required module (1 - 9 for the MDS 9500 Series switch and 1 - 2 for the MDS 9200 Series switch.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

If your chassis has more than one switching module, you will see the progress check if you issue the show module command several times and view the status column each time.

The switching module goes through a testing and an initializing stage before displaying an `ok` status.

The following table describes the possible states in which a module can exist.

show module Output	Description
`powered up`	The hardware has electrical power. When the hardware is powered up, the software begins booting.
`testing`	The module has established connection with the supervisor and the switching module is performing bootup diagnostics.
`initializing`	The diagnostics have passed and the configuration is being downloaded.
`failure`	The switch detects a switching module failure on initialization and automatically attempts to power-cycle the module three (3) times. After the third attempt it continues to display a failed state.
`ok`	The switch is ready to be configured.
`power-denied`	The switch detects insufficient power for a switching module to power up. In this case, issue a **show environment power** command to determine power consumption issues.
`active`	This module is the active supervisor module and the switch is ready to be configured.

show module Output	Description
HA-standby	This module is the standby supervisor module and that the HA switchover mechanism is enabled.
standby	This module is the standby supervisor module and the warm switchover mechanism is enabled.

Examples

```
switch# show module
Mod  Ports  Module-Type                      Model              Status
---  -----  -------------------------------- ------------------ ------------
1    16     1/2 Gbps FC Module               DS-X9016           ok
5    0      Supervisor/Fabric-1              DS-X9530-SF1-K9    active *
6    0      Supervisor/Fabric-1              DS-X9530-SF1-K9    ha-standby
9    16     1/2 Gbps FC Module               DS-X9016           ok

Mod  Sw           Hw      World-Wide-Name(s) (WWN)
---  -----------  ------  --------------------------------------------------
1    1.0(2.34)    0.3     20:01:00:05:30:00:13:9e to 20:10:00:05:30:00:13:9e
5    1.0(2.34)    0.602   --
6    1.0(2.34)    0.0     --
9    1.0(2.34)    0.0     22:01:00:05:30:00:13:9e to 22:10:00:05:30:00:13:9e

Mod  MAC-Address(es)                         Serial-Num
---  --------------------------------------  ----------
1    00-05-30-00-81-6e to 00-05-30-00-81-72  jab063908gj
5    00-05-30-00-84-1a to 00-05-30-00-84-1e  jab063909cv
6    00-05-30-00-2c-5e to 00-05-30-00-2c-62
9    00-05-30-00-03-0c to 00-05-30-00-03-10  123

* this terminal session

switch# show module diag

Diag status for module 2 (. = PASS, F = FAIL, N = N/A)
CPU           .
SPROM         .
ASICS         .

Diag status for module 4 (. = PASS, F = FAIL, N = N/A)
CPU           .
SPROM         .
ASICS         .
```

show ntp

To display the configured server and peer associations, use the **show ntp** command.

show ntp peers | statistics [io | local | memory | peer (ipaddr | name)] | timestamp-status

Syntax Description

peers	Shows all the peers.
statistics	Shows the NTP statistics
io	Shows the input-output statistics.
local	Shows the counters maintained by the local NTP.
memory	Shows the statistics counters related to memory code.
peer	Shows the per-peer statistics counter of a peer.
ipaddr	Shows the peer statistics for the specified IP address.
name	Shows the peer statistics for the specified peer name.
timestamp-status	Shows if the timestamp check is enabled.

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 display the NTP information.

```
switch# show ntp peers
-------------------------------------------
  Peer IP Address               Serv/Peer
-------------------------------------------
  10.20.10.2                    Server
  10.20.10.0                    Peer

switch# show ntp statistics io
time since reset:     11152
receive buffers:      9
free receive buffers: 9
used receive buffers: 9
low water refills:    0
dropped packets:      0
ignored packets:      0
received packets:     3
packets sent:         2
packets not sent:     0
interrupts handled:   3
received by int:      3

switch# show ntp statistics local
system uptime:          11166
time since reset:       11166
bad stratum in packet:  0
old version packets:    4
new version packets:    0
unknown version number: 0
bad packet format:      0
packets processed:      0
bad authentication:     0

switch# show ntp statistics memory
time since reset:     11475
total peer memory:    15
free peer memory:     15
calls to findpeer:    0
new peer allocations: 0
peer demobilizations: 0
hash table counts:      0   0   0   0   0   0   0   0
                        0   0   0   0   0   0   0   0
                        0   0   0   0   0   0   0   0
                        0   0   0   0   0   0   0   0

switch# show ntp statistics peer ipaddr 10.1.1.1

switch# show ntp statistics peer name Peer1

switch# show ntp timestamp-status
Linecard 9 does not support Timestamp check.
```

show port-channel

Use the **show port-channel** command to view information about existing PortChannel configurations

show port-channel compatibility-parameters | consistency (detail) | database (interface port-channel *port channel number)* **| summary | usage**

Syntax Description

compatibility-parameters	Shows compatibility parameters.
consistency	Verify database consistency of all modules.
detail	Shows port channel database information for all modules.
database	Shows port-channel database.
interface port-channel *port channel number*	Port channel number (1-128)
summary	Shows port-channel summary.
usage	Shows port-channel number usage.

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 displays the PortChannel summary.

```
switch# show port-channel summary
NEW
```

The following example displays the PortChannel compatibility.

```
switch# show port-channel compatibility-parameters
    physical port layer                fibre channel or ethernet
    port mode                          E/TE/AUTO only
    trunk mode
    speed
    port VSAN
    port allowed VSAN list
```

The following example shows the PortChannel database.

```
switch# show port-channel database
port-channel 2
    Administrative channel mode is on
    Operational channel mode is on
    Last membership update succeeded
    First operational port is fc2/2
    1 port in total, 1 port up
    Ports:   fc2/2    [up]
```

The **show port-channel consistency** command has two options—without detail **and detail**.

Command Without Details

```
switch# show port-channel consistency
Database is consistent
switch#
```

Command With Details

```
switch# show port-channel consistency detail
Authoritative port-channel database:
================================================
totally 1 port-channels
port-channel 2:
    1 ports, first operational port is fc2/2
    fc2/2    [up]
================================================
database 1: from module 5
================================================
totally 1 port-channels

port-channel 2:
    1 ports, first operational port is fc2/2
    fc2/2    [up]
================================================
database 2: from module 2
================================================
totally 1 port-channels
port-channel 2:
    1 ports, first operational port is fc2/2
    fc2/2    [up]
================================================
```

The **show port-channel usage** command displays details of the used and unused PortChannel numbers.

PortChannel Usage

```
switch# show port-channel usage
Totally 2 port-channel numbers used
===================================
Used  :   3, 9
Unused:   1-2, 4-8, 10-128
```

show port-security

To display configured port security feature information, use the **show port-security database** command.

show port-security database
[(active | fwwn *wwn* **| interface fc** *slot/port*) **vsan** *vsan-id]* **|**
statistics vsan *vsan-id* **|**
status | violations

Syntax Description

port-security	Displays configured port security informations.
database	Displays database-related port security information
statistics	Displays port security statistics.
status	Displays the port security status on a per VSAN basis.
violations	Displays violations in the port security database.
vsan *vsan-id*	Displays information for the specified database.
active	Displays the activated database information.
fwwn *wwn*	Displays information for the specified fWWN.
interface fc *slot/port*	Displays information for the specified interface.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

The access information for each port can be individually displayed. If you specify the fwwn or interface options, all devices that are paired in the active database (at that point) with the given fWWN or the interface are displayed.

The **show port-security** command issued with the **last** *number* option displays only the specified number of entries that appear first.

Examples

The following example displays the contents of the port security database.

```
switch# show port-security database
--------------------------------------------------------------------------------
VSAN    Logging-in Entity             Logging-in Point(     Interface)
--------------------------------------------------------------------------------
1       21:00:00:e0:8b:06:d9:1d(pwwn) 20:0d:00:05:30:00:95:de(fc1/13)
1       50:06:04:82:bc:01:c3:84(pwwn) 20:0c:00:05:30:00:95:de(fc1/12)
2       20:00:00:05:30:00:95:df(swwn) 20:0c:00:05:30:00:95:de(port-channel 128)
3       20:00:00:05:30:00:95:de(swwn) 20:01:00:05:30:00:95:de(fc1/1)
[Total 4 entries]
```

The following example displays the output of the activated port security database in VSAN 1.

```
switch# show port-security database vsan 1
--------------------------------------------------------------------------------
Vsan   Logging-in Entity              Logging-in Point        (Interface)
--------------------------------------------------------------------------------
1                  *                  20:85:00:44:22:00:4a:9e (fc3/5)
1      20:11:00:33:11:00:2a:4a(pwwn)  20:81:00:44:22:00:4a:9e (fc3/1)
[Total 2 entries]
```

The following example displays the activated database.

```
switch# show port-security database active
-------------------------------------------------------------------------------------------
VSAN    Logging-in Entity             Logging-in Point(      Interface)     Learnt
-------------------------------------------------------------------------------------------
1       21:00:00:e0:8b:06:d9:1d(pwwn) 20:0d:00:05:30:00:95:de(fc1/13)           Yes
1       50:06:04:82:bc:01:c3:84(pwwn) 20:0c:00:05:30:00:95:de(fc1/12)           Yes
2       20:00:00:05:30:00:95:df(swwn) 20:0c:00:05:30:00:95:de(port-channel 128) Yes
3       20:00:00:05:30:00:95:de(swwn) 20:01:00:05:30:00:95:de(fc1/1)
[Total 4 entries]
```

The following example displays the wildcard fwwn port security in VSAN 1.

```
switch# show port-security database fwwn 20:85:00:44:22:00:4a:9e vsan 1
Any port can login thru' this fwwn
```

The following example displays the configured fWWN port security in VSAN 1.

```
switch# show port-security database fwwn 20:01:00:05:30:00:95:de vsan 1
20:00:00:0c:88:00:4a:e2(swwn)
```

The following example displays the interface port information in VSAN 2.

```
switch# show port-security database interface fc 1/1 vsan 2
20:00:00:0c:88:00:4a:e2(swwn)
```

The following example port security statistics.

```
switch# show port-security statistics
Statistics For VSAN: 1
-----------------------
Number of pWWN permit: 2
Number of nWWN permit: 2
Number of sWWN permit: 2
Number of pWWN deny  : 0
Number of nWWN deny  : 0
Number of sWWN deny  : 0

Total Logins permitted  : 4
Total Logins denied     : 0
Statistics For VSAN: 2
-----------------------
Number of pWWN permit: 0
Number of nWWN permit: 0
Number of sWWN permit: 2
Number of pWWN deny  : 0
Number of nWWN deny  : 0
Number of sWWN deny  : 0
...
```

The following example displays the status of the active database and the auto-learn configuration.

```
switch# show port-security status
VSAN 1 :Activated database, auto-learning is enabled
VSAN 2 :No Active database, auto-learning is disabled
...
```

The following example displays the previous 100 violations.

```
switch# show port-security violations

-------------------------------------------------------------------------------------------
VSAN    Interface      Logging-in Entity             Last-Time              [Repeat count]
-------------------------------------------------------------------------------------------
1       fc1/13         21:00:00:e0:8b:06:d9:1d(pwwn) Jul  9 08:32:20 2003   [20]
                       20:00:00:e0:8b:06:d9:1d(nwwn)
1       fc1/12         50:06:04:82:bc:01:c3:84(pwwn) Jul  9 08:32:20 2003   [1]
                       50:06:04:82:bc:01:c3:84(nwwn)
2       port-channel 1 20:00:00:05:30:00:95:de(swwn) Jul  9 08:32:40 2003   [1]
[Total 2 entries]
```

show processes

To show general information about all the processes, use the show processes command.

show processes [cpu | log [details | pid *process-id* **| memory]**

Syntax Description

cpu	Shows processes CPU Info
log	Shows information about process logs
memory	Shows processes Memory Info

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 displays general information abut system processes.

```
switch# show process
PID    State  PC        Start_cnt    TTY   Process
-----  -----  --------  -----------  ----  -------------
  868      S  2ae4f33e            1     -  snmpd
  869      S  2acee33e            1     -  rscn
  870      S  2ac36c24            1     -  qos
  871      S  2ac44c24            1     -  port-channel
  872      S  2ac7a33e            1     -  ntp
    -     ER         -            1     -  mdog
    -     NR         -            0     -  vbuilder

PID: process ID.

State: process state

       D   uninterruptible sleep (usually IO)
       R   runnable (on run queue)
       S   sleeping
       T   traced or stopped
       Z   a defunct ("zombie") process

    NR  not-running
    ER  should be running but currently not-running

PC: Current program counter in hex format

Start_cnt: how many times a process has been started.
```

```
TTY: Terminal that controls the process. A "-" usually means a daemon not
     running on any perticular tty.

Process: name of the process.

=====================================================

2. show processes cpu (new output)
Description: show cpu utilization information about the processes.

switch# show processes cpu

PID    Runtime(ms)  Invoked   uSecs  1Sec   Process
-----  -----------  --------  -----  -----  -----------
  842         3807    137001     27    0.0  sysmgr
 1112         1220     67974     17    0.0  syslogd
 1269          220     13568     16    0.0  fcfwd
 1276         2901     15419    188    0.0  zone
 1277          738     21010     35    0.0  xbar_client
 1278         1159      6789    170    0.0  wwn
 1279          515     67617      7    0.0  vsan

Runtime(ms): cpu time the process has used, expressed in milliseconds
Invoked: Number of times the process has been invoked.
uSecs:  Microseconds of CPU time in average for each process invocation.
1Sec:    CPU utilization in percentage for the last 1 second.

=====================================================
3. show processes mem
Description: show memory information about the processes.

PID    MemAlloc  StackBase/Ptr      Process
-----  --------  -----------------  ----------------
 1277    120632  7ffffcd0/7fffefe4  xbar_client
 1278     56800  7ffffce0/7ffffb5c  wwn
 1279   1210220  7ffffce0/7ffffbac  vsan
 1293    386144  7ffffcf0/7fffebd4  span
 1294   1396892  7ffffce0/7fffdff4  snmpd
 1295    214528  7ffffcf0/7ffff904  rscn
 1296     42064  7ffffce0/7ffffb5c  qos

MemAlloc: total memory allocated by the process.
StackBase/Ptr: process stack base and current stack pointer in hex format

=====================================================
3. show processes log
Decription: list all the process logs

switch# show processes log
Process           PID     Normal-exit  Stack-trace  Core     Log-create-time
----------------  ------  -----------  -----------  -------  ---------------
fspf              1339             N            Y        N  Jan  5 04:25
lcm               1559             N            Y        N  Jan  2 04:49
rib               1741             N            Y        N  Jan  1 06:05

Normal-exit: whether or not the process exited normally.
Stack-trace: whether or not there is a stack trace in the log.
Core: whether or not there exists a core file.
Log-create-time: when the log file got generated.
```

The following example displays the detail log information about a particular process.

```
switch# show processes log pid 1339
Service: fspf
Description: FSPF Routing Protocol Application

Started at Sat Jan  5 03:23:44 1980 (545631 us)
Stopped at Sat Jan  5 04:25:57 1980 (819598 us)
Uptime: 1 hours 2 minutes 2 seconds

Start type: SRV_OPTION_RESTART_STATELESS (23)
Death reason: SYSMGR_DEATH_REASON_FAILURE_SIGNAL (2)
Exit code: signal 9 (no core)
CWD: /var/sysmgr/work

Virtual Memory:

    CODE      08048000 - 0809A100
    DATA      0809B100 - 0809B65C
    BRK       0809D988 - 080CD000
    STACK     7FFFFD20
    TOTAL     23764 KB

Register Set:

    EBX 00000005         ECX 7FFFF8CC         EDX 00000000
    ESI 00000000         EDI 7FFFF6CC         EBP 7FFFF95C
    EAX FFFFFDFE         XDS 8010002B         XES 0000002B
    EAX 0000008E (orig)  EIP 2ACE133E         XCS 00000023
    EFL 00000207         ESP 7FFFF654         XSS 0000002B

Stack: 1740 bytes. ESP 7FFFF654, TOP 7FFFFD20

0x7FFFF654: 00000000 00000008 00000003 08051E95 ................
0x7FFFF664: 00000005 7FFFF8CC 00000000 00000000 ................
0x7FFFF674: 7FFFF6CC 00000001 7FFFF95C 080522CD ........\....".."
0x7FFFF684: 7FFFF9A4 00000008 7FFFFC34 2AC1F18C ........4......*
```

show qos statistics

To display the current QoS settings along with a the number of frames marked high priority, use the **show qos statistics** command.

show 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 example displays configures QoS statistics.

```
switch# show qos statistics
Total number of FC frames transmitted from the Supervisor= 15767
Number of highest-priority FC frames transmitted = 8224
Current priority of FC control frames = 0 (0 = lowest; 7 = highest)
```

show radius-server

To display all configured RADIUS server parameters, use the **show radius-server** command.

show radius-server

Syntax Description

This command has no keywords or arguments.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

Only administrators can view the RADIUS pre-shared key.

Examples

```
switch# show radius-server
Global RADIUS shared secret:Myxgqc
retransmission count:5
timeout value:10

following RADIUS servers are configured:
        myradius.cisco.users.com:
                available for authentication on port:1812
                available for accounting on port:1813
        172.22.91.37:
                available for authentication on port:1812
                available for accounting on port:1813
                RADIUS shared secret:23MHcUnD
        10.10.0.0:
                available for authentication on port:1812
                available for accounting on port:1813
               RADIUS shared secret:hostkey----> for administrators only
```

show role

To display rules (and their associated rules) configured on the switch, including those roles that have not yet been committed to persistent storage, use the **show role** command.

show role [name *string*]

Syntax Description

name *string*	The name of the role for which you want to display information.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

The rules are displayed by rule number and are based on each role. All roles are displayed even if role name is not specified.

Only network-admin role can access this command.

Examples

```
switch# show role
Role: network-admin
Description: Predefined Network Admin group. This role cannot be modified
Access to all the switch commands

Role: network-operator
Description: Predefined Network Operator group. This role cannot be modified
Access to Show commands and selected Exec commands

Role: sangroup
Description: SAN management group
----------------------------------------
Rule   Type   Command-type   Feature
----------------------------------------
  1.   permit    config           *
  2.     deny    config        fspf
  3.   permit     debug        zone
  4.   permit      exec      fcping
```

show rscn

To display RSCN information, use the **show rscn** command.

show rscn [scr-table vsan *vsan-range* **| statistics vsan** *vsan-range***]**

Syntax Description

scr-table	Shows State Change Registration table.
statistics	Shows RSCN statistics.
vsan *vsan-range*	Range of the required VSANs (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

The SCR table cannot be configured, it is only populated if one or more Nx ports send SCR frames to register for RSCN information. If the **show rscn scr-table** command does not return any entries, no Nx port is interested in receiving RSCN information.

Examples

The following examples display RSCN information.

```
switch# show rscn scr-table vsan 1
SCR table for VSAN: 1
---------------------------------------------
FC-ID         REGISTERED FOR
---------------------------------------------
0x1b0300      fabric detected rscns

Total number of entries = 1
```

```
switch# show rscn statistics vsan 1

Statistics for VSAN: 1
-----------------------

Number of SCR received         = 0
Number of SCR ACC sent         = 0
Number of SCR RJT sent         = 0
Number of RSCN received        = 0
Number of RSCN sent            = 0
Number of RSCN ACC received    = 0
Number of RSCN ACC sent        = 0
Number of RSCN RJT received    = 0
Number of RSCN RJT sent        = 0
Number of SW-RSCN received     = 0
Number of SW-RSCN sent         = 0
Number of SW-RSCN ACC received = 0
Number of SW-RSCN ACC sent     = 0
Number of SW-RSCN RJT received = 0
Number of SW-RSCN RJT sent     = 0
```

show running-config

To view the running configuration file, use the **show running-config** command

show running-config [diff]

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

If the running configuration is different from the startup configuration, issue the **show startup-config** command to view the ASCII version of the current startup configuration that was used to boot the switch.

Examples

The following example displays the configuration currently running on the switch.

```
switch# show running-config
Building Configuration ...
 interface fc1/1
 interface fc1/2
 interface fc1/3
 interface fc1/4
 interface mgmt0
ip address 172.22.95.112 255.255.255.0
no shutdown
vsan database
boot system bootflash:isan-237; sup-1
boot kickstart bootflash:boot-237 sup-1
callhome
ip default-gateway 172.22.95.1
switchname switch
trunk protocol enable
username admin password 5 /AFDAMD4B2xK2  role network-admin
```

show scsi-target

Use the **show scsi target** command to view specific information about existing SCSI configurations.

show scsi target {devices [vsan *vsan-range* **| fcid** *fcid-id***] | disk [vsan** *vsan-range* **| fcid** *fcid-id***] | lun [vsan** *vsan-range* **| fcid** *fcid-id***] | status | tape [vsan** *vsan-range* **| fcid** *fcid-id***]}**

Syntax Description

devices	Shows discovered scsi-target devices information
disk	Shows discovered disk information.
lun	Shows discovered SCSI target LUN information.
vsan *vsan-range*	Specifies the VSAN ID or VSAN range (from 1 to 4093).
fcid *fcid-id*	Specifies the FCID of the SCSI target to display.
status	Shows SCSI target discovery status.
tape	Shows discovered tape information

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 displays the status of a SCSI discovery.

```
switch# show scsi-target status
discovery completed
```

The following example displays discovered disk information.

```
switch# show scsi-target disk
--------------------------------------------------------------------------------
VSAN    FCID        PWWN                    VENDOR    MODEL           REV
--------------------------------------------------------------------------------
1       0x9c03d6    21:00:00:20:37:46:78:97   Company 4 ST318203FC        0004
1       0x9c03d9    21:00:00:20:37:5b:cf:b9   Company 4 ST318203FC        0004
1       0x9c03da    21:00:00:20:37:18:6f:90   Company 4 ST318203FC        0004
1       0x9c03dc    21:00:00:20:37:5a:5b:27   Company 4 ST318203FC        0004
1       0x9c03e0    21:00:00:20:37:36:0b:4d   Company 4 ST318203FC        0004
1       0x9c03e1    21:00:00:20:37:39:90:6a   Company 4 ST318203 CLAR18   3844
1       0x9c03e2    21:00:00:20:37:18:d2:45   Company 4 ST318203 CLAR18   3844
1       0x9c03e4    21:00:00:20:37:6b:d7:18   Company 4 ST318203 CLAR18   3844
1       0x9c03e8    21:00:00:20:37:38:a7:c1   Company 4 ST318203FC        0004
1       0x9c03ef    21:00:00:20:37:18:17:d2   Company 4 ST318203FC        0004
```

The following example displays the discovered LUNs.

```
switch# show scsi-target lun
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03d6 in VSAN 1, PWWN is 21:00:00:20:37:46:78:97
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LRA2510000007027 C:1 A:0 T:3 20:00:00:20:37:46:78:97
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03d9 in VSAN 1, PWWN is 21:00:00:20:37:5b:cf:b9
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR94873000007029 C:1 A:0 T:3 20:00:00:20:37:5b:cf:b9
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03da in VSAN 1, PWWN is 21:00:00:20:37:18:6f:90
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR18591800001004 C:1 A:0 T:3 20:00:00:20:37:18:6f:90
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03dc in VSAN 1, PWWN is 21:00:00:20:37:5a:5b:27
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LRC4498200007031 C:1 A:0 T:3 20:00:00:20:37:5a:5b:27
- ST318203FC       from Company 4  (Rev 0004)
  FCID is 0x9c03e0 in VSAN 1, PWWN is 21:00:00:20:37:36:0b:4d
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18210      Online LR18184700007024 C:1 A:0 T:3 20:00:00:20:37:36:0b:4d
- ST318203 CLAR18  from Company 4  (Rev 3844)
  FCID is 0x9c03e1 in VSAN 1, PWWN is 21:00:00:20:37:39:90:6a
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LR64147100001017 C:1 A:0 T:3 20:00:00:20:37:39:90:6a
- ST318203 CLAR18  from Company 2  (Rev 3844)
  FCID is 0x9c03e2 in VSAN 1, PWWN is 21:00:00:20:37:18:d2:45
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LR28349500001952 C:1 A:0 T:3 20:00:00:20:37:18:d2:45
- ST318203 CLAR18  from Company 2  (Rev 3844)
  FCID is 0x9c03e4 in VSAN 1, PWWN is 21:00:00:20:37:6b:d7:18
  --------------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  --------------------------------------------------------------------------------
  0x0     18200      Online LRF7150500001041 C:1 A:0 T:3 20:00:00:20:37:6b:d7:18
- ST318203FC       from Company 2  (Rev 0004)
  FCID is 0x9c03e8 in VSAN 1, PWWN is 21:00:00:20:37:38:a7:c1
  --------------------------------------------------------------------------------
```

```
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  ----------------------------------------------------------------------------
  0x0     18210      Online LR43588300001011 C:1 A:0 T:3 20:00:00:20:37:38:a7:c1
- ST318203FC       from Company 2  (Rev 0004)
  FCID is 0x9c03ef in VSAN 1, PWWN is 21:00:00:20:37:18:17:d2
  ----------------------------------------------------------------------------
  LUN     Capacity   Status Serial Number    Device-Id
          (MB)
  ----------------------------------------------------------------------------
  0x0     18210      Online LR06903200001949 C:1 A:0 T:3 20:00:00:20:37:18:17:d2
```

show snmp

The **show snmp** command displays the count information for all SNMP settings.

show snmp [community | host |user]

Syntax Description

community	Shows SNMP community strings.
host	Shows snmp hosts.
user	Shows SNMPv3 users.

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 displays SNMP information.

```
switch# show snmp
sys contact:
sys location:

1631 SNMP packets input
        0 Bad SNMP versions
        0 Unknown community name
        0 Illegal operation for community name supplied
        0 Encoding errors
        64294 Number of requested variables
        1 Number of altered variables
        1628 Get-request PDUs
        0 Get-next PDUs
        1 Set-request PDUs
152725 SNMP packets output
        0 Too big errors
        1 No such name errors
        0 Bad values errors
        0 General errors

Community                     Access
---------                     ------
public                         rw

User                          Group                         Auth  Priv
____                          _____                         ____  _____
admin                         network-admin                 md5   no
```

The following example displays SNMP user details.

```
switch# show snmp user
User                           Group                          Auth  Priv
____                           _____                          ____  ____
steve                          network-admin                  md5   des
sadmin                         network-admin                  md5   des
stever                         network-operator               md5   des
```

The following example displays SNMP community information.

```
switch# show snmp community
Community                      Access
---------                      ------
private                         rw
public                          ro
v93RACqPNH                      ro
```

The following example displays SNMP host information.

```
switch# show snmp host
Host                            Port Version  Level  Type   SecName
____                            ____ _______  ______ ____  _______
171.16.126.34                   2162 v2c      noauth trap   public
171.16.75.106                   2162 v2c      noauth trap   public
171.31.124.81                   2162 v2c      noauth trap   public
171.31.157.193                  2162 v2c      noauth trap   public
171.31.157.98                   2162 v2c      noauth trap   public
171.31.49.25                    2162 v2c      noauth trap   public
171.31.49.32                    2188 v2c      noauth trap   public
171.31.49.49                    2162 v2c      noauth trap   public
171.31.49.49                    3514 v2c      noauth trap   public
171.31.49.54                    2162 v2c      noauth trap   public
171.31.58.54                    2162 v2c      noauth trap   public
171.31.58.81                    2162 v2c      noauth trap   public
171.31.58.97                    1635 v2c      noauth trap   public
171.31.58.97                    2162 v2c      auth   trap   public
171.31.58.97                    3545 v2c      auth   trap   public
172.22.00.43                    2162 v2c      noauth trap   public
172.22.00.65                    2162 v2c      noauth trap   public
172.22.05.234                   2162 v2c      noauth trap   public
172.22.05.98                    1050 v2c      noauth trap   public
```

show span session

Use the **show span session** command to view specific information about a SPAN session.

show span session [*session-id* **[brief] | brief]**

Syntax Description

session	Shows SPAN session configuration.
session-id	SPAN session ID (1-16).
brief	Shows SPAN session configuration in brief format.

Defaults

None.

Command Modes

EXEC mode.

Command History

This command was modified in Cisco MDS SAN-OS Release 1.2(1).

Usage Guidelines

None.

Examples

The following example displays SPAN sessions in a brief format.

```
switch# show span session brief
-------------------------------------------------------
 Session  Admin          Oper           Destination
          State          State          Interface
-------------------------------------------------------
 7        no suspend     active         fc2/7
```

The following example displays a specific SPAN session details.

```
switch# show span session 7
Session 7 (active)
   Destination is fc2/7
   No session filters configured
   No ingress (rx) sources
   Egress (tx) sources are
     port-channel 7,
```

The following example displays all SPAN sessions.

```
switch# show span session
Session 1 (inactive as no destination)
Destination is not specified
   Session filter vsans are 1
   No ingress (rx) sources
   No egress (tx) sources

Session 2 (active)
   Destination is fc9/5
   No session filters configured
   Ingress (rx) sources are
      vsans 1
     sup-fc0,
   Egress (tx) sources are
     sup-fc0,
```

The following example displays a SPAN session mapped to a FC tunnel interface.

```
switch# show span session
Session 2 (active)
   Destination is fc-tunnel 100
   No session filters configured
   Ingress (rx) sources are
     fc2/16,
   Egress (tx) sources are
     fc2/16,
```

show sprom

To show vendor ID, product's component attributes, serial number information that can be used to track field replacable units, use the **show sprom** command.

show sprom sup

show sprom clock *clock-module-index*

show sprom backplane *backplane-index*

show sprom module *module-number sprom-index*

show sprom fan

show sprom powersupply *powersupply-index*

show sprom mgmt-module

Syntax Description

sup	Display Vendor ID, product's component attributes for the current supervisor module
module *module-number sprom-index*	Display Vendor ID, product's component attributes for the given switching module. There can be up to 4 sub-components in a module. Each of them will have a SPROM associated with it.
clock clock-module-index>	Display attributes of the clock module. There are two clock modules in a switch. This module is absent in MDS9216 type switch.
backplane <backplane-index>	Display attributes that can be used to uniquely identify a switch.
powersupply <powersupply-index>	Displays attributes of the first or the second power-supply. This contains information about the powersupply capacity in watts when it is used in 110Volts and 220Volts respectively. This information is used for power-budget allocation.
fan	Display attributes that uniquely identified fan.
mgmt-module	Display attributes of management module. This module is only present in MDS9216 type switch.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

Use the **show sprom** command to get unique information about a specific module, supervisor module, switch, power-supply module, or a fan module. If the customer needs to report a problem with a module, supervisor module, switch, power-supply module, or a fan module and does not have access to management station, then he can extract serial number information from **show sprom**.

Examples

The following example displays management module information. This module and command are specific to the Cisco MDS 9216 switch.

```
switch# show sprom mgmt-module
DISPLAY SAM sprom contents:
Common block:
 Block Signature :0xabab
 Block Version   :2
 Block Length    :156
 Block Checksum  :0x1295
 EEPROM Size     :0
 Block Count     :2
 FRU Major Type  :0x0
 FRU Minor Type  :0x0
 OEM String      :Cisco Systems Inc
 Product Number  :SAM SMITH
 Serial Number   :12345678901
 Part Number     :SAM-SMITH-06
 Part Revision   :A0
 Mfg Deviation   :
 H/W Version     :1.0
 Mfg Bits        :1
 Engineer Use    :0
 snmpOID         :0.0.0.0.0.0.0.0
 Power Consump   :-200
 RMA Code        :0-0-0-0
Linecard Module specific block:
 Block Signature :0x6003
 Block Version   :2
 Block Length    :103
 Block Checksum  :0x3c7
 Feature Bits    :0x0
 HW Changes Bits :0x0
 Card Index      :9009
 MAC Addresses   :00-12-34-56-78-90
 Number of MACs  :4
 Number of EOBC links :4
 Number of EPLD  :0
 Port Type-Num   :200-16
 SRAM size       :0
 Sensor #1       :0,0
 Sensor #2       :0,0
 Sensor #3       :0,0
 Sensor #4       :0,0
 Sensor #5       :0,0
 Sensor #6       :0,0
 Sensor #7       :0,0
 Sensor #8       :0,0
```

The following command displays supervisor module information.

```
switch# show sprom sup
DISPLAY supervisor sprom contents:
Common block:
 Block Signature : 0xabab
 Block Version   : 2
 Block Length    : 156
 Block Checksum  : 0x10a8
 EEPROM Size     : 512
 Block Count     : 2
 FRU Major Type  : 0x6002
 FRU Minor Type  : 0x7d0
 OEM String      : Cisco Systems
 Product Number  : DS-X9530-SF1-K9
 Serial Number   : abcdefgh
 Part Number     : 73-7523-06
 Part Revision   : 0.0
 Mfg Deviation   : 0.0
 H/W Version     : 0.0
 Mfg Bits        : 0
 Engineer Use    : 0
 snmpOID         : 9.5.1.3.1.1.2.2000
 Power Consump   : -524
 RMA Code        : 0-0-0-0
Supervisor Module specific block:
 Block Signature : 0x6002
 Block Version   : 2
 Block Length    : 103
 Block Checksum  : 0x927
 Feature Bits    : 0x0
 HW Changes Bits : 0x0
 Card Index      : 9003
 MAC Addresses   : 00-05-30-00-18-be
 Number of MACs  : 4
 Number of EPLD  : 1
 EPLD A          : 0x0
 Sensor #1       : 75,60
 Sensor #2       : 60,55
 Sensor #3       : -127,-127
 Sensor #4       : -127,-127
 Sensor #5       : -128,-128
 Sensor #6       : -128,-128
 Sensor #7       : -128,-128
 Sensor #8       : -128,-128
```

Related Commands

Command	Description
show hardware	Displays brief information about the list of field replacable units in the switch.

show ssh

Use the **show ssh key** command to display the host key pair details for the specified key or for all keys, if no key is specified.Use the **show ssh server** command to display the status of the SSH protocol (enabled or disabled) and the versions that are enabled for that switch.show ssh key

show ssh [key [dsa | rsa | rsa1] | server]

Syntax Description

key	Shows ssh keys.
server	Shows whether ssh server is enabled or not.
dsa	Shows dsa ssh keys.
rsa	Shows rsa ssh keys.
rsa1	Shows rsa1 ssh keys.

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 displays SSH protocol status.

```
switch# show ssh server
ssh is enabled
version 1 enabled
version 2 enabled
```

The following example displays Host Key Pair details.

```
switch# show ssh key
rsa1 Keys generated:Sun Jan 13 07:16:26 1980

1024 35

fingerprint:
1024 67:76:02:bd:3e:8d:f5:ad:59:5a:1e:c4:5e:44:03:07

could not retrieve rsa key information

dsa Keys generated:Sun Jan 13 07:40:08 1980

ssh-dss AAAAB3NzaC1kc3MAAABBAJTCRQOydNRel2v7uiO6Fix+OTn8eGdnnDVxw5eJs5OcOEXOyjaW
cMMYsEgxc9ada1NElp8Wy7GPMWGOQYj9CU0AAAAVAMCcWhNN18zFNOIPo7cU3t7d0iEbAAAAQBdQ8UAO
i/Cti84qFb3kTqXlS9mEhdQUo0lHcH5bw5PKfj2Y/dLR437zCBKXetPj4p7mhQ6Fq5os8RZtJEyOsNsA
AABAA0oxZbPyWeR5NHATXiyXdPI7j9i8fgyn9FNipMkOF2Mn75Mi/lqQ4NIq0gQNvQOx27uCeQlRts/Q
wI4q68/eaw==

fingerprint:
512 f7:cc:90:3d:f5:8a:a9:ca:48:76:9f:f8:6e:71:d4:ae
```

show startup-config

To view the startup configuration file, use the **show startup-config** command

show startup-config [log]

Syntax Description

log	Displays execution log of last used ascii startup configuration.

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 displays the switch configuration at startup.

```
switch# show startup-config
vsan database
vsan 2
vsan 3
vsan 4
vsan 5
vsan 31
vsan 32 suspend
vsan 100
vsan 300

 interface port-channel 1
switchport mode E
switchport trunk mode off

 interface port-channel 2
fspf cost 100 vsan 2
switchport mode E
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-99
switchport trunk allowed vsan add 101-4093

 interface port-channel 3
switchport mode E
switchport trunk mode off

 interface port-channel 4
switchport mode E
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-99
switchport trunk allowed vsan add 101-4093
```

```
 interface port-channel 5
switchport mode E
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-10interface port-channel 5
switchport mode E
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-10

interface port-channel 8
switchport mode E

 interface vsan1

no shutdown

snmp-server community public rw
snmp-server user admin network-admin auth md5 0xe84b06201ae3bfb726a2eab9f485eb57
 localizedkey
snmp-server host 171.69.126.34 traps version 2c public udp-port 2162
snmp-server host 171.69.75.106 traps version 2c public udp-port 2162
vsan database
vsan 3 interface fc2/9
vsan 3 interface fc2/14
vsan 5 interface fc9/11
vsan 2 interface fc9/12
vsan 3 interface port-channel 3
vsan 3 interface port-channel 4
vsan 100 interface port-channel 8

boot system bootflash:/isan-8b-u sup-1
boot kickstart bootflash:/boot-3b sup-1
boot system bootflash:/isan-8b-u sup-2
boot kickstart bootflash:/boot-3b sup-2

ip default-gateway 172.22.90.1
power redundancy-mode combined force

username admin password 5 HyLyYqb4.q74Y  role network-admin
zone name Z1 vsan 1
  member pwwn 10:00:00:00:77:99:60:2c
  member pwwn 21:00:00:20:37:a6:be:14

zone default-zone permit vsan 1
zoneset distribute full vsan 51-58

zoneset name ZS1 vsan 1
  member Z1

zoneset  activate name ZS1 vsan 1

 interface fc2/1
switchport mode E
switchport trunk mode off
no shutdown

 interface fc2/2

 interface fc2/3
channel-group 1 force
no shutdown
```

```
interface fc2/6
channel-group 2 force
no shutdown

 interface fc2/7
switchport mode E
no shutdown
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-25

interface fc2/9
switchport mode E
switchport trunk mode off
no shutdown

 interface fc2/10
channel-group 3 force
no shutdown

 interface fc2/12
channel-group 4 force
no shutdown

 interface fc2/14
switchport mode E
no shutdown
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-99
switchport trunk allowed vsan add 101-4093

 interface fc2/15
channel-group 6 force
no shutdown

 interface fc2/16
channel-group 6 force
no shutdown
.
.
.
interface fc9/10
switchport mode F
no shutdown

 interface fc9/11
switchport trunk mode off
no shutdown

 interface fc9/12
switchport mode E
switchport speed 1000
switchport trunk mode off
no shutdown

 interface fc9/15
no shutdown
no switchport trunk allowed vsan all
switchport trunk allowed vsan add 1-99
switchport trunk allowed vsan add 101-4093
```

```
 interface fc9/16
switchport mode FL
no shutdown

 interface mgmt0
ip address 172.22.90.38 255.255.255.0
no shutdown
```

show switchname

To view the switch's network name, use the **show switchname** command.

show switchname

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 displays the name of the switch.

```
switch# show switchname
switch-123
```

show system

To show the system information use the **show system** command.

show system autosync | cores |default switchport | directory information |error-id [*list* | *hex***] | exception-info | health | redundancy status | reset-reason [module** *number* **] | resources | uptime**

Syntax Description

autosync	Shows image autosync status.
cores	Displays core transfer option.
default switchport	Shows system default values.
directory information	Directory information of System Manager.
error-id	Shows description about errors.
exception-info	Shows last exception log information.
health	Shows dta to reflect the health of the system.
redundancy status	Redundancy status.
reset-reason	Shows the last four reset reason codes.
module *number*	Specifies the module number to display the reset-reason codes.
resources	Show the CPU and memory statistics.
uptime	Shows how long the system has been up and running.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

Use the **show system redundancy status** command to ensure that the system is ready to accept a switchover.

Examples

The following example displays the system redundancy status.

```
switch# show system redundancy status
Redundancy mode
---------------
      administrative:   HA
         operational:   None

This supervisor (sup-2)
-----------------------
    Redundancy state:   Active
    Supervisor state:   Active
      Internal state:   Active with no standby
```

```
Other supervisor (sup-1)
------------------------
    Redundancy state:   Not present
```

The following example displays the default switch port states.

```
switch# show system default switchport
System default port state is down
System default trunk mode is on
```

The following example displays error information for a specified ID.

```
switch# show system error-id 0x401D0019
Error Facility: module
Error Description: Failed to stop Linecard Async Notification.
```

The following example displays the system health information.

```
switch# show system health
System Health Services iteration frequency 5 seconds
Active SUP arbiter is Working
Active SUP bootflash is Working
```

The following example displays the system reset information.

```
switch# show system reset reason
----- reset reason for module 6 -----
1) At 520267 usecs after Tue Aug  5 16:06:24 1980
    Reason: Reset Requested by CLI command reload
    Service:
    Version: 1.2(0.73a)
2) At 653268 usecs after Tue Aug  5 15:35:24 1980
    Reason: Reset Requested by CLI command reload
    Service:
    Version: 1.2(0.45c)
3) No time
    Reason: Unknown
    Service:
    Version: 1.2(0.45c)
4) At 415855 usecs after Sat Aug  2 22:42:43 1980
    Reason: Power down triggered due to major temperature alarm
    Service:
    Version: 1.2(0.45c)
```

The following example displays system-related CPU and memory statistics.

```
switch# show system resources
Load average:   1 minute: 0.43   5 minutes: 0.17   15 minutes: 0.11
Processes   :   100 total, 2 running
CPU states  :   0.0% user,   0.0% kernel,   100.0% idle
Memory usage:   1027628K total,    313424K used,    714204K free
                   3620K buffers,   22278K cache
```

The following example displays the system uptime.

```
switch# show system uptime
Start Time: Sun Oct 13 18:09:23 2030
Up Time:    0 days, 9 hours, 46 minutes, 26 seconds
```

Use the **show system cores** command to display the currently configured scheme for copying cores.

```
switch# show system cores
Transfer of cores is enabled
```

show tech-support

Use the **show tech-support** command to display information useful to TAC when reporting a problem.

show tech-support [details | interface | module | vsan *vsan-id***]**

Syntax Description

details	Provides detailed information for each **show** command
interface	Display interface status and configuration information
module	Display module status information
vsan	Display vsan status and configuration information
vsan-id	The ID of the VSAN is from 1 to 4093.

Defaults

The default displays output on a per-command basis, with each command being the title of the output that follows. A line separates the output from the next command. The software removes passwords and other security information.

Command Modes

EXEC mode.

Command History

This command was modified in Cisco MDS SAN-OS Release 1.2(1).

Usage Guidelines

The **show tech-support** command is a compilation of several **show** commands and can be quite lengthy. For a sample display of the output of the **show tech-support** command, see the individual command explanation for the following commands.

If you enter the **show tech-support** command without arguments, the output displays the equivalent of all the following **show** commands.

- **show version**
- **show environment**
- **show module**
- **show hardware**
- **show running-config**
- **show interface**
- **show accounting log**
- **show process**
- **show process log**
- **show processes log details**

Examples

switch# **sho tech-support module 1**

```
'terminal length 0'

'show module '
Mod  Ports  Module-Type                      Model              Status
---  -----  -------------------------------- ------------------ ------------
1    16     1/2 Gbps FC/Supervisor           DS-X9216-K9-SUP    active *
2    32     1/2 Gbps FC Module               DS-X9032           ok

Mod  Sw           Hw      World-Wide-Name(s) (WWN)
---  -----------  ------  --------------------------------------------------
1    1.0(0.271)   0.0     20:01:00:05:30:00:21:9e to 20:10:00:05:30:00:21:9e
2    1.0(0.271)   0.0     20:41:00:05:30:00:21:9e to 20:60:00:05:30:00:21:9e

Mod  MAC-Address(es)                         Serial-Num
---  --------------------------------------  ----------
1    00-05-30-00-40-b6 to 00-05-30-00-40-ba
2    00-05-30-00-11-22 to 00-05-30-00-11-26

* this terminal session

'show environment'
Clock:
----------------------------------------------------------
Clock           Model                Hw         Status
----------------------------------------------------------
A               Clock Module         --         ok/active
B               Clock Module         --         ok/standby

Fan:
-----------------------------------------------------
Fan             Model                Hw         Status
-----------------------------------------------------
Chassis         DS-2SLOT-FAN         0.0        ok
PS-1            --                   --         ok
PS-2            --                   --         absent

Temperature:
-------------------------------------------------------------------
Module   Sensor   MajorThresh   MinorThres   CurTemp     Status
                  (Celsius)    (Celsius)    (Celsius)
-------------------------------------------------------------------
1        1        75           60           30          ok
1        2        65           50           28          ok
1        3        -127         -127         40          ok
1        4        -127         -127         36          ok

2        1        75           60           32          ok
2        2        65           50           26          ok
2        3        -127         -127         41          ok
2        4        -127         -127         31          ok
```

```
Power Supply:
------------------------------------------------------
PS  Model                Power     Power       Status
                         (Watts)   (Amp @42V)
------------------------------------------------------
1   WS-CAC-950W          919.38    21.89       ok
2                        --        --          absent


Mod Model                Power     Power       Power     Power       Status
                         Requested Requested   Allocated Allocated
                         (Watts)   (Amp @42V)  (Watts)   (Amp @42V)
--- -------------------  -------   ----------  --------- ----------  ----------
1    DS-X9216-K9-SUP     220.08    5.24        220.08    5.24        powered-up
2    DS-X9032            199.92    4.76        199.92    4.76        powered-up

Power Usage Summary:
--------------------
Power Supply redundancy mode:                  redundant

Total Power Capacity                           919.38   W

Power reserved for Supervisor(s)[-]            220.08   W
Power reserved for Fan Module(s)[-]            47.88    W
Power currently used by Modules[-]             199.92   W

                                               -------
Total Power Available                          451.50
```

show telnet server

The **show telnet server** command displays the state of the Telnet access configuration.

show telnet server

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

```
switch# show telnet server
telnet service enabled
```

show terminal

To view the terminal information, use the **show terminal** command

show 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 displays terminal information.

```
switch# show terminal
TTY:  Type: "vt100"
Length: 25 lines, Width: 80 columns
Session Timeout: 30 minutes
```

show tlport

To view configured TL port information, use the **show tlport** command

show tlport {discapp [fcid *fcid-id* **| verbose | vsan** *vsan-id*] **| interface [all | private | proxied | topology | unsupported] | list [vsan** *vsan-id*]}

Syntax Description

discapp	Shows private N port parameters.
fcid *fcid-id*	Specifies the FCID of the N port.
verbose	Specifies the verbose mode.
vsan *vsan-id*	Specifies the N port VSAN.
interface	Shows TL ports in the selected interface.
all	Shows all proxied & private devices on this TL Port.
private	Shows all private devices on this TL Port.
proxied	Shows all proxied devices on this TL Port.
topology	Shows loop topology for this TL Port.
unsupported	Shows all unsupported devices on this TL Port.
list	Shows TL ports in all VSANs.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

The **show tlport** command displays the TL port interface configurations. This command provides a list of all TL ports configured on a box and shows the associated VSAN, the FC ID for the port (only domain and area are valid), and the current operational state of the TL port (up or initializing).

Examples

The following example displays the TL ports in all VSANs

```
switch# show tlport list
-------------------------------
Interface Vsan FC-ID    State
------------------------ ------
fc1/16    1    0x420000 Init
fc2/26    1    0x150000 Up
```

The following example displays the detailed information for a specific TL port

```
switch# show tlport interface fc1/16 all
fc1/16 is up, vsan 1, FCID 0x420000
```

```
--------------------------------------------------------------------------------
alpa pWWN                   nWWN                   SCSI Type Device  FC-ID
--------------------------------------------------------------------------------
0x01 20:10:00:05:30:00:4a:de 20:00:00:05:30:00:4a:de Initiator Proxied 0xfffc42
0x73 22:00:00:20:37:39:ae:54 20:00:00:20:37:39:ae:54 Target    Private 0x420073
0xef 20:10:00:05:30:00:4a:de 20:00:00:05:30:00:4a:de Initiator Switch  0x0000ef
```

The following example displays TL port information for private devices

```
switch# show tlport int fc1/16 pri
fc1/16 is up, vsan 1, FCID 0x420000
--------------------------------------------------------------------------
alpa pWWN                   nWWN                   SCSI Type FC-ID
--------------------------------------------------------------------------
0x73 22:00:00:20:37:39:ae:54 20:00:00:20:37:39:ae:54 Target    0x420073
0x74 22:00:00:20:37:38:d3:de 20:00:00:20:37:38:d3:de Target    0x420074
```

The following example displays TL port information for proxied devices

```
switch# show tlport int fc1/16 prox
fc1/16 is up, vsan 1, FCID 0x420000
--------------------------------------------------------------------------
alpa pWWN                   nWWN                   SCSI Type FC-ID
--------------------------------------------------------------------------
0x01 20:10:00:05:30:00:4a:de 20:00:00:05:30:00:4a:de Initiator 0xfffc42
0x02 21:00:00:e0:8b:01:95:e7 20:00:00:e0:8b:01:95:e7 Initiator 0x420100
```

show trunk protocol

To show trunk protocol information, use the **show trunk protocol** command.

show trunk protocol

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 displays trunk protocol

```
switch# show trunk protocol
Trunk protocol is enabled
```

show user-account

Use the **show user-account** command to display configured information about user accounts.

show user-account [*user-name*]

Syntax Description		
	user-name	Displays the user account infomration for the specified user name.

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 displays information for a specified user.

```
switch# show user-account user1
user:user1
        this user account has no expiry date
        roles:network-operator
no password set. Local login not allowed
Remote login through RADIUS is possible
```

The following example displays information for all users.

```
switch# show user-account
show user-account
user:admin
        this user account has no expiry date
        roles:network-admin

user:usam
        expires on Sat May 31 00:00:00 2003
        roles:network-admin network-operator

user:msam
        this user account has no expiry date
        roles:network-operator

user:user1
        this user account has no expiry date
        roles:network-operator
no password set. local login not allowed
Remote login through RADIUS is possible
```

show users

The **show users** command displays all users currently accessing the switch.

show users

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 displays all users.

```
switch# show users
switch# show users
admin    pts/7        Jan 12 20:56 (10.77.202.149)
admin    pts/9        Jan 12 23:29 (modena.cisco.com)
admin    pts/10       Jan 13 03:05 (dhcp-171-71-58-120.cisco.com)
admin    pts/11       Jan 13 01:53 (dhcp-171-71-49-49.cisco.com)
```

show version

To show the version of system software that is currently running on the switch, use the **show version** command.

show version {detail | image [bootflash: | slot0:]*image-filename* **| [module** *module-number* **{ epld}**
[epld *url* **] }**

Syntax Description

detail	Shows the software version.
image	Shows the software version of a given image.
bootflash:	Source location for internal bootflash memory
slot0:	Source location for the CompactFlash memory or PCMCIA card.
image-filename	The name of the system or kickstart image.
module	Shows the software version of a module.
module-number	Slot number in which the required module resides.
epld	Shows all current versions of EPLDs on a specified module.
epld *url*	Shows all EPLD versions that are available at the specified URL (bootflash:, ftp:, scp:, sftp:, slot0:, tftp:, or volatile:)

Defaults

None.

Command Modes

EXEC mode.

Command History

This command was introduced in Cisco MDS SAN-OS Release 1.0(2) and modified in Release 1.0(3).

Usage Guidelines

Use the **show version image** command to verify the integrity of the image before loading the images. This command can be used for both the system and kickstart images.

Use the **show version** command to verify the version on the active and standby supervisor modules before and after an upgrade.

Examples

The following examples depict version of the system, kickstart, and failed images.

```
switch(boot)# show version image bootflash:system_image <------------system image
 image name: m9500-sf1ek9-mz.1.0.3.bin
 system:     version 1.0(3)
 compiled:   10/25/2010 12:00:00

switch(boot)# show version image bootflash:kickstart_image <-------------kickstart image
  image name: m9500-sf1ek9-kickstart-mz.1.0.3.upg.bin
  kickstart:  version 1.0(3)
  loader:     version 1.0(3)
  compiled:   10/25/2010 12:00:00
```

```
switch# show version image bootflash:bad_image <--------------failure case
Md5 Verification Failed
Image integrity check failed
```

The following example displays current EPLD versions for a specified module.

```
switch# show version module 2 epld
Module Number                       2
EPLD Device                   Version
------------------------------------
Power Manager                    0x06
XBUS IO                          0x07
UD chip Fix                      0x05
Sahara                           0x05
```

The following example displays available EPLD versions

```
switch# show version epld scp://user@10.6.16.22/users/dino/epld.img
user@10.6.16.22's password:

Module Name                     EPLD Device          Version
------------------------------------------------------------
Supervisor/Fabric-1             XBUS 1 IO               0x09
                                XBUS 2 IO               0x0c
                                UD chip Fix             0x05
                                Sahara                  0x04
1/2 Gbps FC 16 port             XBUS IO                 0x08
                                Sahara                  0x05
1/2 Gbps FC 32 port             XBUS IO                 0x07
                                Sahara                  0x05
Virtualization Linecard         XBUS IO                 0x07
                                UD chip Fix             0x05
                                Golden Gate             0x04
IP Storage Module               XBUS IO                 0x02
                                UD chip Fix             0x05
                                Sahara                  0x05
                                Mainboard Bally         0x12
                                Daughter card Bally     0x08
20/40 Port FC Fabric Switch     XBUS IO                 0x03
```

The following examples provide a before and after comparison scenario after the loader version is updated.

```
switch# show version
Cisco Storage Area Networking Operating System (SAN-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2003 by Cisco Systems, Inc. All rights reserved.
The copyright for certain works contained herein are owned by
Andiamo Systems, Inc. and/or other third parties and are used and
distributed under license.
Software
  BIOS:      version 1.0(3)
  loader:    version 1.0(2) <----------existing version
  kickstart: version 1.0(3)
  system:    version 1.0(3)
  BIOS compile time:       11/18/02
  kickstart image file is: bootflash:/kickstart_image
  kickstart compile time:  1/20/2003 12:00:00
  system image file is:    bootflash:/system_image
  system compile time:     1/20/2003 12:00:00

switch# show version
Cisco Storage Area Networking Operating System (SAN-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2003 by Cisco Systems, Inc. All rights reserved.
The copyright for certain works contained herein are owned by
Andiamo Systems, Inc. and/or other third parties and are used and
distributed under license.
Software
  BIOS:      version 1.0(3)
  loader:    version 1.0(3) <----------new version
.....
```

The following example show the version details for a specified module.

```
switch# show ver mod 4
Mod No   Mod Type       SW Version           SW Interim Version
4        LC             1.0(3)               1.0(3)
```

show vrrp

Use the **show vrrp vr** command to display the VRRP configuration information

show vrrp [statistics | vr [*integer* **interface** *group***]**

Syntax Description

statistics	Shows cumulative vrrp statistics for this machine.
vr	Shows virtual router information.
group	The ID of the group (1-255).
interface	Enter **mgmt** for management interface, or VSAN for the IPFC VSAN interface.

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 displays VRRP configured information.

```
switch# show vrrp vr 7 interface vsan 2 configuration
vr id 7 configuration
admin state down
priority 100
no authentication
advertisement-Interval 1
preempt yes
tracking interface vsan1 priority 2
protocol IP
```

The following example displays VRRP status information.

```
switch# show vrrp vr 7 interface vsan 2 status
vr id 7 status
MAC address 00:00:5e:00:01:07
Operational state: init
```

The following example displays VRRP statistics

```
switch# show vrrp vr 7 interface vsan 2 statistics
vr id 7 statistics
Become master 0
Advertisement 0
Advertisement Interval Error 0
Authentication Failure 0
TTL Error 0
Priority 0 Received 0
Priority 0 Sent 0
Invalid Type 0
Mismatch Address List 0
Invalid Authentication Type 0
Mismatch Authentication 0
Invalid Packet Length 0
```

The following example displays VRRP cumulative statistics.

```
switch# show vrrp statistics
Invalid checksum 0
Invalid version 0
Invalid VR ID 0
```

show vsan

Use the **show vsan** command to display information about configured VSAN.

show vsan [vsan-range] | [membership interface *vsan-range***] | usage]]**

Syntax Description

vsan *vsan-range*	The VSAN ID range (from 1 to 4093).
membership	Shows membership information.
usage	Shows VSNA usage in the system.

Defaults

None.

Command Modes

EXEC mode.

Command History

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

Usage Guidelines

For the **show vsan membership interface** command, interface information is not displayed if interfaces are not configured on this VSAN.

Examples

The following examples displays configured VSAN information.

```
switch# show vsan 1
vsan 1 information
         name:VSAN0001  state:active
         interoperability mode:yes ß verify mode
         loadbalancing:src-id/dst-id/oxid
         operational state:up

switch# show vsan usage
4 vsan configured
configured vsans:1-4
vsans available for configuration:5-4093
```

```
switch# show vsan
switch# show vsan
vsan 1 information
         name:VSAN0001  state:active
         in-order guarantee:no  interoperability mode:no
         loadbalancing:src-id/dst-id/oxid
vsan 2 information
         name:VSAN0002  state:active
         in-order guarantee:no  interoperability mode:no
         loadbalancing:src-id/dst-id/oxid
vsan 7 information
         name:VSAN0007  state:active
         in-order guarantee:no  interoperability mode:no
         loadbalancing:src-id/dst-id/oxid
vsan 100 information
         name:VSAN0100  state:active
         in-order guarantee:no  interoperability mode:no
         loadbalancing:src-id/dst-id/oxid
vsan 4094:isolated vsan

switch # show vsan 1 membership
vsan 1 interfaces:
        fc1/1   fc1/2   fc1/3   fc1/4   fc1/5   fc1/6   fc1/7   fc1/9
        fc1/10  fc1/11  fc1/12  fc1/13  fc1/14  fc1/15  fc1/16  port-channel 99
```

The following example displays membership information for all VSANs

```
switch # show vsan membership
vsan 1 interfaces:
        fc2/16  fc2/15  fc2/14  fc2/13  fc2/12  fc2/11  fc2/10  fc2/9
        fc2/8   fc2/7   fc2/6   fc2/5   fc2/4   fc2/3   fc2/2   fc2/1
        fc1/16  fc1/15  fc1/14  fc1/13  fc1/12  fc1/11  fc1/10  fc1/9
        fc1/7   fc1/6   fc1/5   fc1/4   fc1/3   fc1/2   fc1/1
vsan 2 interfaces:
vsan 7 interfaces:
        fc1/8
vsan 100 interfaces:
vsan 4094(isolated vsan) interfaces:
```

The following example displays membership information for a specified interface.

```
switch # show vsan membership interface fc1/1
fc1/1
        vsan:1
        allowed list:1-4093
```

show wwn

Use the **show wwn** commands to display the status of the WWN configuration.

show wwn [status *block-id number* | **switch**]

Syntax Description

status	Shows overall WWN Usage and Alarm Status
switch	Shows switch WWN.

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 displays the WWN of the switch:

```
switch# show wwn switch
Switch WWN is 20:01:ac:16:5e:52:00:01
```

show zone

To display zone information, use the **show zone** command.

show zone [active]

show zone [change [event-history] [vsan *vsan-range*]

show zone [member [[fcalias *alias-name*] [**active] [vsan** *vsan-range*] **| [fcid** *fcid-id*] [**active] [vsan** *vsan-range*] **| pwwn** *wwn* [**active] [vsan** *vsan-range*]**]**

show zone [merge] [event-history] [interface *interface* **vsan** *vsan-id*]

show zone [name *string* **active vsan** *vsan-range*]

show zone [statistics vsan *vsan-range*]

show zone [status vsan *vsan-range*]

Syntax Description

active	Shows zones which are part of active zoneset.
change	Shows log transaction changes.
member	Shows all zones in which the given member is part of.
merge	Shows log transaction merges.
name	Shows members of a specified zone.
statistics	Shows zone server statistics.
status	Shows zone server current status.
vsan	Shows zones belonging to the specified VSAN.
vsan-range	Range of the required VSANs (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 example displays configured zone information.

```
switch(config)# show zone
zone name Zone3 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:9c:48:e5

zone name Zone2 vsan 2
  fwwn 20:41:00:05:30:00:2a:1e
  fwwn 20:42:00:05:30:00:2a:1e
  fwwn 20:43:00:05:30:00:2a:1e

zone name Zone1 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:a6:be:2f
  pwwn 21:00:00:20:37:9c:48:e5
  fcalias Alias1
```

Use the **show zone vsan** command to display zone information for a specific VSAN.

```
switch(config)# show zone vsan 1
zone name Zone3 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:9c:48:e5

zone name Zone2 vsan 1
  fwwn 20:41:00:05:30:00:2a:1e
  fwwn 20:42:00:05:30:00:2a:1e
  fwwn 20:43:00:05:30:00:2a:1e
  fwwn 20:44:00:05:30:00:2a:1e
  fwwn 20:45:00:05:30:00:2a:1e
  fwwn 20:46:00:05:30:00:2a:1e
  fwwn 20:47:00:05:30:00:2a:1e
  fwwn 20:48:00:05:30:00:2a:1e
  fwwn 20:49:00:05:30:00:2a:1e
  fwwn 20:4a:00:05:30:00:2a:1e
  fwwn 20:4b:00:05:30:00:2a:1e
  fwwn 20:4c:00:05:30:00:2a:1e
  fwwn 20:4d:00:05:30:00:2a:1e
  fwwn 20:4e:00:05:30:00:2a:1e
  fwwn 20:4f:00:05:30:00:2a:1e
  fwwn 20:50:00:05:30:00:2a:1e
  fwwn 20:51:00:05:30:00:2a:1e
  fwwn 20:52:00:05:30:00:2a:1e
  fwwn 20:53:00:05:30:00:2a:1e
  fwwn 20:54:00:05:30:00:2a:1e
  fwwn 20:55:00:05:30:00:2a:1e
  fwwn 20:56:00:05:30:00:2a:1e
  fwwn 20:57:00:05:30:00:2a:1e
  fwwn 20:58:00:05:30:00:2a:1e
  fwwn 20:59:00:05:30:00:2a:1e
  fwwn 20:5a:00:05:30:00:2a:1e
  fwwn 20:5b:00:05:30:00:2a:1e
  fwwn 20:5c:00:05:30:00:2a:1e
  fwwn 20:5d:00:05:30:00:2a:1e
  fwwn 20:5e:00:05:30:00:2a:1e
  fwwn 20:5f:00:05:30:00:2a:1e
  fwwn 20:60:00:05:30:00:2a:1e

zone name Zone1 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:a6:be:2f
  pwwn 21:00:00:20:37:9c:48:e5
  fcalias Alias1
```

Use the **show zone name** command to display members of a specific zone.

```
switch# show zone name Zone1
zone name Zone1 vsan 1
  pwwn 21:00:00:20:37:6f:db:dd
  pwwn 21:00:00:20:37:a6:be:2f
  pwwn 21:00:00:20:37:9c:48:e5
  fcalias Alias1
```

Use the **show zone member** command to display all zones to which a member belongs using the FC ID.

```
@switch# show zone member pwwn 21:00:00:20:37:9c:48:e5
           VSAN: 1
zone Zone3
zone Zone1
fcalias Alias1
```

Use the **show zone statistics** command to display the number of control frames exchanged with other switches.

```
switch# show zone statistics
Statistics For VSAN: 1
**********************************
Number of Merge Requests Sent: 24
Number of Merge Requests Recvd: 25
Number of Merge Accepts Sent: 25
Number of Merge Accepts Recvd: 25
Number of Merge Rejects Sent: 0
Number of Merge Rejects Recvd: 0
Number of Change Requests Sent: 0
Number of Change Requests Recvd: 0
Number of Change Rejects Sent: 0
Number of Change Rejects Recvd: 0
Number of GS Requests Recvd: 0
Number of GS Requests Rejected: 0
Statistics For VSAN: 2
**********************************
Number of Merge Requests Sent: 4
Number of Merge Requests Recvd: 4
Number of Merge Accepts Sent: 4
Number of Merge Accepts Recvd: 4
Number of Merge Rejects Sent: 0
Number of Merge Rejects Recvd: 0
Number of Change Requests Sent: 0
Number of Change Requests Recvd: 0
Number of Change Rejects Sent: 0
Number of Change Rejects Recvd: 0
Number of GS Requests Recvd: 0
Number of GS Requests Rejected: 0
```

show zoneset

Use the **show zoneset** command to view the configured zone sets.

show zoneset [name | brief | active | vsan *vsan-id*]

Syntax Description

active	Shows only active zonesets.
brief	Shows members in brief mode.
name	Shows members of a specified zoneset.
vsan	Shows zonesets belonging to the specified VSAN.
vsan-id	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 example displays configured zoneset information.

```
switch# show zoneset vsan 1
zoneset name ZoneSet2 vsan 1
  zone name Zone2 vsan 1
    fwwn 20:4e:00:05:30:00:2a:1e
    fwwn 20:4f:00:05:30:00:2a:1e
    fwwn 20:50:00:05:30:00:2a:1e
    fwwn 20:51:00:05:30:00:2a:1e
    fwwn 20:52:00:05:30:00:2a:1e

  zone name Zone1 vsan 1
    pwwn 21:00:00:20:37:6f:db:dd
    pwwn 21:00:00:20:37:a6:be:2f
    pwwn 21:00:00:20:37:9c:48:e5
    fcalias Alias1

zoneset name ZoneSet1 vsan 1
  zone name Zone1 vsan 1
    pwwn 21:00:00:20:37:6f:db:dd
    pwwn 21:00:00:20:37:a6:be:2f
    pwwn 21:00:00:20:37:9c:48:e5
    fcalias Alias1
```

The following example displays configured zone set information for a specific VSAN.

```
switch# show zoneset vsan 2-3
zoneset name ZoneSet2 vsan 1
  zone name Zone2 vsan 1
    fwwn 20:52:00:05:30:00:2a:1e
    fwwn 20:53:00:05:30:00:2a:1e
    fwwn 20:54:00:05:30:00:2a:1e
    fwwn 20:55:00:05:30:00:2a:1e
    fwwn 20:56:00:05:30:00:2a:1e

  zone name Zone1 vsan 1
    pwwn 21:00:00:20:37:6f:db:dd
    pwwn 21:00:00:20:37:a6:be:2f
    pwwn 21:00:00:20:37:9c:48:e5
    fcalias Alias1

zoneset name ZoneSet1 vsan 1
  zone name Zone1 vsan 1
    pwwn 21:00:00:20:37:6f:db:dd
    pwwn 21:00:00:20:37:a6:be:2f
    pwwn 21:00:00:20:37:9c:48:e5
    fcalias Alias1
```