Show Commands

This chapter documents the following commands:

- show arp ethernet, page 6-4
- show authentication, page 6-6
- show backplane, page 6-8
- show boot-config, page 6-10
- show bridge-forwarding, page 6-12
- show bridge-group, page 6-14
- show bridge-subnets, page 6-16
- show card, page 6-17
- show card-inventory, page 6-22
- show cdp, page 6-25
- show cdp entry, page 6-27
- show cdp neighbors, page 6-28
- show clock, page 6-29
- show config, page 6-30
- show diagnostic, page 6-32
- show diagnostic card, page 6-33
- show diagnostic chassis, page 6-35
- show diagnostic fan, page 6-36
- show diagnostic fru-error, page 6-38
- show diagnostic interface ethernet, page 6-40
- show diagnostic interface fc, page 6-42
- show diagnostic interface ib, page 6-44
- show diagnostic post, page 6-46
- show diagnostic power-supply, page 6-48
- show diagnostic rack-locator, page 6-50
- show fan, page 6-52
- show fc srp initiator, page 6-54

- show fc srp initiator-wwpn-view, page 6-57
- show fc srp it, page 6-59
- show fc srp itl, page 6-61
- show fc srp itl-statistics, page 64
- show fc srp lu, page 6-66
- show fc srp statistics, page 6-69
- show fc srp target, page 6-71
- show fc srp-global, page 6-73
- show host, page 6-74
- show ib dm ioc, page 6-76
- show ib dm iou, page 6-79
- show ib pm config, page 6-81
- show ib pm connection counter, page 6-83
- show ib pm connection monitor, page 6-86
- show ib pm port counter config, page 6-88
- show ib pm port counter, page 6-89
- show ib pm port monitor, page 6-91
- show ib pm threshold, page 6-94
- show ib sm configuration, page 6-96
- show ib sm db-sync, page 6-99
- show ib sm lft, page 6-101
- show ib sm mft, page 6-103
- show ib sm multicast, page 6-106
- show ib sm neighbor, page 6-108
- show ib sm node, page 6-110
- show ib sm partition, page 6-113
- show ib sm port, page 6-115
- show ib sm service, page 6-122
- show ib sm switch, page 6-127
- show ib sm switch-elem-route, page 6-130
- show ib sm switch-route, page 6-132
- show ib-agent channel-adapter, page 6-134
- show ib-agent summary, page 6-136
- show ib-agent switch, page 6-138
- show interface ethernet, page 6-148
- show interface fc, page 6-156
- show interface gateway, page 6-162
- show interface ib, page 6-167

- show interface mgmt-ethernet, page 6-177
- show interface mgmt-ib, page 6-179
- show interface mgmt-serial, page 6-180
- show inventory, page 6-181
- show ip, page 6-183
- show ip http, page 6-185
- show location, page 6-189
- show logging, page 6-190
- show ntp, page 6-192
- show power-supply, page 6-193
- show redundancy-group, page 6-195
- show running-status, page 6-197
- show sensor, page 6-199
- show snmp, page 6-201
- show system-mode, page 6-204
- show system-services, page 6-205
- show terminal, page 6-207
- show trace, page 6-208
- show trunk, page 6-209
- show user, page 6-210
- show version, page 6-212

show arp ethernet

To display entries in the Ethernet ARP routing table, enter the **show arp ethernet** command in User Exec mode or Privileged Exec mode.

show arp ethernet

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Ethernet read-only user.

Your Server Switch dynamically creates ARP connections on an as-needed basis and removes ARP entries from ARP routing tables when connections drop.

Command Output:

Table 6-1 describes the fields in the **show arp ethernet** command output.

Table 6-1 show arp ethernet Command Field Descriptions

Field	Description
port	Port (in slot#/port# format) on your Server Switch to which the host connects.
physical-address	MAC address of the host.
net-address	IP address of the host.
type	Type of route between the host and your Server Switch, either **static** or **dynamic**.

Examples

The following example displays the entries in the Ethernet ARP routing table of the Server Switch:

```
SFS-7000P# show arp ethernet
================================================================
                  ARP Information
================================================================
port    physical-address       net-address         type
----------------------------------------------------------------------------
4/1     00:05:ad:00:10:41      20.45.0.1           static
```

Related Commands arp ethernet

show authentication

To display how your system authenticates logins, enter the **show authentication** command in Privileged Exec mode.

show authentication

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use this command to determine if your Server Switch uses a RADIIUS server or TACACS+ client, along with the local database, to authenticate CLI user logins. If your Server Switch uses multiple resources, the command output displays the order in which your Server Switch authenticates logins.

Command Output:

Table 6-2 describes the fields in the **show authentication** command output.

Table 6-2 show authentication Command Field Descriptions

Field	Description
authentication method	Displays whether your Server Switch authenticates logins with the local CLI database, the RADIUS server, a TACACS+ client, or a combination. If dual configuration is used (local and either RADIUS or TACACS+), the output displays the order in which your Server Switch authenticates the login.

Examples

The following example displays the authentication method that the Server Switch uses:

```
SFS-7000P> show authentication

     authentication method: tacacs+ and then local
     ----------------------------------------------

tacacs-server : 171.71.27.230
                priority : 1
                    port : 49
                     key : testing123
```

```
                    timeout : 5
                max-retries : 2
      access-request-count : 3
       access-accept-count : 0
       access-reject-count : 1
      server-timeout-count : 4
SFS-7000P>
```

Related Commands

authentication
radius-server
config TACACS-server host

show backplane

To display a breakdown of Serial Electrically Erasable and Programmable Read-Only Memory (SEEPROM) details of your Server Switch, enter the **show backplane** command in User Exec mode or Privileged Exec mode.

show backplane

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

General read-only user.

The output of the **show backplane** command assists product support personnel.

Command Output:

Table 6-3 describes the fields in the **show backplane** command output.

Table 6-3 show backplane Command Field Descriptions

Field	Description
base-mac-addr	24-bit base MAC address of this chassis.
chassis-id	Factory-assigned, 64-bit chassis-identification number.
chassis-guid	Factory-assigned GUID of the chassis.
product serial-number	Factory-assigned product serial number.
pca serial-number	Printed circuit assembly (PCA) serial number.
pca number	Printed Circuit Assembly (PCA) assembly number.
fru number	Field replaceable unit (FRU) number for the actual switch (Cisco SFS 3001) or chassis (Cisco SFS 3012).

Examples

The following example displays the SEEPROM details of the Server Switch backplane:

```
SFS-7000P> show backplane


================================================================================
                               Backplane Seeprom
================================================================================
base-mac-addr        chassis-id             chassis-guid
--------------------------------------------------------------------------------
0:5:ad:1:5f:f2       0x5ad0000015ff2        0x5ad0000015ff2


================================================================================
                               Backplane Seeprom
================================================================================
product            pca                pca                fru
serial-number      serial-number      number             number
--------------------------------------------------------------------------------
MX3054100107       C3054100150        95-00078-01        99-00140-01


SFS-7000P>
```

show boot-config

To display the active system image that runs when your Server Switch boots, enter the **show boot-config** command in User Exec mode or Privileged Exec mode.

show boot-config

Syntax Description

This command has no arguments or keywords.

Defaults

No default behavior or values

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

The **show boot-config** command displays the image that initializes chassis firmware and configures the interfaces.

This command lists the files that were used to bring up the system, the files to use the next time the system reboots, and the backup files to use in the event that the primary boot files are not available.

Command Output:

Table 6-4 describes the fields in the **show boot-config** command output.

Table 6-4 show boot-config Command Field Descriptions

Field	Description
slot-id	Slot identifier of the controller card in use.
sw-version	Version of the software image that initialized chassis components.
last-image-source	Directory name of the active system image used to initialize chassis components.
primary-image-source	Name and directory location of the active system image to use to initialize chassis components the next time the system boots.

Examples

The following example displays the image that the Server Switch boots:

```
SFS-7000P# show boot-config
================================================================================
                    System Boot Configuration
================================================================================
                   slot-id : 1
                sw-version : OS-1.1.3/build255
         last-image-source : OS-1.1.3/build255
      primary-image-source : OS-1.1.3/build255
```

Related Commands

boot-config
install
reload
show version

show bridge-forwarding

Display subnets to which bridge groups forward traffic with the **show bridge-forwarding** command.

show bridge-forwarding [*integer*] [**subnet** *subnet-prefix prefix-length*]

Syntax Description

integer	(Optional) Bridge group number limits forwarding information to bridge group.
subnet	(Optional) Specifies a particular subnet to display in the command output.
subnet-prefix	(Optional) Particular subnet to display in the command output.
prefix-length	(Optional) Prefix length of the subnet to display in the command output.

Defaults

This command has no default settings.

Command Modes:

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-7 explains the fields that appear in the **show bridge-subnets** command output.

Table 6-5 show bridge-subnets Command Field Descriptions

Field	Description
bridge	Number of the bridge group that bridges the subnet.
subnet-prefix	Subnet prefix that the bridge-group bridges.
subnet-prefix-len	Length of the subnet prefix of the subnet.

Examples

The following example provides sample output of the **show bridge-subnets** command:

```
SFS-7000P# show bridge-subnets

================================================================================
                                Bridge Subnets
================================================================================
bridge subnet-prefix   subnet-prefix-len
--------------------------------------------------------------------------------
1      192.168.0.0     22
2      192.168.13.32   29
```

Related Commands bridge-group

show bridge-group

To display the attributes of bridge groups, enter the **show bridge-group** command in User Exec mode or Privileged Exec mode.

show bridge-group [*bridge-groupID#*]

Syntax Description

bridge-groupID#	(Optional) Integer value that represents a bridge group. Use the bridge-group ID number to view the attributes of one specific bridge group.

Defaults

Without an argument, the **show bridge-group** command shows all bridge groups.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines:

Privilege Level:

General read-only user.

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Command Output:

Table 6-6 describes the fields in the **show bridge-group** command output.

Table 6-6 show bridge-group Command Field Descriptions

Field	Description
bridge-group-id	Displays the integer-value identifier of the bridge group that the administrator assigned with the **bridge-group** command.
bridge-group-name	Displays the ASCII text string identifier that the administrator assigned with the **bridge-group** command.
eth-bridge-port	Displays the trunk that the bridge group uses to connect to the Ethernet switch.
ib-bridge-port	Displays the internal gateway slot#/port# of the bridge-group.
broadcast-forwarding	Displays true if you enable broadcast-forwarding. Displays false if you disable broadcast forwarding.
broadcast-forwarding-mode	
loop-protection-method	Displays one if you enable ARP Packet Painting. Displays **?** if you disable ARP Packet Painting. See the *Ethernet Gateway User Guide* for more information.
multicast	Displays true if the bridge group belongs to a multicast group. Displays false if the bridge group does not belong to a multicast group.

Table 6-6 show bridge-group Command Field Descriptions (continued)

Field	Description
redundancy-group	Displays the redundancy group to which the bridge group belongs.
status-in-redundancy-group	Displays **none** (when the bridge group is not in a redundancy group), **primary**, or **secondary**.

Examples

The following example (output abridged) shows all bridge groups on the Server Switch:

```
SFS-7000P# show bridge-group

================================================================================
                                Bridge Groups
================================================================================
          bridge-group-id : 1
        bridge-group-name :
          eth-bridge-port : trunk 1 (not tagged)
           ib-bridge-port : 5/2(gw) (pkey: ff:ff)
      broadcast-forwarding : false
 broadcast-forwarding-mode : inherit-from-redundancy-group
    loop-protection-method : one
                 multicast : false
          multicast-mode : inherit-from-redundancy-group
         redundancy-group : 1
status-in-redundancy-group : primary
```

Related Commands

bridge-group

show bridge-subnets

To display the subnets that a particular bridge group bridges, enter the **show bridge-subnets** command in User Exec mode or Privileged Exec mode.

show bridge-subnets [*bridge-group-number*]

Syntax Description

bridge-group-number	(Optional) Limits the command output to the subnets of one particular bridge group.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-7 explains the fields that appear in the **show bridge-subnets** command output.

Table 6-7 show bridge-subnets Command Field Descriptions

Field	Description
bridge	Number of the bridge group that bridges the subnet.
subnet-prefix	Subnet prefix that the bridge-group bridges.
subnet-prefix-len	Length of the subnet prefix of the subnet.

Examples

The following example provides sample output of the **show bridge-subnets** command:

```
SFS-7000P# show bridge-subnets

================================================================================
                                Bridge Subnets
================================================================================
bridge subnet-prefix   subnet-prefix-len
--------------------------------------------------------------------------------
1      192.168.0.0     22
2      192.168.13.32   29
```

Related Commands

bridge-group

show card

To display the configuration, status, and Serial Electrically Erasable and Programmable Read Only Memory (SEEPROM) details of interface cards, enter the **show card** command in User Exec mode or Privileged Exec mode.

show card {*card-selection* | **all**}

Syntax Description

card-selection	Card, list of cards, or range of cards to view.
all	Displays the details of all interface cards in your Server Switch.

Defaults

The **show card** command displays all cards by default.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

- Use the following syntax format to display the details of one card:

  show card 5

- Use the following syntax format to display the details of a list of cards:

  show card 5,9,14

- Use the following syntax format to display the details of a range of cards:

  show card 5-9

- Use the following syntax format to display the details of a list with ranges of cards:

  show card 5, 7-9, 14

Command Output:

Table 6-8 describes the fields in the **show card** command output.

Table 6-8 show card Command Field Descriptions

Field	Description
slot	Displays the number of the slot that the card occupies.
admin type	Displays the type of the interface card that the administrator specified with the **type** command. The first two letters of the entry indicate the general type of the card: • en for Ethernet • ib for InfiniBand • fc for Fibre Channel The number of ports on the card follow the two-letter type identifier. The remaining number and letter identify the speed of the ports on the card. The admin type **fc2port2G** indicates a Fibre Channel card with two ports that run at a maximum speed of 2 Gbps. **Note** The controller and controllerIb12port4x cards serve as an exception to these rules. The "admin type" identifier "controller" indicates the type of independent controller card found on both sides of the system chassis. The "admin type" identifier "controllerIb12port4x" indicates a controller card that piggy-backs onto a 12-port InfiniBand switch card, where each port connection can support speeds up to 4X.
oper type	Displays the type of the card as detected by the controller. If any conflict occurs between "admin type" and "oper type", the system assumes that the type specified by oper type is correct and allows you to configure the card based upon this assumption. If a type mismatch occurs, verify that you are selecting the correct type for the card in the chassis.
admin status	Displays the administrative status (that you configure with the **shutdown** and **no shutdown** commands) of the port.
oper status	Displays the operational status as detected by the controller. Oper status represents the absolute status of the interface card based upon self-detection. The value of this read-only field appears as one of the following: • unknown, which generally indicates that an error occurred when the card booted • up, which indicates that the card is operating normally • down, which indicates that a user disabled the card with the **shutdown** command • failure, which indicates that the card failed to boot correctly The "up" indicator means that your card is operating normally. You can only configure cards that have an operational status of "up."

Table 6-8 show card Command Field Descriptions (continued)

Field	Description
oper code	Displays the general condition of the interface card. The general condition may appear as any of the following: • unknown • normal • wrongBootImage • bootFailed • tooHot • checkingBootImage • rebooting • booting • standby • recoveryImage A condition of "unknown" indicates an unsupported interface card. To address this condition, replace the card with a supported card. The oper code of a card must appear as normal for the oper status of the card to appear as up. A wrong-image condition indicates that the active system image on the interface card does not match the active system image on the controller. All cards must run the same active system image as the controller card to function. A bootFailed condition indicates that the active system image on the card was incompletely or incorrectly loaded. If the other interface cards come up successfully, reset the individual card. Otherwise, reboot your entire Server Switch. When your card overheats, the tooHot condition appears in the **show card** command output. Enter the **show fan** command to see if your fans have failed. The booting condition indicates that the card has not finished loading the necessary image data for internal configuration.
boot stage	Boot Stage could be any of the following: • recovery • ipl • ppcboot • fpga • pic • ib • rootfs • kernel • exe • done

Table 6-8 show card Command Field Descriptions (continued)

Field	Description
boot status	Boot Status may appear as any of the following: • upgrading • success • failed • badVersion • badCrc • memoryError • outOfSpace • programmingError • hardwareError • fileNotFound • inProgress
boot image	Displays the active system image that the card runs when it boots.
product serial-number	Displays the factory-assigned product serial number of the card.
pca serial-number	Displays the Printed Circuit-Assembly (PCA) serial number of the card.
pca number	Displays the Printed Circuit-Assembly (PCA) assembly number of the card.
fru number	Displays the field-replaceable unit (FRU) number of the card.

Note When you run the **show card** command on a Cisco SFS 7008, an asterisk (*) next to the slot number identifies the controller card on which you executed this command. The asterisk does not identify the normal or standby controllers. That information appears in the oper code column.

Examples

This example displays the configuration and status information for cards 5, 9, 14, and 16:

```
SFS-7000P# show card 5,9,14,16
================================================================================
                              Card Information
================================================================================
     admin                oper                 admin    oper     oper
slot type                 type                 status   status   code
--------------------------------------------------------------------------------
5    en4port1G            en4port1G            up       up       normal
9    fc2port2G            fc2port2G            up       up       normal
14   controller           controller           up       up       normal
16   ib12port4x           ib12port4x           up       up       normal

================================================================================
                            Card Boot Information
================================================================================
     boot         boot               boot
slot stage        status             image
--------------------------------------------------------------------------------
5    done         success             OS-1.1.2/build084
9    done         success             OS-1.1.2/build084
14   done         success             OS-1.1.2/build084
16   done         success             OS-1.1.2/build084
```

```
================================================================================
                                  Card Seeprom
================================================================================
     product          pca              pca              fru
slot serial-number    serial-number    number           number
--------------------------------------------------------------------------------
5    00024            1234             95-00007-01      1234
9    1234             1234             95-00008-01      1234
14   00002            00002            95-00005-01      1234
16   1234             1234             95-00006-01      1234
SFS-7000P#
```

On the Cisco SFS 7008, an asterisk (*) designates the active controller card from which you have initiated your CLI session. See the example below:

```
SFS-270# show card

   ================================================================================
                                  Card Information
   ================================================================================
        admin                oper                 admin    oper     oper
   slot type                 type                 status   status   code
   --------------------------------------------------------------------------------
   11*  controllerFabric12x   controllerFabric12x   up       up       normal
   12   controllerFabric12x   controllerFabric12x   up       up       standby
```

Related Commands

action
boot-config
card
install
shutdown
type

show card-inventory

To display the system resources and image data of interface cards, enter the **show card-inventory** command in User Execute mode or Privileged Execute mode.

Note The **show card-inventory** command only displays cards with an oper-status of **up**.

show card-inventory [*card-selection* | **all**]

Syntax Description

card-selection	(Optional) Card, list of cards, or range of cards to view.
all	(Optional) Displays resources and data of all cards in the chassis.

Defaults

The **show card-inventory** defaults to **show card-inventory all**.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Each interface card is a system in itself. The following comprise system resources:

- available and used memory
- available and used flash memory
- active system image on the interface card
- CPU name and version

The active system image should match the active image that runs on the controller card. Occasions may occur when you update the system image on the controller but not on an interface card, such as when you swap interface cards between chassis or update the system image on the controller when an interface card goes down. Disk space may be an issue if you try to update the system image on the controller but cannot propagate this data to the interface card because the interface card has no free space.

The CPU description may be requested by support personnel in the event you experience difficulties with a controller or an interface card.

Command Output:

Table 6-9 describes the fields in the **show card-inventory** command output.

Table 6-9 show card-inventory Command Field Descriptions

field	description
slot-id	Slot number of the controller card, gateway module, or InfiniBand switch.
up-time	Number of seconds card has been active.
used-memory	Total amount of local RAM being used by the card.
slot-id	Displays the slot ID.
used-memory	Total amount of memory used in local RAM.
free-memory	Total amount of available local RAM.
used-disk-space	Total amount of local flash memory space being used by the card.
free-disk-space	Total amount of available local flash memory space.
last-image-source	Last image that the card booted.
primary-image-source	Active system image to use when the system reboots. This value should be the same for all cards in the system.
image	If only one instance of the image field appears, it indicates the system image used to initialize the card firmware. If there are two instances of the image field, the second instance indicates that a second system image is present on the card.
cpu-descr	CPU type, model, and firmware version. The disk on chip (DOC) versions are appended to the existing CPU descriptions in this release.
fpga-firmware-rev	Current FPGA firmware version that the card runs.
ib-firmware-rev	Version of InfiniBand firmware on the card. **Note** The CLI displays the device-ID and version number of the InfiniBand chip for each card for Anafa 2 chips. This content appears in parentheses next to the firmware version. For original Anafa chips, no parenthetical text appears. The Cisco SFS 3001 and Cisco SFS 3012 chassis run original Anafa chips. The Cisco SFS 7000 and Cisco SFS 7008 chassis run later models.

Examples

The following example displays the configuration and status information for the cards on the Server Switch:

```
SFS-7000P# show card-inventory

================================================================================
                      Card Resource/Inventory Information
================================================================================
                  slot-id : 1
                  up-time : 615398 (seconds)
              used-memory : 24184 (kbytes)
              free-memory : 103652 (kbytes)
          used-disk-space : 36123 (kbytes)
          free-disk-space : 58702 (kbytes)
```

```
   last-image-source : TopspinOS-2.6.0/build141
primary-image-source : TopspinOS-2.6.0/build141
               image : TopspinOS-2.6.0/build141
           cpu-descr : PPC 440GP Rev. C - Rev 4.129 (pvr 4012 0481) (doc G3)
   fpga-firmware-rev : ab
     ib-firmware-rev : 0008002ace (hw-rev b924 1a1)
```

Related Commands

boot-config
card

show cdp

Display the Cisco Discovery Protocol (CDP) advertisement information, with the **show cdp** command.

show cdp

Syntax Description

This command has no arguments or keywords.

Defaults

CDP is running when the chassis boots.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Cisco Discovery Protocol (CDP) obtains protocol addresses of neighboring devices and discovers the platform of those devices. Using it with the MIB database allows applications to learn the device and the SNMP agent address of neighboring devices. CDP uses the CISCO-CDP-MIB.

Each device configured for CDP sends periodic messages, known as advertisements, to a multicast address. Each device advertises at least one address at which it can receive SNMP messages. Advertisements also contain time-to-live, or hold time, information, that indicates the length of time that a receiving device holds CDP information before discarding it. Each device also listens to the CDP messages sent by others to learn when the media interfaces of neighboring devices go up or down.

CDP Version-2 is the latest release of the protocol. With CDP Version-2, detailed information is provided on the VLAN Trunking Protocol (VTP) management domain and duplex modes of neighbor devices, CDP-related counters, and VLAN IDs of connecting ports. This helps Ethernet gateway configuration. CDP is run on server switches over both management-Ethernet and management-IB interfaces.

Examples

The following example displays the CDP advertisement information:

```
SFS-7000P# show cdp
================================================================================
                                CDP Information
================================================================================
                          run : false
              message-interval : 60
                     hold-time : 180
                     device-id : SFS(00:05:ad:01:5f:f2)
```

Related Commands show cdp neighbors
show clock

show cdp entry

To display the Cisco Discovery Protocol (CDP) information for a specific neighbor, enter the **show cdp entry** command in User Exec mode or Privileged Exec mode.

show cdp entry entry-name [*protocol* | *version*]

Syntax Description

entry-name	Specifies the entry name
protocol	(Optional) Specifies the protocol.
version	(Optional) Specifies the version

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Examples

The following example displays the CDP entry information:

```
SFS-7000P# show cdp entry

-------------------------------------------------------------------------------
                                    CDP entry
-------------------------------------------------------------------------------
                 device-id : svbu-h46-c2950.svbu-h46-c2950.cisco.com
                   platform : cisco WS-C2950T-24
               capabilities : switch
                device-port : FastEthernet0/1224
                    version : Cisco Internetwork OS C2950 Software
 (C2950-I6Q4L2-M) Version 12.1(22)
                native-vlan : 230
                     duplex : half
```

Related Commands

show cdp
show cdp neighbors
show clock

show cdp neighbors

To display the information for neighbors CDP has discovered, enter the **show cdp neighbors** command in User Exec mode or Privileged Exec mode.

show cdp neighbors [**type number**] [**detail**]

Syntax Description

type number	(Optional) Displays the type of device discovered, the device name, the number and type of the local interface (port), the number of seconds the CDP advertisement is valid for the port, the device type, the device product number, and the port ID.
detail	(Optional) Displays information about the native VLAN ID, the duplex mode, and the VTP domain name associated with the neighbor device.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Examples

The following example displays the CDP neighbors information:

```
SFS-7000P# show cdp neighbors

-------------------------------------------------------------------------------
                                CDP neighbors
-------------------------------------------------------------------------------
Capability Codes: R - Router, T - Trans Bridge, B - Source Route Bridge
                  S - Switch, H - Host, I - IGMP, r - Repeater, P - Phone

device-id               hold-time capability platform       port-id
-------------------------------------------------------------------------------
svbu-q8-c2950.svbu-q8-c2950.cisco.com²(- 180       S          cisco WS-C2950T-24
 FastEthernet0/4-24
```

Related Commands

show cdp
show cdp entry
show clock

show clock

To display the current system time, enter the **show clock** command in User Exec mode or Privileged Exec mode.

show clock

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

If you have not set the clock, system time begins at 00:00:00, January 1, 1970.

Examples

The following example displays the clock settings of the Server Switch:

```
SFS-7000P# show clock
Mon Mar  17 02:26:32 2003 (UTC)
SFS-7000P#
```

Related Commands

clock set

show config

To display the startup configuration, enter the **show config** command in User Exec mode or Privileged Exec mode.

show config

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

The **show config** command displays the current configuration as a series of commands in the format that you use when you execute commands in a CLI session. This command queries all active service components to collect their current configuration data and translates the data into a CLI command format.

This record of the configuration may be saved, edited, and reused to replicate a configuration.

Note ITLs (see the "fc srp itl" section on page 3-9) with default attributes (see the "fc srp-global itl" section on page 3-19) do not appear in the **show config** command output.

Examples

The following example displays the running configuration on the Server Switch:

```
SFS-7000P# show config
enable
config terminal
card 2
type en4port1G
no shutdown
ib sm subnet-prefix fe:80:00:00:00:00:00:00 priority 0
interface gateway 2
authentication login default local tacacs
ip address 192.168.2.1 255.255.255.0
interface ethernet 2/1
ip address 192.168.1.1 255.255.255.0
```

```
interface ethernet 2/2
ip address 192.168.3.1 255.255.255.0
arp ib 192.168.2.2 gid fe:80:00:00:00:00:00:00:02:c9:00:00:13:68:c3 qpn 2 2/0
arp ib 192.168.2.3 gid fe:80:00:00:00:00:00:00:02:c9:00:00:16:af:d3 qpn 2 2/0
SFS-7000P#
```

Related Commands

copy
history

show diagnostic

To display diagnostics, enter the **show diagnostic** command in User Exec mode or Privileged Exec mode.

show diagnostic

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Examples

The following example displays the system diagnostics available:

```
SFS-270# diagnostic ?
SFS-7000P#  show diag ?
card                - Show card specific diagnostic test
chassis             - Show chassis specific diagnostic test
fan                 - Show fan specific diagnostic test
fru-error           - Show the last hardware error (if any) detected
interface           - Show interface specific diagnostic test
post                - Show POST status of all FRUs in the system
power-supply        - Show power supply specific diagnostic test
rack-locator        - Show rack locator specific diagnostic test
```

Related Commands

show diagnostic card
show diagnostic chassis
show diagnostic fan
show diagnostic fru-error
show diagnostic interface ethernet
show diagnostic interface fc
show diagnostic interface ib
show diagnostic post
show diagnostic power-supply
show diagnostic rack-locator

show diagnostic card

To display completed or ongoing diagnostic tests for cards, enter the **show diagnostic card** command in User Exec mode or Privileged Exec mode.

show diagnostic card {**all** | *card-selection*}

Syntax Description

all	Specifies all cards on the Server Switch.
card-selection	Card or cards with the tests that you want to view.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-10 describes the fields in the **show diagnostic card** command.

Table 6-10 show diagnostic card Command Field Descriptions

Field	Description
test	Test that ran or runs on the card.
slot-id	Slot of the card.
iterations	Number of iterations that the test completed.
action	Last action that an administrator applied to the test.
result	Result of the last action that an administrator applied to the test.
percentage-completed	Percentage of the test that has executed.
result-string	Diagnostic test results.

Examples

The following example displays the completed and ongoing diagnostic tests on card 3:

```
SFS-7000P# show diag card 3

================================================================================
                          Diagnostic Tests For Cards
================================================================================
```

```
                    test : led
                 slot-id : 3
              iterations : 1
                  action : stop
                  result : success
    percentage-completed : 100
           result-string : Card LED Test, Final report : PASSED
```

The following example displays the available test parameters:

```
SFS-7000P(config)# diagnostic card 16
SFS-7000P(config-diag-card-16)# ?
diagnostic Configuration Commands:
exit                 - Exit current mode
help                 - Show command help
history              - Show command history
start                - Initiate a test
stop                 - Stop a test
test                 - Configure test type
SFS-7000P(config-diag-card-16)# test ?
>  led                  - Test type is LED test
>  self-test            - Test type is self-test
```

Related Commands

show diagnostic

show diagnostic chassis

To display completed or ongoing diagnostic tests the chassis, enter the **show diagnostic chassis** command in User Exec mode or Privileged Exec mode.

show diagnostic chassis

Syntax Description

This command has no arguments or keywords.

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Privilege Level:

Unrestricted read-write user.

Examples

The following example displays the completed and ongoing diagnostic tests on card 3:

```
SFS-120# show diagnostic chassis

================================================================================
                          Diagnostic Tests For Chassis
================================================================================
              module-type : chassis
            module-number : 1
                     test : self-test
               iterations : 1
                   option : stopOnError
                   action : start
                   result : success
     percentage-completed : 100
            result-string : Self Test, Final report : PASSED; Please reboot syst
em

SFS-120#
```

Related Commands

show diagnostic

show diagnostic fan

To display completed or ongoing diagnostic tests for fans, enter the **show diagnostic fan** command in User Exec mode or Privileged Exec mode.

show diagnostic fan {**all** | *fan-selection*}

Syntax Description

all	Specifies all fans on the Server Switch.
fan-selection	Fan or fans with the tests that you want to view.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 7000, Cisco SFS 7008

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-11 describes the fields in the **show diagnostic fan** command.

Table 6-11 show diagnostic card Command Field Descriptions

Field	Description
test	Test that ran or runs on the card.
slot-id	Slot of the card.
iterations	Number of iterations that the test completed.
action	Last action that an administrator applied to the test.
result	Result of the last action that an administrator applied to the test.
percentage-completed	Percentage of the test that has executed.
result-string	Diagnostic test results.

Examples

The following example displays diagnostic test results for a fan:

```
SFS-120# show diag fan


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

                            Diagnostic Tests For Fan
================================================================================

              module-type : fan
            module-number : 3
                     test : self-test
               iterations : 1
                   action : stop
                   result : success
     percentage-completed : 100
            result-string : Fan Self Test Completed, Final report : Passed=1, Fa
iled=0, Total=1
```

Related Commands

show diagnostic

show diagnostic fru-error

To display field-replaceable unit (FRU) run-time errors, enter the **show diagnostic fru-error** command in User Exec mode or Privileged Exec mode.

show diagnostic fru-error

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes:

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 7000, Cisco SFS 7008

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-12 describes the fields in the **show diagnostic fru-error** command.

Table 6-12 show diagnostic card Command Field Descriptions

Field	Description
fru-slot	FRU type (such as fan or power supply) and slot.
fru-error	FRU error, if any.

Examples

The following example displays FRU errors on a Cisco SFS 7000:

```
SFS-270# show diagnostic fru-error
================================================================================
                                  Fru-Error
================================================================================
fru-slot        fru-error
--------------------------------------------------------------------------------
card(1)         none
card(2)         none
card(9)         none
card(11)        _FRU_ETHERNET_ERR
card(12)        _FRU_ETHERNET_ERR
card(15)        none
card(16)        none
fan(1)          none
fan(2)          none
fan(3)          none
fan(4)          none
power-supply(1) none
power-supply(2) none
```

Related Commands

show diagnostic

show diagnostic interface ethernet

To display completed or ongoing diagnostic tests for Ethernet gateway ports, enter the **show diagnostic interface ethernet** command in User Exec mode or Privileged Exec mode.

show diagnostic interface ethernet {*port* | **all**}

Syntax Description

port	Ethernet port, in slot#/port# notation.
all	Specifies all Ethernet ports on the Server Switch.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Ethernet read-only user.

Command Output:

Table 6-13 describes the fields in the **show diagnostic interface ethernet** command.

Table 6-13 show diagnostic interface ethernet Command Field Descriptions

Field	Description
test	Test that ran or runs on the card.
port	Ethernet port number, in slot#/port# notation.
validation	Displays enabled or disabled to indicate validation status.
data-size	Size of the test data.
data-pattern	Pattern of the test data.
iterations	Number of iterations of the test.
action	Last action that an administrator performed on the test.
result	Result of the last action that an administrator performed on the test.
percentage-completed	Percentage of the test that has executed.
result-string	Result of the diagnostic test.

Examples

The following example displays the completed and ongoing diagnostic tests on port 1 of Ethernet gateway 9:

```
SFS-7000P# show diagnostic interface ethernet 9/1

================================================================================
                     Diagnostic Tests For Ethernet Interfaces
================================================================================
                      test : led
                      port : 9/1
                validation : enabled
                 data-size : 0
              data-pattern : 00:00:00:00
                iterations : 0
                    action : stop
                    result : none
     percentage-completed : 0
             result-string : Unknown Test Unknown status, Current report : Passed=0,
Failed=0, Total=0
```

The following example displays the diagnostic tests available:

```
SFS-7000P# (config)# diagnostic interface ethernet 2/1
SFS-7000P# (config-diag-if-ether-2/1)# ?
>diagnostic Configuration Commands:
data-pattern         - Configure a data pattern to use in traffic test
cases
  data-size            - Configure size (in octects) of payload data
  exit                 - Exit current mode
  help                 - Show command help
  history              - Show command history
  iterations           - Configure number of iterations the test case
 should be run
  no                   - Disable a configuration or set default
  start                - Initiate a test
  stop                 - Stop a test
  test                 - Configure the test case to run
  validate             - Enable data validation to be performed on
 received packets
SFS-7000P# (config-diag-if-ether-2/1)# test ?
  ext-loopback         - Configure External-Loopback test
  led                  - Configure LED test
```

Related Commands

show diagnostic

show diagnostic interface fc

To display completed or ongoing diagnostic tests for Fibre Channel gateway ports, enter the **show diagnostic interface fc** command in User Exec mode or Privileged Exec mode.

show diagnostic interface fc {*port* | **all**}

Syntax Description

port	Ethernet port, in slot#/port# notation.
all	Specifies all Ethernet ports on the Server Switch.

Defaults

This command has no default settings.

Command Modes:

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Command Output:

Table 6-14 describes the fields in the **show diagnostic interface fc** command.

Table 6-14 show diagnostic card Command Field Descriptions

Field	Description
test	Test that ran or runs on the card.
port	Fibre Channel port number, in slot#/port# notation.
validation	Displays enabled or disabled to indicate validation status.
data-size	Size of the test data.
data-pattern	Pattern of the test data.
iterations	Number of iterations of the test.
source-id	Source WWPN for the test.
target-id	Target WWPN for the test.
action	Last action that an administrator performed on the test.
result	Result of the last action that an administrator performed on the test.
percentage-completed	Percentage of the test that has executed.
result-string	Result of the diagnostic test.

Examples

The following example displays the completed and ongoing diagnostic tests on all Ethernet ports:

```
SFS-7000P# show diagnostic interface ethernet all

================================================================================
                    Diagnostic Tests For Ethernet Interfaces
================================================================================
                      test : external-loopback
                      port : 6/3
                validation : enabled
                 data-size : 0
              data-pattern : 00:00:00:00
                iterations : 0
                    action : stop
                    result : none
     percentage-completed : 0
            result-string : External Loopback Test In-progress, Current report : Passed=0,
Failed=0, Total=0
```

The following example displays the diagnostic tests available:

```
SFS-7000P(config)# diagnostic interface fc 6/1
SFS-7000P(config-diag-if-fc-6/1)# ?
> diagnostic Configuration Commands:
>  data-pattern         - Configure a data pattern to use in traffic test
> cases
>  data-size            - Configure size (in octects) of payload data
>  exit                 - Exit current mode
>  help                 - Show command help
>  history              - Show command history
>  iterations           - Configure number of iterations the test case
> should be run
>  no                   - Disable a configuration or set default
>  source-id            - Specify source identifier for use with FC Echo test
>  start                - Initiate a test
>  stop                 - Stop a test
>  target-id            - Specify target identifier for use with FC Echo test
>  test                 - Configure the test case to run
>  validate             - Enable data validation to be performed on
> received packets
> Topspin-360(config-diag-if-fc-6/1)# test ?
>  echo                 - Configure Echo test
>  ext-loopback         - Configure External-Loopback test
>  int-loopback         - Configure Internal-Loopback test
```

Related Commands

show diagnostic

show diagnostic interface ib

To display completed or ongoing diagnostic tests for InfiniBand switch ports, enter the **show diagnostic interface ib** command in User Exec mode or Privileged Exec mode.

show diagnostic interface ib {*port* | **all**}

Syntax Description

port	Ethernet port, in slot#/port# notation.
all	Specifies all Ethernet ports on the Server Switch.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-15 describes the fields in the **show diagnostic interface ib** command.

Table 6-15 show diagnostic card Command Field Descriptions

Field	Description
test	Test that ran or runs on the card.
port	InfiniBand port number, in slot#/port# notation.
validation	Displays enabled or disabled to indicate validation status.
data-size	Size of the test data.
data-pattern	Pattern of the test data.
iterations	Number of iterations of the test.
source-id	Source LID for the test.
target-id	Target LID for the test.
action	Last action that an administrator performed on the test.
result	Result of the last action that an administrator performed on the test.
percentage-completed	Percentage of the test that has executed.
result-string	Result of the diagnostic test.

Examples

The following example displays the completed and ongoing diagnostic tests on port 1 of InfiniBand switch card 16:

```
SFS-7000P> show diagnostic interface ib 16/1

================================================================================
                        Diagnostic Tests For IB Interfaces
================================================================================
                      test : external-loopback
                      port : 16/1
                validation : enabled
                 data-size : 0
              data-pattern : 00:00:00:00
                iterations : 0
                 source-id : 00:00:00
                 target-id : 00:00:00
                    action : stop
                    result : none
     percentage-completed : 0
             result-string : External Loopback Test Unknown status, Current report :
Passed=0, Failed=0, Total=0
```

The following example displays the available diagnostics tests:

```
SFS-7000P(config)# diagnostic interface ib 16/1
> SFS-7000P(config-diag-if-ib-16/1)# ?
> diagnostic Configuration Commands:
>  data-pattern         - Configure a data pattern to use in traffic test
> cases
>  exit                 - Exit current mode
>  help                 - Show command help
>  history              - Show command history
>  iterations           - Configure number of iterations the test case
> should be run
>  no                   - Disable a configuration or set default
>  start                - Initiate a test
>  stop                 - Stop a test
>  test                 - Configure the test case to run
>  validate             - Enable data validation to be performed on
> received packets
> SFS-7000P(config-diag-if-ib-16/1)# test ?
>  ext-cable            - Configure External-Cable test
>  ext-loopback         - Configure External-Loopback test
>  int-loopback         - Configure Internal-Loopback test
```

Related Commands

show diagnostic

show diagnostic post

To display POST error messages, enter the **show diagnostic post** command in User Exec mode or Privileged Exec mode.

show diagnostic post

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 7000, Cisco SFS 7008

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-16 describes the fields in the **show diagnostic post** command.

Table 6-16 show diagnostic card Command Field Descriptions

Field	Description
fru-slot	FRU type (such as fan or power supply) and slot.
post-status	Status of the POST test.
error-codes	Applicable error codes.

Examples

The following example displays POST error messages on a Cisco SFS 7000:

```
SFS-270# show diagnostic post


================================================================================
                                  Post Status
================================================================================
fru-slot        post-status           post-error
--------------------------------------------------------------------------------
card(1)         passed              none
card(2)         passed              none
card(9)         passed              none
card(11)        failed                _FRU_ETHERNET_ERR
card(12)        failed                 _FRU_ETHERNET_ERR
card(15)        passed              none
card(16)        passed              none
fan(1)         passed              none
fan(2)         passed              none
fan(3)         passed              none
fan(4)         passed              none
power-supply(1) passed          none
power-supply(2) passed          none
```

Related Commands

show diagnostic

show diagnostic power-supply

To display completed or ongoing diagnostic tests for power supplies, enter the **show diagnostic power-supply** command in User Exec mode or Privileged Exec mode.

show diagnostic power-supply {**all** | *power-supply-selection*}

Syntax Description

all	Specifies all fans on the Server Switch.
power-supply-selection	Power supply or supplies with the tests that you want to view.

Defaults

This command has no default settings.

Command Modes:

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 7000, Cisco SFS 7008

Privilege Level:

Unrestricted read-write user.

Command Output:

Table 6-11 describes the fields in the **show diagnostic power-supply** command.

Table 6-17 show diagnostic card Command Field Descriptions

Field	Description
module-number	Power supply module number.
test	Test that ran or runs on the card.
iterations	Number of iterations that the test completed.
action	Last action that an administrator applied to the test.
result	Result of the last action that an administrator applied to the test.
percentage-completed	Percentage of the test that has executed
result-string	Diagnostic test results.

Examples

The following example displays the completed and ongoing diagnostic tests on all power supplies:

```
SFS-270> show diagnostic power-supply all

================================================================================
                      Diagnostic Tests For Power Supplies
================================================================================
            module-number : 1
                     test : none
               iterations : 1
                   action : stop
                   result : none
     percentage-completed : 0
            result-string :
```

show diagnostic rack-locator

To display the results of the rack locator test, enter the **show diagnostic rack-locator** command in User Exec mode or Privileged Exec mode.

show diagnostic rack-locator

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 7000, Cisco SFS 7008

Privilege Level:

Unrestricted read-write user.

Table 6-18 describes the fields in the **show diagnostic rack-locator** command.

Command Output:

Table 6-18 show diagnostic rack-locator Command Field Descriptions

Field	Description
module-type	Type of test.
module-number	Module tested.
test	Last test executed.
iterations	Number of iterations of last test executed.
action	Last test action taken.
result	Result of test.
percentage-completed	Percentage of test completed.
result-string	Test results.

The following example displays rack locator test results:

```
SFS-7000P# show diagnostic rack-locator
================================================================================
                      Diagnostic Tests For Rack Locator
================================================================================
              module-type : rack-locator
            module-number : 1
                     test : led
               iterations : 1
```

```
                action : stop
                result : success
percentage-completed : 100
       result-string : LED Test, Final report : PASSED
```

Related Commands

show diagnostic

show fan

To display the status of the fans in your Server Switch, enter the **show fan** command in User Exec mode or Privileged Exec mode.

show fan

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

General read-only user.

For the health of your Server Switch, both fans should be operating while your Server Switch runs. If the operational status of a fan appears as "down," contact customer support for a fan module replacement.

Command Output:

Table 6-19 describes the fields in the **show fan** command output.

Table 6-19 show fan Command Field Descriptions

field	description
fan	Fan number. Fan 1 resides on the left-side as you are facing the front of the chassis. Fan 2 resides on the right-side of the chassis.
oper status	Operational status of the fan. The value appears as unknown, up, down, or failure. An up value indicates the fan functions correctly.
speed (%)	Speed of the fan as a percentage of the maximum speed of the fan.
product serial number	Factory-assigned product serial-number.
pca serial-number	Printed Circuit-Assembly (PCA) serial-number.
pca number	Printed Circuit-Assembly (PCA) assembly-number.
fru number	Field-replaceable unit (FRU) number.

Examples

The following example displays the fan settings on the Server Switch:

```
SFS-7000P# show fan


================================================================================
                                Fan Information
================================================================================
fan   oper-status   speed(%)
--------------------------------------------------------------------------------
1     up            93
2     up            91
3     up            89
4     up            85


================================================================================
                                 Fan Seeprom
================================================================================
      product              pca                pca                fru

fan   serial-number        serial-number      number             number

--------------------------------------------------------------------------------
1     PY-0323-000055       PY-0323-000055     95-00011-01        98-00004-01

2     PY-0323-000055       PY-0323-000055     95-00011-01        98-00004-01

3     PY-0323-000059       PY-0323-000059     95-00011-01        98-00004-01

4     PY-0323-000059       PY-0323-000059     95-00011-01        98-00004-01
```

Related Commands

show power-supply
show sensor

show fc srp initiator

To display the attributes of initiators that you have configured on your Server Switch, enter the **show fc srp initiator** command in User Exec mode or Privileged Exec mode.

show fc srp initiator [*guid extension*]

Syntax Description

guid (optional)	GUID of the initiator to view.
extension (optional)	GUID extension of the initiator to view.

Defaults

Enter the **show fc srp initiator** command with no arguments to display all initiators.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

This command displays active and inactive initiators.

Enter this command without any arguments to display the initiator information for all configured SRP initiators. If you specify a GUID, you must also specify the extension.

Note Initiators do not need to connect to the Server Switch to appear in the show output. As long as you configured them, they appear in the command output.

Command Output:

Table 6-20 describes the fields in the **show fan** command output.

Table 6-20 show fc srp initiator Command Field Descriptions

Field	Description
guid	GUID of the initiator.
extension	GUID extension of the initiator.
description	User-assigned ASCII description of the initiator.
wwnn	World-wide node name (WWNN) of the initiator.
credit	Indicates the amount of traffic that the initiator can accept.
active-ports	IB ports on your Server Switch through which the initiator passes traffic.
pkeys	Partition keys of the initiator.

Table 6-20 show fc srp initiator Command Field Descriptions (continued)

Field	Description
action	Displays the last action you performed using the **fc srp initiator** command on this initiator. Displays the last action you have performed using the **config fc arp initiator** command on this initiator. The action can be *discover-itl* or *auto-bind*. Possible values are none (when no action was taken), success, in-progress, or fail.
result	Displays the result of the action that appears in the "action" field. Possible values are none (when no action was taken), success, in-progress, or fail. Any results other than "Operation completed successfully" occur due to interface errors.
wwpns	World-wide port names (WWPNs) of the virtual ports (NL_ports) that point to the initiator.

Examples

The following example displays the initiators that users have configured on the Server Switch:

```
SFS-7000P# show fc srp initiator

================================================================================
                                SRP Initiators
================================================================================
                    guid: 00:05:ad:00:00:01:29:c5
               extension: 00:00:00:00:00:00:00:00
             description: Bender
                    wwnn: 20:01:00:05:ad:00:40:00
                  credit: 0
            active-ports: 6/1
                   pkeys:
                  action: none
                  result: none
                   wwpns: port    wwpn                     fc-addr
                           2/1    20:01:00:05:ad:20:40:00  00:00:00
                           2/2    20:01:00:05:ad:24:40:00  00:00:00
                           3/1    20:01:00:05:ad:30:40:00  00:00:00
                           3/2    20:01:00:05:ad:34:40:00  00:00:00
                           4/1    20:01:00:05:ad:40:40:00  00:00:00
                           4/2    20:01:00:05:ad:44:40:00  00:00:00
                           5/1    20:01:00:05:ad:50:40:00  00:00:00
                           5/2    20:01:00:05:ad:54:40:00  00:00:00
                           6/1    20:01:00:05:ad:60:40:00  00:00:02
                           6/2    20:01:00:05:ad:64:40:00  00:00:00
                           7/1    20:01:00:05:ad:70:40:00  00:00:00
                           7/2    20:01:00:05:ad:74:40:00  00:00:00
                           8/1    20:01:00:05:ad:80:40:00  00:00:00
                           8/2    20:01:00:05:ad:84:40:00  00:00:00
                           9/1    20:01:00:05:ad:90:40:00  00:00:00
                           9/2    20:01:00:05:ad:94:40:00  00:00:00
                          10/1    20:01:00:05:ad:a0:40:00  00:00:00
                          10/2    20:01:00:05:ad:a4:40:00  00:00:00
                          11/1    20:01:00:05:ad:b0:40:00  00:00:00
                          11/2    20:01:00:05:ad:b4:40:00  00:00:00
                          12/1    20:01:00:05:ad:c0:40:00  00:00:00
                          12/2    20:01:00:05:ad:c4:40:00  00:00:00
                          13/1    20:01:00:05:ad:d0:40:00  00:00:00
                          13/2    20:01:00:05:ad:d4:40:00  00:00:00
                          14/1    20:01:00:05:ad:e0:40:00  00:00:00
                          14/2    20:01:00:05:ad:e4:40:00  00:00:00
Total: 1 initiators.
```

Related Commands

fc srp initiator auto-bind
fc srp initiator-wwpn
fc srp it
fc srp itl
fc srp lu
fc srp target
fc srp-global gateway-portmask-policy restricted
fc srp-global lun-policy restricted
speed

show fc srp initiator-wwpn-view

To display SRP targets that an initiator can access through one of its virtual ports, enter the **show fc srp initiator-wwpn-view** command in User Exec mode or Privileged Exec mode.

show fc srp initiator-wwpn-view *wwpn* **target**

Syntax Description

wwpn	World-wide port name (WWPN) of the virtual port of the initiator.
target	Displays the targets that your initiator can access through the virtual port.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Use this command to verify that your initiator connects to all of the targets that you configured for it.

Table 6-21 describes the fields in the **show fc srp initiator-wwpn-view** command output.

Table 6-21 show fc srp initiator-wwpn-view Command Field Descriptions

Field	Description
wwpn	World-wide port name (WWPN) of the target port that the initiator can access through the virtual port.
wwnn	World-wide node name (WWNN) of the target.
description	Description of the target.
ioc-guid	GUID of the I/O controller of the target.
service-name	Service name of the target.
protocol-ids	Protocols that the target supports.
fc-address	Fibre Channel address of the target.
mtu	Maximum transmission unit (MTU), in bytes, of the target.
connection-type	Displays **nl-port** to indicate a virtual FC port.
physical-access	Physical FC port (in slot#/port# format) of the virtual port.

Examples

The following example displays the targets that the initiator can access through the specified virtual port:

```
SFS-7000P> show fc srp initiator-wwpn-view 20:03:00:05:ad:21:5a:5c target

================================================================================
    SRP Targets Accessible to Initiator Via Port WWN 20:03:00:05:ad:51:5a:5c
================================================================================
                     wwpn: 20:01:00:60:45:17:36:1c
                     wwnn: 20:09:00:60:45:17:36:1c
              description: SRP.T10:200100604517361C
                 ioc-guid: 00:05:ad:00:00:01:38:80
             service-name: SRP.T10:200100604517361C
             protocol-ids: 04:00:00:00:00:00:00:00:00:00:00:00
               fc-address: 61:1b:13
                      mtu: 0
          connection-type: nl-port
          physical-access: 5/1-5/2,7/1
```

Related Commands

fc srp initiator
fc srp-global lun-policy restricted
show fc srp initiator

show fc srp it

To display initiator-target pairs that you have configured or that your Server Switch has discovered, enter the **show fc srp it** command in User Exec mode or Privileged Exec mode.

show fc srp it [*guid extension target-wwpn*]

Syntax Description

guid	(Optional) GUID of the initiator in the IT pair.
extension	(Optional) GUID extension of the initiator in the IT pair.
target-wwpn	(Optional) World-wide port name (WWPN) of the target FC storage port in the IT pair.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Use this command to verify that you successfully created IT pairs on your Server Switch.

Table 6-22 show fc srp it Command Output Field Descriptions

Field	Description
guid	GUID of the initiator in the initiator-target pair.
extension	GUID extension of the initiator in the initiator-target pair.
target-wwpn	WWPN of the target storage.
description	User-assigned description of the initiator-target pair.
non-restricted-ports	Ports on your Server Switch that grant the initiator of the IT pair access to storage.
active-ports	Ports on your Server Switch through which the initiator of the IT pair passes traffic.
physical-access	Physical ports on your Server Switch to which the initiator of the IT pair connects.
mode	Displays “normal-mode” or “test-mode.” Configure the mode to normal-mode to permit initators to log in to storage. In test-mode, the FC gateway persistently logs in to storage and blocks the initiators.

Table 6-22 show fc srp it Command Output Field Descriptions

Field	Description
action	Displays the last action you performed using the **config fc srp it** command on this initiator target. The action can be *discover-itl*
result	Displays the result of the action that appears in the "action" field. Possible values are none (when no action was taken), success, in-progress, or fail. Any result other than "Operation completed successfully" occurs due to interface errors.

Examples

The following example displays the details of an IT pair:

```
SFS-7000P# show fc srp it

================================================================================
                                    SRP IT
================================================================================
                                  guid: 00:02:c9:02:00:40:0e:d4
                             extension: 00:00:00:00:00:00:00:00
                           target-wwpn: 21:00:00:04:cf:86:a0:1f
                           description: it
                  non-restricted-ports: 2/1-2/4,3/1-3/4,4/1-4/4,5/1-5/4,
                                      : 6/1-6/4,7/1-7/4,8/1-8/4,9/1-9/4,
                                      : 10/1-10/4,11/1-11/4,12/1-12/4,13/1-13/4
                          active-ports: 5/1-5/2
                       physical-access: 5/1-5/2,7/2
                                  mode: normal-mode
                                action: none
                                result: none
```

Related Commands

fc srp-global gateway-portmask-policy restricted
fc srp it
show interface fc

show fc srp itl

To display all ITLs that run through your Server Switch, enter the **show fc srp itl** command in User Exec mode or Privileged Exec mode.

show fc srp itl [*guid extension wwpn LUN*]

Syntax Description

guid	(Optional) Global unique identifier (GUID) of the initiator.
extension	(Optional) GUID extension of the initiator.
wwpn	(Optional) World-wide port name (WWPN) of the target port on the FC storage device.
LUN	(Optional) Logical unit number (LUN) of the FC storage device.

Defaults

Enter the **show fc srp itl** command with not arguments to display all ITLs on your Server Switch.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Enter this command without arguments to display the ITL information for all connected Fibre Channel devices. This command displays active and inactive ITLs.

Table 6-23 describes the fields in the **show fc srp itl** command output.

Table 6-23 show fc srp itl Command Field Descriptions

Field	Description
guid	GUID of the initiator.
extension	GUID extension of the initiator.
target-wwpn	WWPN of the target port on the FC storage device.
fc-lunid	Fibre Channel LUN ID of the storage disk/tape/stripe.
description	User-configured description.
srp-lunid	Internal SRP LUN ID. This value serves as a SRP-side alias for a FC LUN ID. By default, the srp-lunid value matches the *LUN* variable.
logical-id (raw 64 bytes)	Numeric disk LU.
logical-id (formatted display)	Alphanumeric disk LU.

Table 6-23 show fc srp itl Command Field Descriptions (continued)

Field	Description
gateway-port-mask-policy	Displays a list of unrestricted ports though which the ITL traffic can pass.
lun-policy	Displays **restricted** when the you activate the LUN masking policy and **non-restricted** when you deactivate the policy.
hi-mark	The maximum number of outstanding requests from the initiator to the storage that the ITL can maintain.
max-retry	Configures the maximum number of retries that the initiator can send to the storage device.
min-io-timeout	Maximum amount of time, in seconds, that elapses before a SRP request times out.
dynamic-path-affinity	Displays true when you enable the feature; otherwise, displays false.
dynamic-gateway-port-loadbalancing	Displays true when you enable the feature; otherwise, displays false.
dynamic-storage-port-loadbalancing	Displays true when you enable the feature; otherwise, displays false. If this feature does not apply to the storage, no output appears.
dynamic-gateway-port-failover	Displays true when you enable the feature; otherwise, displays false.
dynamic-storage-port-failover	Displays true when you enable the feature; otherwise, displays false. If this feature does not apply to the storage, no output appears.
active-slots	Slots on which ITL traffic actively runs.

Examples

The following example displays the ITLs in the configuration file on the Server Switch:

```
SFS-7000P# show fc srp itl

================================================================================
                                  SRP ITL
================================================================================
                                    guid: 00:05:ad:00:00:01:29:c5
                               extension: 00:00:00:00:00:00:00:00
                            target-wwpn: 21:00:00:04:cf:f6:c2:ab
                               fc-lunid: 00:00:00:00:00:00:00:00
                              srp-lunid: 00:00:00:00:00:00:00:00
                 logical-id (raw 64 bytes): 01:03:00:08:20:00:00:04:cf:f6:c2:ab:00:00:00:00
                                          : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                          : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                          : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
           logical-id (formatted display): 2000000000000000
                             description: itl
                         device-category: random
                              lun-policy: non restricted
                    non-restricted-ports: none
                            active-ports: 6/1
                         physical-access: 6/1
                                 hi-mark: 16
                               max-retry: 5
```

```
                        min-io-timeout: 10
                  dynamic-path-affinity: false
        dynamic-gateway-port-loadbalancing: true
        dynamic-storage-port-loadbalancing:
             dynamic-gateway-port-failover: false
             dynamic-storage-port-failover:
                          active-slots: 6

Total: 1 itls.
```

Related Commands

fc srp itl
fc srp lu
show fc srp it
show interface fc

show fc srp itl-statistics

Enter this command without any arguments to display the SRP/Fibre Channel statistics for every ITL. To display ITL I/O statistics, enter the **show fc srp itl-statistics** command in User Exec mode or Privileged Exec mode.

show fc srp itl-statistics [*guid extension wwpn LUN*]

Syntax Description

guid	(Optional) Global unique identifier (GUID) of the initiator.
extension	(Optional) GUID extension of the initiator.
wwpn	(Optional) World-wide port name (WWPN) of the target port on the FC storage device.
LUN	(Optional) Logical unit number (LUN) of the FC storage device.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Command Output:

Table 6-24 describes the output of the **show fc srp itl-statistics** command.

Table 6-24 show fc srp itl-statistics Command Field Descriptions

Field	Description
guid	GUID of the initiator.
extension	GUID extension of the initiator.
target-wwpn	WWPN of the target.
srp-lunid	LUN ID of the LUN in the ITL.
slot-id	Slot on the Server Switch in which the FC gateway resides.
srp-cmds-outstanding	Cumulative number of outstanding SRP commands.
srp-errors	Cumulative number of SRP errors.
srp-initiated-ios	Total number of SRP I/O requests.
srp-bytes-read	Cumulative number of SRP bytes read by one or all FC gateways.
srp-bytes-written	Cumulative number of SRP bytes written by one or all FC gateways.

Table 6-24 show fc srp itl-statistics Command Field Descriptions (continued)

Field	Description
fcp-cmds-outstanding	Cumulative number of outstanding FC commands.
fcp-cmds-completed	Cumulative number of commands that one or all FC gateways executed.
fcp-errors	Cumulative number of FC errors on one or all gateways.
fcp-initiated-ios	Total number of FC I/O requests.
fcp-bytes-read	Cumulative number of FC bytes read by one or all FC gateways.
fcp-bytes-written	Cumulative number of FC bytes written by one or all FC gateways.

Examples

The following example displays ITL traffic statistics for the ITLs in the configuration file on the Server Switch:

```
SFS-7000P# show fc srp itl-statistics
================================================================================
                               SRP ITL statistics
================================================================================
                     guid: 00:02:c9:00:01:1d:aa:00
                extension: 00:00:00:00:00:00:00:00
              target-wwpn: 20:01:00:60:45:17:36:1c
                srp-lunid: 00:00:00:00:00:00:00:00
                  slot-id: 5
     srp-cmds-outstanding: 0
               srp-errors: 0
        srp-initiated-ios: 0
           srp-bytes-read: 0
        srp-bytes-written: 0
     fcp-cmds-outstanding: 0
       fcp-cmds-completed: 0
                fcp-errors: 0
         fcp-initiated-ios: 0
            fcp-bytes-read: 0
         fcp-bytes-written: 0
```

Related Commands

fc srp itl
show fc srp statistics

show fc srp lu

To display attributes of logical units, enter the **show fc srp lu** command in User Exec mode or Privileged Exec mode.

show fc srp lu [*logical-id*]

Syntax Description

logical-id	(Optional) LU identifier, in 64-byte, hexadecimal format. Be sure to omit all colons.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Table 6-25 describes the fields in the **show fc srp lu** command output.

Table 6-25 show fc srp lu Command Field Descriptions

Field	Description
logical-id (formatted display)	ID of the LUN.
description	User-defined LU description.
device-category	Displays “random” or “sequential” to identify the type of LUN.
targets	Displays the WWPN of the target in which the LUN resides.
hi-mark	The maximum number of outstanding requests from the initiator to the storage that the ITL can maintain.
max-retry	Displays the number of failed communication attempts that must occur before the LUN identifies the initiator as inaccessible.
min-io-timeout	Maximum amount of time that elapses before a SRP request times out.
dynamic-path-affinity	Displays true if you enable the feature and false if you disable the feature.
dynamic-gateway-port-loadbalancing	Displays true if you enable the feature and false if you disable the feature.

Table 6-25 show fc srp lu Command Field Descriptions (continued)

Field	Description
dynamic-storage-port-loadbalancing	Displays true if you enable the feature and false if you disable the feature.
vendor-id	Vendor-assigned ID of the LUN.
product-id	Vendor-assigned product ID of the LUN.
product-revision	Manufacturer-assigned product revision number.
physical-access	FC gateway Ports on your Server Switch that connect to the LU.

Examples

The following example displays the LUs (storage disks) that connect to the Server Switch:

```
SFS-7000P# show fc srp lu

================================================================================
                                  SRP LUs
================================================================================
              logical-id (raw 64 bytes): 01:03:00:08:20:00:00:04:cf:f6:c2:ab:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
          logical-id (formatted display): 2000000000000000
                            description: lu-SEAGATE -ST336753FC      -0005
                       device-category: random
                               targets: 21:00:00:04:cf:f6:c2:ab
                               hi-mark: 16
                             max-retry: 5
                          min-io-timeout: 10
                    dynamic-path-affinity: false
      dynamic-gateway-port-loadbalancing: true
           dynamic-gateway-port-failover: false
                               vendor-id: SEAGATE
                              product-id: ST336753FC
                         product-revision: 0005
                          physical-access: 6/1
Total: 1 lus.
```

The following example displays details about one LU:

```
SFS-7000P# show fc srp lu
0103000820000004cf86a01f0000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000000
```

```
================================================================================
                                  SRP LUs
================================================================================
              logical-id (raw 64 bytes): 01:03:00:08:20:00:00:04:cf:86:a0:1f:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
                                       : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
          logical-id (formatted display): 2000000000000000
                            description: lu-SEAGATE -ST336753FC      -0005
                       device-category: random
                               targets: 21:00:00:04:cf:86:a0:1f
```

```
                                  hi-mark: 16
                                max-retry: 5
                            min-io-timeout: 10
                      dynamic-path-affinity: false
        dynamic-gateway-port-loadbalancing: true
             dynamic-gateway-port-failover: false
                                vendor-id: SEAGATE
                               product-id: ST336753FC
                           product-revision: 0005
                            physical-access: 5/1-5/2,7/2
SFS-7000P#
```

Related Commands

fc srp lu
show fc srp initiator
show fc srp itl
show interface fc

show fc srp statistics

To display aggregate SRP I/O statistics for all ITLs on your Server Switch, enter the **show fc srp statistics** command in User Exec mode or Privileged Exec mode.

show fc srp statistics

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes:

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Use the **show fc srp statistics** command to determine load and error count.

The statistical information consists of the following:

- SRP and Fibre Channel commands initiated, outstanding, and completed.
- SRP and Fibre Channel bytes read and written.
- SRP and Fibre Channel errors reported.

Table 6-26 describes the fields in the **show fc srp statistics** command output.

Table 6-26 show fc srp statistics Command Field Descriptions

Field	Description
link-events	Total number of link events (link up, link down) processed by the Fibre Channel interface gateways.
srp-cmds-outstanding	Total number of SRP commands outstanding on the Fibre Channel interface gateways.
srp-cmds-completed	Total number of SRP commands completed on the Fibre Channel interface gateways.
srp-errors	Total number of SRP errors encountered on the Fibre Channel interface gateway(s.
srp-initiated-ios	Total number of I/O transactions requested by the SRP initiator.
srp-bytes-read	Total number of I/O bytes read by the SRP initiator that connects to this chassis.
srp-bytes-written	Total number of I/O bytes written by the SRP initiator.

Table 6-26 show fc srp statistics Command Field Descriptions (continued)

Field	Description
srp-connections	Total number of connections used by the SRP initiator.
fcp-cmds-outstanding	Total number of FCP commands outstanding on the Fibre Channel interface gateways.
fcp-cmds-completed	Total number of FCP commands completed on the Fibre Channel interface gateways.
fcp-errors	Total number of FCP errors encountered on the Fibre Channel interface gateways.
fcp-initiated-ios	Total number of I/O responses by the Fibre Channel device to SRP initiator requests.
fcp-bytes-read	Total number of I/O bytes read by the target device.
fcp-bytes-written	Total number of I/O bytes written by the target device.

Examples

The following example displays traffic statistics for all of the ITLs on your Server Switch:

```
SFS-7000P# show fc srp statistics

================================================================================
                            SRP Global Statistics
================================================================================
              link-events: 1410805
     srp-cmds-outstanding: 0
       srp-cmds-completed: 4
                srp-errors: 0
        srp-initiated-ios: 4
           srp-bytes-read: 288
        srp-bytes-written: 0
          srp-connections: 2
     fcp-cmds-outstanding: 0
       fcp-cmds-completed: 2
                fcp-errors: 0
        fcp-initiated-ios: 2
           fcp-bytes-read: 0
        fcp-bytes-written: 0
```

Related Commands

show fc srp initiator
show fc srp itl
show interface fc

show fc srp target

To display the properties of targets (that you manually configured or that your Server Switch discovered), enter the **show fc srp target** command in User Exec mode or Privileged Exec mode.

show fc srp target [*wwpn*]

Syntax Description

wwpn	(Optional) World-wide port name (WWPN) of the target port.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Enter this command without any arguments to display all target devices known to the Server Switch.

Table 6-27 describes the fields in the **show fc srp target** command output.

Table 6-27 show fc srp target Command Field Descriptions

Field	Description
wwpn	Fibre Channel interface port name of the SRP target.
wwnn	World-wide node name of the target.
description	Text label used to identify the service in the Element Manager GUI or CLI output. If you do not apply a description, the system defaults to the service name.
ioc-guid	InfiniBand I/O controller (IOC) through which the initiator accesses the target. On the Cisco SFS 3012 and Cisco SFS 3001 platforms, the IOC identifies a Fibre Channel gateway slot.
service-name	Name of the service to associate with the target.
protocol-ids	Protocols that the target supports.
fc-address	3-byte Fibre Channel Protocol address of the target.
mtu	Maximum transmission unit, in bytes, of the target.
connection-type	Displays “down” if the connection cannot pass traffic. Displays “nl-port” when the target communicates with the virtual port on the Fibre Channel gateway.
physical -access	Fibre Channel port that physically connects to the target.

Examples

The following example displays the targets that connect to the Server Switch:

```
SFS-7000P# show fc srp target
================================================================================
                                  SRP Targets
================================================================================
                     wwpn: 20:01:00:60:45:17:36:1c
                     wwnn: 20:09:00:60:45:17:36:1c
              description: SRP.T10:200100604517361C
                 ioc-guid: 00:05:ad:00:00:01:38:80
             service-name: SRP.T10:200100604517361C
             protocol-ids: 04:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
               fc-address: 61:1b:13
                      mtu: 0
          connection-type: nl-port
          physical-access: 5/1-5/2
```

Related Commands

fc srp target
show fc srp initiator

show fc srp-global

To display the permissions that automatically apply to all new ITs and ITLs, enter the **show fc srp-global** command in User Exec mode or Privileged Exec mode.

show fc srp-global

Syntax Description

This command has no arguments or keywords.

Defaults

See the **fc srp-global itl** command for defaults.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

Examples:

The following example displays the default attributes of new ITLs:

```
SFS-7000P# show fc srp-global

================================================================================
                              SRP Global Information
================================================================================
                         default-gateway-portmask-policy : restricted
                                     default-lun-policy : restricted
                                   default-itl-hi-mark : 16
                                default-itl-max-retry : 5
                             default-itl-min-io-timeout : 10
                        default-itl-dynamic-path-affinity : false
          default-itl-dynamic-gateway-port-load-balancing : true
               default-itl-dynamic-gateway-port-failover : false
                                  default-seq-itl-hi-mark : 1
                               default-seq-itl-max-retry : 1
                           default-seq-itl-min-io-timeout : 60
                    default-seq-itl-dynamic-path-affinity : false
      default-seq-itl-dynamic-gateway-port-load-balancing : false
            default-seq-itl-dynamic-gateway-port-failover : true
```

Related Commands

fc srp-global gateway-portmask-policy restricted
fc srp-global itl
fc srp-global lun-policy restricted

show host

To display the DNS name servers and domain name that your Server Switch uses, enter the **show host** command in User Exec mode or Privileged Exec mode.

show host

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Fibre Channel read-only user.

Use this command to display the network domain of the chassis and the DNS servers that your Server Switch uses to resolve network names to IP addresses.

Table 6-28 describes the fields in the **show host** command output.

Table 6-28 show host Command Field Descriptions

Field	Description
name-server-one	IP address of the primary name server.
name-server-two	IP address of the backup name server.
domain-name	Host name of the Server Switch.

Examples

The following example displays the IP addresses of the DNS servers that the Server Switch uses to resolve host names:

```
SFS-7000P# show host
================================================================================
                          Host Information
================================================================================
          name-server-one : 10.3.106.20
          name-server-two : 0.0.0.0
              domain-name : shasta
SFS-7000P#
```

Related Commands hostname
ip

show ib dm ioc

To display the Device Manager input/output controller (IOC) configuration, enter the **show ib dm ioc** command in User Exec mode or Privileged Exec mode.

show ib dm ioc [*ioc-guid* | **all**] [**services**]

Syntax Description

ioc-guid	(Optional) GUID of the controller that you want to view.
all	(Optional) Displays all controllers on the InfiniBand fabric.
services	(Optional) Displays the services that run on the input/output controllers.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

General read-only user.

Command Output:

Table 6-29 describes the fields in the **show ib dm ioc** command output:

Table 6-29 show ib dm ioc Command Field Descriptions

Field	Description
guid	GUID of the controller
description	User-assigned description.
vendor-id	Organization Unique Identifier (OUI) of the vendor.
ioc-device-id	Vendor-assigned device identifier.
device-version	Vendor-assigned device version.
subsystem-vendor-id	Vendor-assigned subsystem vendor identifier.
subsystem-id	Vendor-assigned subsystem identifier.
io-class	I/O class that the IOC supports.
io-subclass	Subclass of the I/O class protocol of the IOC.
protocol	Standard protocol definition that the IOC supports.
protocol-version	Protocol version that the IOC supports.
send-msg-q-depth	Maximum number of messages that the send message queue supports.
rdma-read-q-depth	Maximum depth of the per-channel RDMA Read Queue.

Table 6-29 show ib dm ioc Command Field Descriptions (continued)

Field	Description
send-msg-size	Maximum size, in bytes, of send messages.
rdma-transfer-size	Maximum size, in bytes, of outbound RDMA transfers that the IOC initiates.
controller-op-cap	Integer value (from 8 cumulative bits) between 1 and 255 that represents the operation types that the IOC supports. • bit 0: ST; Send Messages To IOC • bit 1: SF; Send Messages From IOC • bit 2: RT; RDMA Read Requests To IOC • bit 3: RF; RDMA Read Requests From IOC • bit 4: WT; RDMA Write Requests To IOC • bit 5: WF; RDMA Write Requests From IOC • bit 6: AT; Atomic Operations To IOC • bit 7: AF; Atomic Operations From IOC
service-entries	Number of services that the IOC provides.

Table 6-30 describes the fields in the services keyword output.

Table 6-30 services Keyword Display Output

Field	Description
ioc-guid	GUID of the node that provides the service.
service-name	ASCII identifier of the service.
service-id	Numeric identifier that nodes use to call the service.

Examples

The following example displays all input/output controller configurations of on the fabric:

```
SFS-7000P> show ib dm ioc

================================================================================
                        IB Device Manager I/O Controller
================================================================================
                                    guid: 00:05:ad:00:00:00:14:fe
                             description:
                               vendor-id: 0x5ad
                           ioc-device-id: 0x5ad
                          device-version: 1
                      subsystem-vendor-id: 0x5ad
                             subsystem-id: 0x5ad
                                 io-class: 256
                              io-subclass: 24734
                                 protocol: 264
                           protocol-version: 1
                           send-msg-q-depth: 65535
                         rdma-read-q-depth: 65535
```

```
                send-msg-size: -1
            rdma-transfer-size: -1
             controller-op-cap: 255
               service-entries: 14
```

The following example displays all services on all of the input/output controllers in the fabric (output abridged).

```
SFS-7000P> show ib dm ioc services

================================================================================
                           IB Device Manager Services
================================================================================
                                ioc-guid: 00:05:ad:00:00:00:14:fe
                            service-name: SRP.T10:2200000C5002CA21
                              service-id: 00:00:00:00:00:00:00:66


                                ioc-guid: 00:05:ad:00:00:00:14:fe
                            service-name: SRP.T10:2200000C50056281
                              service-id: 00:00:00:00:00:00:00:66
```

Related Commands

show ib dm iou

show ib dm iou

To display the Device Manager input/output unit (IOU) configuration, enter the **show ib dm iou** command in User Exec mode or Privileged Exec mode.

show ib dm iou

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

General read-only user.

Table 6-31 describes the fields in the **show ib dm** command output.

Table 6-31 show ib dm Command Output Fields

Field	Description
change-id	Cumulative number of changes to the controller list since the device last booted.
max-controllers	Maximum number of controllers that your device can support.
diag-device-id	Displays “1” if diagnostics can provide IOC details; otherwise, displays “0.”
option-rom	Indicates the presence or absence of Option ROM.
controllers	Lists the virtual slots on your Server Switch that run IOC controllers. **Note** All references to “slot” in this field see virtual slots, not physical slots on the Server Switch.

Examples

The following example displays the DM I/O details for the Server Switch:

```
SFS-7000P> show ib dm iou
================================================================================
                          IB Device Manager I/O Unit
================================================================================
                              change-id: 2352
                         max-controllers: 1
                          diag-device-id: 0
                              option-rom: absent
                             controllers: slot-1 IOC present
```

Related Commands

show ib dm ioc

show ib pm config

To view the performance monitoring configuration on an InfiniBand subnet, enter the **show ib pm config** command in User Execute mode or Privileged Execute mode.

show ib pm config subnet-prefix *prefix*

Syntax Description

subnet-prefix	Specifies the subnet prefix of the InfiniBand subnet for which you want to view performance monitoring.
prefix	Subnet prefix of the InfiniBand subnet for which you want to view performance monitoring

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Table 6-32 describes the fields in the show ib pm config command output.

Table 6-32 show ib pm config Command Output Descriptions

Field	Description
subnet-prefix	Subnet prefix of the InfiniBand subnet with the performance monitoring configuration you are viewing.
state	State of performance monitoring (enabled or disabled).
polling period	Interval at which the feature polls ports and connections (in seconds).
start-delay	Time that elapses before performance managing executes (in seconds).

Examples

The following example displays the output of the show ib pm config command:

```
SFS-120# show ib pm config subnet-prefix fe:80:00:00:00:00:00:00
================================================================================
                               IB PM Configuration
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                    state : enable
           polling-period : 10
              start-delay : 60
```

Related Commands

ib pm

show ib pm connection counter

To view the performance monitoring counters on all ports on a connection, enter the **show ib pm connection counter** command in User Execute mode or Privileged Execute mode.

show ib pm connection counter subnet-prefix *prefix* **src-lid** *source* **dst-lid** *destination*

Syntax Description

subnet-prefix	Specifies the subnet prefix of the InfiniBand subnet for which you want to view performance monitoring.
prefix	Subnet prefix of the InfiniBand subnet for which you want to view performance monitoring
src-lid	Specifies the source Local Identifier (LID) of the connection.
source	Source LID of the connection
dst-lid	Specifies the destination LID of the connection.
destination	Destination LID of the connection.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output Description:

subnet-prefix	Subnet to which the connection belongs
node-guid	GUID of the node belonging to the connection
port-num	Port number on the node belonging to the connection.
chassis-guid	GUID of the chassis to which the port belongs (if available)
slot-num	Slot number on the chassis to which the port belongs (if available)
ext-port-num	Port number on the chassis slot to which the port belongs (if available)
data-is-valid	If the value is false, re-run the command to obtain valid data
symbol-errors	Symbol error counter
link-recovery-errors	Link Error Recovery counter
link-downs	Link Downed counter
rcv-errors	Port Receive Error counter

subnet-prefix	Subnet to which the connection belongs
rcv-remote-phy-errors	Port Receive Remote Physical Error counter
rcv-switch-relay-errors	Port Receive Switch Relay Error counter
xmit-discards	Port Transmit Discards counter
xmit-constraint-errors	Port Transmit Constraint Error counter
rcv-constraint-errors	Port Receive Constraint Error counter
local-link-integrity-errors	Local Link Integrity Error counter
excessive-buf-overrun-errors	Excessive Buffer Overrun Error counter.
vl15-droppeds	VL15 Dropped counter
xmit-data	Port Transmit Data counter
rcv-data	Port Receive Data counter
xmit-pkts	Port Transmit Packet counter
rcv-pkts	Port Receive Packet counter

See Section 16.1.3.5, PortCounters, InfiniBand Architecture, Vol. 1, Release 1.2, for more information on the port counters.'

Examples

The following example displays performance monitoring counters on all ports on a connection:

```
SFS-120# show ib pm connection counter subnet-prefix fe:80:00:00:00:00:00:00 src-l
id 2 dst-lid 2

================================================================================
                            IB PM Port Counter Table
================================================================================
                 subnet-prefix : fe:80:00:00:00:00:00:00
                     node-guid : 00:05:ad:00:00:01:73:bf
                      port-num : 1
                   chassis-guid : 00:05:ad:00:00:01:73:bf
                      slot-num : 1
                   ext-port-num : 1
                  data-is-valid : false
                  symbol-errors : 0
           link-recovery-errors : 0
                     link-downs : 0
                     rcv-errors : 0
          rcv-remote-phy-errors : 0
        rcv-switch-relay-errors : 0
                  xmit-discards : 0
         xmit-constraint-errors : 0
          rcv-constraint-errors : 0
   local-link-integrity-errors : 0
  excessive-buf-overrun-errors : 0
                  vl15-droppeds : 0
                      xmit-data : 0
                       rcv-data : 0
                      xmit-pkts : 0
                       rcv-pkts : 0
```

Related Commands ib pm

show ib pm connection monitor

'To view the state of a performance monitored connection, enter the **show ib pm connection** monitor command in User Execute mode or Privileged Execute mode.

show ib pm connection monitor subnet-prefix *prefix* **src-lid** *source* **dst-lid** *destination*

Syntax Description

subnet-prefix	Specifies the subnet prefix of the InfiniBand subnet for which you want to view performance monitoring.
prefix	Subnet prefix of the InfiniBand subnet for which you want to view performance monitoring
src-lid	Specifies the source Local Identifier (LID) of the connection.
source	Source LID of the connection
dst-lid	Specifies the destination LID of the connection.
destination	Destination LID of the connection.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output Description:

subnet-prefix	Subnet to which the monitored connection belongs
src-lid	16-bit source LID of the connection
dst-lid	16-bit destination LID of the connection
error-status	Error threshold status. If any of the ports in the connection have exceeded a user-defined error threshold, the error-status will be exceeded.
util-status	Utilization threshold status. If any of the ports in the connection have exceeded a user-defined utilization rate threshold, the error-status will be exceeded.

Examples

The following example displays the connection monitor table of a connection:

```
SFS-120# show ib pm connection monitor subnet-prefix fe:80:00:00:00:00:00:00 src-l
id 2 dst-lid 2


================================================================================
                         IB PM Connection Monitor Table
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                  src-lid : 2
                  dst-lid : 2
             error-status : unknown
              util-status : unknown
```

Related Commands

ib pm

show ib pm port counter config

To display the port counter configuration whether access to port counters is either enabled or disabled, enter the **show ib pm port counter config subnet-prefix** command in User Execute mode or Privileged Execute mode. Use the following syntax for this version of the command:

show ib pm port counter config subnet-prefix *prefix*

Syntax Description

config	Port counter configuration.
subnet-prefix	Specifies the subnet prefix of the counters to view.
prefix	Subnet prefix of the counters to view.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output Description:

subnet-prefix	Subnet to which the port counter configuration applies.
state	State of port counter access. If 'enabled', then access to port counters is enabled.

Examples

The following example shows the configuration of the performance monitoring port counter:

```
SFS-120# show ib pm port counter config subnet-prefix fe:80:00:00:00:00:00:00
================================================================================
IB PM Port Counter Configuration
================================================================================
subnet-prefix : fe:80:00:00:00:00:00:00
state : enabled
```

show ib pm port counter

To display the performance monitoring counters for one or more InfiniBand ports, enter the **show ib pm port counter config subnet-prefix** command in User Execute mode or Privileged Execute mode. Use the following syntax for this version of the command:

show ib pm port counter subnet-prefix *prefix* **[node-guid** *guid* **[port-num** *port***]]**

Syntax Descriptionx

subnet-prefix	Subnet prefix to which the port belongs.
prefix	Prefix number such as fe:80:00:00:00:00:00:00
node-guid	GUID of the node to which the port belongs.
guid	GUID number such as 00:05:ad:00:00:01:0c:19
port-num	Port number on the node.
port	Port number such as 1

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Command Output:

Table 6-33 shows the output from this command.

Table 6-33 show ib pm port counter (version 2) Command Output

subnet-prefix	Subnet prefix to which the port belongs.
node-guid	GUID of the node to which the port belongs
port-num	Port number on the node
chassis-guid	GUID of the chassis to which the port belongs (if available)
slot-num	Slot number on the chassis to which the port belongs (if available)
ext-port-num	Port number (if available) on the chassis slot to which the port belongs
data-is-valid	If false, re-run the command to obtain valid data
symbol-errors	Symbol error counter
link-recovery-errors	Link Error Recovery counter
link-downs	Link Downed counter
rcv-errors	Port Receive Error counter
rcv-remote-phy-errors	Port Receive Remote Physical Error counter

rcv-switch-relay-errors	Port Receive Switch Relay Error counter
xmit-discards	Port Transmit Discards counter
xmit-constraint-errors	Port Transmit Constraint Error counter
rcv-constraint-errors	Port Receive Constraint Error counter
local-link-integrity-errors	Local Link Integrity Error counter
excessive-buf-overrun-errors	Excessive Buffer Overrun Error counter
vl15-droppeds	VL15 Dropped counter
xmit-data	Port Transmit Data counter
rcv-data	Port Receive Data counter
xmit-pkts	Port Transmit Packet counter
rcv-pkts	Port Receive Packet counter

See Section 16.1.3.5, PortCounters, InfiniBand Architecture, Vol. 1, Release 1.2, for more information on the port counters.

Examples

The following example displays the performance monitoring configuration for an InfiniBand port subnet-prefix:

SFS-7000P# **show ib pm port counter config subnet-prefix fe:80:00:00:00:00:00:00**

show ib pm port monitor

To show the performance monitoring user-configured monitored ports, or the cumulative port counters, or the cumulative port counters for ports that have exceeded thresholds, enter the **show ib pm port monitor** command in User Execute mode or Privileged Execute mode.

show ib pm port monitor [**counter** | **error-counter**] **subnet-prefix** prefix [**node-guid** guid [**port-num** *port*}]

Syntax Description

counter	(Optional) Show the counters accumulated since monitoring was enabled.
error-counter	(Optional) Show the counters accumulated for ports that have exceeded thresholds.
subnet-prefix	Specifies the subnet prefix of the port monitor.
prefix	Subnet prefix of the port monitor.
node-guid	(Optional) Specifies the GUID of the device with the ports that you want to view.
guid	(Optional) GUID of the device with the ports that you want to view.
port-num	(Optional) Specifies the port number of the port that you want to view.
port	(Optional) Port number of the port that you want to view.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output:

subnet-prefix	Subnet to which the connection belongs
node-guid	GUID of the node belonging to the connection
port-num	Port number on the node belonging to the connection.
chassis-guid	GUID of the chassis to which the port belongs (if available)
slot-num	Slot number on the chassis to which the port belongs (if available)
ext-port-num	Port number on the chassis slot to which the port belongs (if available)
data-is-valid	If the value is false, re-run the command to obtain valid data

subnet-prefix	Subnet to which the connection belongs
error-status	Whether or not the error limit has been exceeded.
util status	Whether or not the util limit has been exceeded
symbol-errors	Symbol error counter
link-recovery-errors	Link Error Recovery counter
link-downs	Link Downed counter
rcv-errors	Port Receive Error counter
rcv-remote-phy-errors	Port Receive Remote Physical Error counter
rcv-switch-relay-errors	Port Receive Switch Relay Error counter
xmit-discards	Port Transmit Discards counter
rcv-data	Port Receive Data counter
xmit-pkts	Port Transmit Packet counter
rcv-pkts	Port Receive Packet counter

Examples

The following example displays the user-configured monitored ports for a subnet-prefix:

```
SFS-120# show ib pm port monitor subnet-prefix fe:80:00:00:00:00:00:00
================================================================================
                  IB PM Port Monitor Configured Ports Table
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                node-guid : 00:05:ad:00:00:01:73:bf
                 port-num : 2

            subnet-prefix : fe:80:00:00:00:00:00:00
                node-guid : 00:05:ad:00:00:01:73:bf
                 port-num : 3
```

The following example displays the performance monitoring cumulative counters:

```
SFS-7000P# show ib pm port monitor counter subnet-prefix fe:80:00:00:00:00:00:00
================================================================================
                          IB PM Port Monitor Table
================================================================================
          subnet-prefix : fe:80:00:00:00:00:00:00
              node-guid : 00:05:ad:00:00:01:3d:90
               port-num : 1
           chassis-guid : 00:00:00:00:00:00:00:00
               slot-num : 0
            ext-port-num : 0
          data-is-valid : true
           error-status : not-exceeded
            util-status : not-exceeded
          symbol-errors : 10
   link-recovery-errors : 1020
             link-downs : 1
              rcv-errors : 0
  rcv-remote-phy-errors : 0
rcv-switch-relay-errors : 0
          xmit-discards : 3
Press any key to continue (Q to quit)
```

The following example displays the performance monitoring cumulative counters for all ports that have exceeded thresholds:

```
show ib pm port monitor error-counter
```

Related Commands

ib pm

show ib pm threshold

To view performance monitoring thresholds, enter the **show ib pm threshold** command in User Execute mode or Privileged Execute mode.

show ib pm threshold subnet-prefix *prefix*

Syntax Description

subnet-prefix	Specifies the subnet prefix of the thresholds to view.
prefix	Subnet prefix of the thresholds to view.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output:

:

subnet-prefix	Subnet to which the threshold configuration applies.
symbol-errors	Threshold for Symbol Error counters.
link-recovery-errors	Threshold for Link Recovery Error counters.
link-downs	Threshold for Link Downed counters.
rcv-errors	Threshold for Port Receive Error counters.
rcv-remote-phy-errors	Threshold for Port Receive Remote Physical Error counters.
rcv-switch-relay-errors	Threshold for Port Receive Switch Relay Error counters.
xmit-discards	Threshold for Port Transmit Discard Error counters.
xmit-constraint-errors	Threshold for Port Transmit Constraint Error counters.
rcv-constraint-errors	Threshold for Port Receive Constraint Error counters.
local-link-integrity-errors	Threshold for Local Link Integrity Error counters.
excessive-buf-overrun-errors	Threshold for Excessive Buffer Overrun Error counters
vl15-droppeds	Threshold for VL15 Dropped Error counters
xmit-rate	Threshold for transmit rate, as a percentage of total port bandwidth
rcv-rate	Threshold for receive rate, as a percentage of total port bandwidth

Examples

The following example displays performance monitoring thresholds:

```
SFS-120# show ib pm threshold subnet-prefix fe:80:00:00:00:00:00:00

================================================================================
                                IB PM Thresholds
================================================================================
                 subnet-prefix : fe:80:00:00:00:00:00:00
                 symbol-errors : none
          link-recovery-errors : none
                     link-downs : 1
                   rcv-errors : none
         rcv-remote-phy-errors : none
       rcv-switch-relay-errors : none
                 xmit-discards : none
        xmit-constraint-errors : none
         rcv-constraint-errors : none
   local-link-integrity-errors : none
  excessive-buf-overrun-errors : none
                 vl15-droppeds : none
                     xmit-rate : 1
                      rcv-rate : 1
```

Related Commands

ib pm

show ib sm configuration

To display information about the subnet managers on your InfiniBand fabric, enter the **show ib sm configuration** command in User Exec mode or Privileged Exec mode.

show ib sm configuration {**subnet-prefix** *prefix* | **all**} [**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of subnet manager that you want to view.
prefix	Subnet prefix of the subnet manager that you want to view.
all	The current CLI can only report the local subnet manager configuration data. Therefore, the subnet-prefix value of 'all' is just an alias to the subnet value of the subnet manager local to the CLI.
summary	(Optional) Displays an abridged form of the command output. The abridged information includes the subnet prefix, GUID, priority, and subnet manager key of the subnet managers.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-34 describes the fields in the **show ib sm configuration** command output.

Table 6-34 show ib sm configuration Command Field Descriptions

Field	Description
subnet-prefix	64-bit value used that identifies the InfiniBand subnet. This is a unique subnet identifier joins with the GUID to form the global identifier (GID) of the port. Each GIDs within a subnet has the same subnet prefix.
guid	GUID of this subnet manager.
priority	User-assigned priority for this subnet manager. You must enter an integer between 0 and 15. The value defaults to 10. **Note** When the chassis boots, the subnet manager priority defaults to 10. When you add the subnet manager manually, the priority defaults to 10.

Table 6-34 show ib sm configuration Command Field Descriptions (continued)

Field	Description
sm-key	64-bit subnet management key assigned to the subnet manager.The sm-key defaults to 00:00:00:00:00:00:00:00. The sm-key serves as the prefix of all GIDs and brands nodes as members of this subnet.
oper-status	Operational status of the subnet manager. Self-detection determines this status. The value appears as notActive, discovering, standby, or master. If notActive appears, the subnet manager has not been enabled or has been disabled. The discovering output appears when the subnet manager sweeps the fabric. If standby appears, the subnet manager serves as a slave subnet manager. If only one subnet manager runs on the fabric, it serves as the master.
act-count	Activity counter that increments each time the subnet manager issues a subnet management packet (SMP) or performs other management activities.
status	Status of the subnet manager. It appears as **active** or **inactive**. If **active**, it is actively managing subnets. If **inactive**, it is not managing subnets.
master-poll-interval	Interval at which the slave subnet manager polls the master to see if the master is still active.
master-poll-retries	Number of unanswered polls that cause the slave to identify the master as inactive.
max-active-sms	Maximum number of standby subnet managers that the master supports.
LID-mask-control	Number of path bits present in the base LID to each channel adapter port. Increasing the LMC value increases the number of LIDs assigned to each port to increase the number of potential paths to reach each port.
switch-life-time	The packet lifetime inside a Server Switch.
switch-hoq-life-time	The packet lifetime at the head-of-queue of a switch port.
host-hoq-life-time	The lifetime of a packet at the head-of-queue of the host port.
max-hops	Maximum number of times the subnet manager can be redirected.
mad-retries	Number of times the subnet manager will retry to send a management diagram after not receiving a response. The value range is 0 - 100; the default value is 5.
node-timeout	Minimum amount of time in seconds that a HCA may be unresponsive before the subnet manager will remove it from the InfiniBand fabric. The value range is 1 - 2000 seconds; the default value is 10 seconds.
wait-report-response <true | false>	Determines whether or not the subnet manager waits to receive a ReportResponse MAD in response to the Report MAD that it forwards. This value is Boolean. If false, the subnet manager sends the Report MAD only once; if set to true, the subnet manager continues to send the Report MAD until either the ReportResponse MAD is received or the maximum number of Report MAD have been sent. The default value is false.
sa-mad-queue-deoth	Size of the SA's internal queue for receiving a management diagram. The value range is 256 - 1024; the default value is 256.

Examples

The following example shows the detailed configuration of a subnet manager:

```
SFS-7000P# show ib sm configuration subnet-prefix fe:80:00:00:00:00:00:00

================================================================================
                           Subnet Manager Information
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                     guid : 00:05:ad:00:00:01:5f:f2
                 priority : 10
                   sm-key : 00:00:00:00:00:00:00:00
              oper-status : master
                act-count : 43392
      sweep-interval(sec) : 10
   response-timeout(msec) : 200
  master-poll-intval(sec) : 3
      master-poll-retries : 2
           max-active-sms : 0
         LID-mask-control : 0
         switch-life-time : 20
     switch-hoq-life-time : 20
       host-hoq-life-time : 20
                  max-hops : 64
              mad-retries : 5
        node-timeout(sec) : 5
     wait-report-response : false
       sa-mad-queue-depth : 256
```

The following example shows the summary configuration of a subnet manager:

```
SFS-7000P> show ib sm configuration subnet-prefix fe:80:00:00:00:00:00:00 summary

================================================================================
                      Subnet Manager Configuration Summary
================================================================================
subnet-prefix           guid                    priority sm-key
--------------------------------------------------------------------------------
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:5f:f2 10       00:00:00:00:00:00:00:00
SFS-7000P>
```

Related Commands

ib sm
ib-agent
show ib-agent switch
name

show ib sm db-sync

Use this command to determine the following:

- If the database of the master subnet manager synchronizes with one or more standby databases.
- The frequency with which the databases synchronize.

To display subnet manager synchronization information, enter the **show ib sm db-sync** command in User Exec mode or Privileged Exec mode.

show ib sm db-sync subnet-prefix {*prefix* | **all**}

Syntax Description

subnet-prefix	Specifies the subnet prefix of the subnet manager with the synchronization status that you want to view.
prefix	Prefix of the subnet manager with the synchronization status that you want to view.
all	Displays synchronization data for all subnet managers on the fabric.

Defaults

This command has no default settings.

Command Modes

User Exec mode, Privileged Exec mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-35 show ib sm db-sync Command Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the subnet with the synchronization information that you want to view.
enable	Displays true if an administrator has enabled synchronization; otherwise, displays false.
max-backup-sms	The maximum number of backup subnet managers that the master subnet manager supports.
session-timeout	The interval, in seconds, during which a synchronization session status management diagram packet must arrive at the master subnet manager to maintain synchronization.

Table 6-35 show ib sm db-sync Command Field Descriptions

Field	Description
poll-interval	Interval at which the master subnet manager polls an active slave subnet manager to verify synchronization.
cold-sync-timeout	Maximum amount of time in which subnet managers can perform a cold synchronization. During the cold-sync, the master subnet manager copies all out-of-sync tables to the standby subnet manager.
cold-sync-limit	Maximum number of cold synchronizations that may take place during the cold-sync period.
cold-sync-period	Length of the interval during which cold-syncs may occur.
new-session-delay	Amount of time that the master subnet manager waits before it attempts to initiate a synchronization session with a new subnet manager.
resync-interval	Specifies the interval at which the master subnet manager sends a re-synchronization request to all active synchronization sessions.
state	Specifies whether or not the subnet manager is synchronized with the backup.

Examples

The following example displays subnet manager synchronization information:

```
show ib sm db-sync subnet-prefix fe:80:00:00:00:00:00:00


================================================================================
              Subnet Manager Database Synchronization Information
================================================================================

            subnet-prefix : fe:80:00:00:00:00:00:00
                   enable : false
           max-backup-sms : 1
          session-timeout : 10
            poll-interval : 3
        cold-sync-timeout : 10
          cold-sync-limit : 2
         cold-sync-period : 900
        new-session-delay : 120
          resync-interval : 3600
                    state : not in-sync
```

Related Commands

ib sm db-sync

show ib sm lft

Use this command to display the following:

- Linear forwarding information based on the block number.
- Linear entries that are currently in use by subnet manager.

To display linear forwarding information based on the LID block number, enter the **show ib sm lft** command in User Exec mode or Privileged Exec mode. The command reports only entries that are currently in use by the subnet manager.

show ib sm lft subnet-prefix {*prefix* | **all**}[**lid** *lid* | **node-guide** *guid*]

Syntax Description

subnet-prefix	Subnet prefix of the subnet manager with the status that you want to view.
prefix	Displays the linear forwarding table info for a specific subnet or all the subnets in the fabric.
all	Currently, "all" is an alias to the subnet value of the local subnet manager.
lid	Local ID of the subnet.
lid	Local ID number.
node-guide	Guid of the switch node in the subnet with the FDB is to be accessed.
guid	Guid number.

Defaults

This command has no default settings.

Command Modes

User Exec mode, Privileged Exec mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-36 show ib sm lft Command Field Descriptions

Field	Description
NodeGuid	Guid of the switch node in the subnet with the FDB that you want to access.
LID	Local ID of the subnet.
Port	Port number.

Examples

This example displays linear forwarding information for all subnets based on the LID block number:

```
Topspin-120# show ib sm lft subnet-prefix all

================================================================================
                      Linear Forwarding Table
================================================================================
node-guid                lid port
--------------------------------------------------------------------------------
00:05:ad:00:00:00:14:cd  2   5
00:05:ad:00:00:00:14:cd  5   5
00:05:ad:00:00:00:14:cd  6   0
00:05:ad:00:00:00:14:cd  7   5
00:05:ad:00:00:00:14:cd  8   2
00:05:ad:00:00:00:14:cd  9   5
```

show ib sm mft

Use this command to display the following:

- Multicast forwarding information based on the block number.
- Multicast entries that are currently in use by a subnet manager.

To display multicast forwarding information based on the LID block number, enter the **show ib sm mft** command in User Exec mode or Privileged Exec mode. The command reports only the entries that are currently in use by a subnet manager.

show ib sm mft subnet-prefix {*prefix* | **all**}[**lid** *lid* | **node-guide** *guid*]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the subnet manager with the status that you want to view.
prefix	Displays the multicast forwarding table info for a specific subnet or all the subnets in the fabric.
all	Currently, "all" is just an alias to the subnet value of the local subnet manager.
lid	Local ID of the subnet.
lid	Local ID number.
node-guide	Guide of the switch node in the subnet with the FDB to be accessed.
guid	Guide number.

Defaults

This command has no default settings.

Command Modes

User Exec mode, Privileged Exec mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Examples

This example displays multicast forwarding information for all subnets, based on the LID block number:

```
Topspin-360> show ib sm mft subnet-prefix all
================================================================================
Multicast Forwarding Table
================================================================================
node-guid                    mlid     port-mask(0, 1, 2 ...)
--------------------------------------------------------------------------------
00:05:ad:00:00:00:02:30      49152    0x1a
00:05:ad:00:00:00:02:30      49153    0x11a
00:05:ad:00:00:00:02:30      49154    0x11a
00:05:ad:00:00:00:02:30      49155    0x118
00:05:ad:00:00:00:02:30      49156    0x118
00:05:ad:00:00:00:02:30      49157    0x118
00:05:ad:00:00:00:02:30      49158    0x118
00:05:ad:00:00:00:02:30      49159    0x118
00:05:ad:00:00:00:02:30        49160    0x118
```

show ib sm sm-info

To display subnet manager information maintained by the subnet manager on this device, enter the **show ib sm sm-info** command in User Exec mode or Privileged Exec mode.

show ib sm sm-info subnet-prefix subnet-*prefix* [**port-guid** *port-guid*] [**summary**]

Syntax Description

subnet-prefix	Displays the information of subnet managers discovered in the subnet specified by subnet-prefix.
subnet-prefix	Prefix of the subnet with the desired Subnet Managers' information, for example, fe:80:00:00:00:00:00:00.
port-guid	(Optional) Displays the information of the Subnet Manager residing at the port specified by port-guid.
port-guid	(Optional) Specifies the port-guid.
summary	(Optional) Displays a summary of the discovered subnet managers in the fabric.

Defaults

This command has no default settings.

Command Modes

User Exec mode, Privileged Exec mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Examples

This example displays subnet manager information:

```
SFS-270# show ib sm sm-info subnet-prefix fe:80:00:00:00:00:00:00 summary
================================================================================
               Summary of Discovered Subnet Managers in Fabric
================================================================================
subnet-prefix           port-guid                priority state
--------------------------------------------------------------------------------
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:5f:f2  10
```

Related Commands

ib sm db-sync

show ib sm multicast

Troubleshoot with this command when a host does not receive a broadcast packet. Use this command to verify that the multicast group includes the host. The subnet manager dynamically configures all multicast groups. To display attributes of the multicast groups on your Server Switch, enter the **show ib sm multicast summary** command in User Exec or Privileged Exec mode.

show ib sm multicast {subnet-prefix {*prefix* **| all}** [**mgid** *multicast-group-GID*] [**summary**]} **| | summary**}

Syntax Description

subnet-prefix	Prefix of the subnet containing multicast groups.
prefix	Prefix address, such as fe:80:00:00:00:00:00:00.
all	Display multicast groups configured in the entire fabric.
mgid	(Optional) Specifies the global identifier (GID) of the multicast group.
multicast-group-GID	Global identifier, such as ff:12:40:1b:ff:f1:00:00:00:00:00:00:ff:ff:ff:ff.
summary	(Optional) Displays an abridged form of the data. The abridged information includes the subnet prefix, GUID, priority, and subnet manager key of the subnet managers.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-37 describes the fields in the **show ib sm configuration** command output.

Table 6-37 show ib sm multicast Command Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the subnet manager.
MGID	Multicast group identifier.
port-GID	Global identifier of a port that belongs to the multicast group.

Table 6-37 show ib sm multicast Command Field Descriptions (continued)

Field	Description
member-join-state	Type of membership that the member has in the multicast group. Members qualify as full members, non-members, or send-only members.
proxy-join-status	This field displays false except for trusted requests. For details, see *InfiniBand Architecture®, Vol. 1, Release 1.1*.

Examples

The following example displays a summary of the multicast groups on the Server Switch:

```
SFS-7000P# show ib sm multicast summary
================================================================================
                    Summary of Multicast-Groups on Device
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                    MGID : ff:12:40:1b:ff:f1:00:00:00:00:00:00:ff:ff:ff:ff

            multicast-group-members :
                 port-GID : fe:80:00:00:00:00:00:00:05:ad:00:00:00:12:bf
        member-join-state : full-member
        proxy-join-status : false
```

Related Commands

ib sm

show ib sm neighbor

To display the InfiniBand devices that directly connect to your Server Switch, enter the **show ib sm neighbor** command in User Exec mode or Privileged Exec mode.

show ib sm neighbor

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-38 describes the fields in the **show ib sm neighbor** command output.

Table 6-38 show ib sm neighbor Command Field Descriptions

Field	Description
subnet-prefix	64-bit value that identifies the InfiniBand subnet to which this neighbor node belongs.
local-node-guid	64-bit GUID of the InfiniBand node.
local-port-id	Port ID of the InfiniBand node. You must enter an integer between 0 and 255.
local-node-type	Type of the InfiniBand node. The value appears as channel-adapter, switch, or router.
remote-node-guid	64-bit GUID of the neighboring InfiniBand node to which the local node links.
remote-port-id	Port ID of the neighboring InfiniBand node to which the local node links. You must enter an integer between 0 and 255.
remote-node-type	Type of the neighboring InfiniBand node. The value appears as channel-adapter, switch, or router.
link-state	State of the link between the local and neighboring nodes. The value appears as noStateChange, down, initialize, armed, or active.
link-width-active	Active link width. This parameter, with LinkSpeedActive, determines the link rate between the two connected nodes. The value appears as width1x, width4x, or width12x.

Examples

The following example displays the GUIDs that connect to your Server Switch and the GUIDs within your Server Switch:

Note Truncated output appears here.

```
SFS-7000P# show ib sm neighbor
================================================================================
                          Subnet Management Neighbors
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
          local-node-guid : 00:05:ad:00:00:00:11:97
            local-port-id : 2
          local-node-type : channel-adapter
         remote-node-guid : 00:05:ad:00:00:00:13:da
           remote-port-id : 1
         remote-node-type : switch
               link-state : active
        link-width-active : width4x
```

Related Commands

ib sm

show ib sm node

Use this command to display the configuration of all the nodes on a subnet or to display the configuration of an individual node. The output may also be displayed in summary form. The summary comprises the subnet-manager prefix, the node guide and type, and the vendor identification. The node summary includes the node GUID, node type, vendor identification, description, and system-image-guid. To display the configuration and attributes of subnet management nodes in a subnet, enter the **show ib sm node** command in User Exec mode or Privileged Exec mode.

show ib sm node subnet-prefix *prefix* | **all** [**node-guid** *guid*] [**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the nodes that you want to view.
prefix	Subnet prefix of the nodes that you want to view.
all	Display subnet management nodes configured in the entire fabric.
node-guid	(Optional) Specifies the GUID of an individual node that you want to view.
guid	(Optional) GUID of an individual node that you want to view.
summary	(Optional) Displays abridged command output.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

All nodes that the subnet manager on your Server Switch actively manages qualify as subnet management nodes.

Command Output:

Table 6-39 describes the fields in the **show ib sm node** command output.

Table 6-39 show ib sm node Command Field Descriptions

Field	Description
subnet-prefix	64-bit value that identifies the InfiniBand subnet to which this node belongs.
node-guid	Guide of the node.

Table 6-39 show ib sm node Command Field Descriptions (continued)

Field	Description
base-version	Supported base management datagram (MAD) version. Indicates that this channel adapter, switch, or router supports versions up to and including this version. See section 13.4.2, Management Datagram Format, in *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
class-version	Supported MAD class format version. Indicates that this channel adapter, switch, or router supports versions up to, and including, this version.
type	Type of node being managed. The value appears as channel adapter, switch, router, or error. An error entry indicates an unknown type.
num-ports	Number of physical ports on the node.
port-guid	Guide of the port that connects the node to the Server Switch. A port within a node can return the node GUID as its PortGUID if the port serves as an integral part of the node and you cannot replace the port in the field (not swappable).
partition-cap	Capacity of entries in the partition table for channel adapter, router, and the switch management port. The value appears the same for all ports on the node. This defaults to at least 1 for all nodes including switches. You cannot configure this value.
device-id	Manufacturer-assigned device identification.
revision	Manufacturer-assigned device revision.
local-portnum	The link port number from which this subnet management packet (SMP) arrived. The value appears the same for all ports on the node.
vendor-id	Device vendor ID. The value appears the same for all ports on the node.
system-image-guid	Guide of an associated supervisory node. No supervisory node exists if the command output displays 00:00:00:00:00:00:00:00.

Examples

The following example (output abridged) displays the configuration of all the nodes on all the subnets on the InfiniBand fabric:

```
SFS-7000P# show ib sm node subnet-prefix fe:80:00:00:00:00:00:00

================================================================================
                            Subnet Management Nodes
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                node-guid : 00:00:2c:90:01:1b:ba:80
              description : swfc5 HCA-1 (Topspin HCA)
             base-version : 1
            class-version : 1
                     type : channel adapter
                num-ports : 2
                port-guid : 00:00:2c:90:01:1b:ba:81
            partition-cap : 64
                device-id : 0
                 revision : 0
            local-portnum : 1
                vendor-id : 00:2c:90
        system-image-guid : 00:00:00:00:00:00:00:00
```

```
        subnet-prefix : fe:80:00:00:00:00:00:00
            node-guid : 00:05:ad:00:00:00:13:da
          description : Topspin Switch - U1
         base-version : 1
        class-version : 1
                 type : switch
            num-ports : 8
            port-guid : 00:05:ad:00:00:00:13:da
        partition-cap : 32
            device-id : 0
             revision : 0
        local-portnum : 6
            vendor-id : 00:05:ad
  system-image-guid : 00:00:00:00:00:00:00:00
```

The following example displays a node configuration in summary form:

```
SFS-7000P# show ib sm node subnet-prefix fe:80:00:00:00:00:00:00 node-guid
00:05:ad:00:00:00:13:80 summary
================================================================================
               Subnet Manager Node Summary
================================================================================
node-guid                node-type        vendor-id description    System-image-guid
--------------------------------------------------------------------------------
00:05:ad:00:00:00:13:80  channel adapter  00:05:ad                 00:00:00:00:00:00:00:00
SFS-7000P#
```

Related Commands

ib sm

show ib sm partition

To display the partitions that the subnet manager on your Server Switch manages, enter the **show ib sm partition** command in User Exec mode or Privileged Exec mode.

show ib sm partition [[node-guid *guid* **port-num** *num*]|[**subnet-prefix** *val*]]

Syntax Description

Field	Description
node-guid	GUID of the node in the partition.
guid	GUID value, such as 00:05:ad:00:00:00:02:40.
port-num	Port on the node that belongs to the partition.
num	Port number value, such as zero.
subnet-prefix	Subnet prefix of the subnet with the partitions that you want to view.
val	Subnet-prefix value such as fe:80:00:00:00:00:00:00.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

A single partition can have members that have full-membership, as well as members that have limited membership.

See the *Cisco SFS 7000 Series Product Family Element Manager User Guide* for detailed information about partitions.

Command Output:

In the output, ff:ff refers to the default partition, which cannot be altered. Members of partitions are identified by their Node GUID and port-number, as displayed below.

Table 6-40 describes the fields in the **show ib sm partition** command output.

Table 6-40 show ib sm partition Command Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the subnet with the partitions that you want to view.
p_key	Partition key of the partition with the members the display prints below.
node-guid	GUID of the node in the partition.

Table 6-40 show ib sm partition Command Field Descriptions (continued)

Field	Description
port-number	Port on the node that belongs to the partition.
member-type	Type of membership that an administrator assigns to the node, either full or limited.

Examples

The following example displays the configuration of all nodes on all subnets on the InfiniBand fabric:

```
SFS-7000P# show ib sm partition
================================================================================
                  Partitions Managed By The Subnet Managers
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                    p_key : ff:ff

        partition-members :
                 node-guid : 00:05:ad:00:00:00:02:40
               port-number : 0
               member-type : full-member

                 node-guid : 00:05:ad:00:00:00:02:42
               port-number : 0
               member-type : full-member
```

Related Commands

ib sm

show ib sm port

Use this command to verify that all ports in your fabric came up when the subnet manager initialized them. To display all InfiniBand ports on the fabric, the nodes to which the ports belong, the capabilities of the ports, and the link statistics of the ports, enter the **show ib sm port** command in User Exec mode or Privileged Exec mode.

show ib sm port subnet-prefix *prefix* | **all** [**node-guid** *guid*] [**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the subnet manager that manages the ports that you want to view.
prefix	Subnet prefix of the subnet manager that manages the ports that you want to view.
all	Display all subnet management ports in the fabric.
node-guid	(Optional) Specifies the GUID of an individual node with the ports that you want to view.
guid	(Optional) GUID of an individual node with the ports that you want to view.
summary	(Optional) Displays abridged command output.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Port information may be reported for all the ports on a specific subnet or all the ports comprising a specific node. The output may also be displayed in summary form.

Command Output:

Table 6-41 describes the fields in the **show ib sm port** command output.

Table 6-41 show ib sm port Command Field Descriptions

Field	Description
subnet-prefix	64-bit value that identifies the InfiniBand subnet to which this port belongs.
node-guid	64-bit GUID of the node to which this port belongs.
if-index	Port number (integer) on the node (host).

Table 6-41 show ib sm port Command Field Descriptions (continued)

Field	Description
mkey	64-bit management key for this port. See section 14.2.4, Management Key and 3.5.3, Keys, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
gid-prefix	64-bit Global identifier prefix for this port. The subnet manager assigns this prefix based upon the port router and the rules for local identifiers. See section 4.1.3, Local Identifiers, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
lid	16-bit base-LID of this port.
master-sm-lid	16-bit base LID of the master subnet manager managing this port.
cap-mask	The capability mask identifies the functions that the host supports. 32-bit bitmask that specifies the supported capabilities of the port. A bit value of 1 (one) indicates a supported capability. The bits are 0, 11-15, 18, 21-31 (Reserved and always 0.), 1 IsSM, 2 IsNoticeSupported, 3 IsTrapSupported, 4 IsResetSupported, 5 IsAutomaticMigrationSupported, 6 IsSLMappingSupported, 7 IsMKeyNVRAM (supports M_Key in NVRAM), 8 IsPKeyNVRAM (supports P_Key in NVRAM), 9 Is LED Info Supported, 10 IsSMdisabled, 16 IsConnectionManagementSupported, 17 IsSNMPTunnelingSupported, 19 IsDeviceManagementSupported, 20 IsVendorClassSupported.Values are expressed in hexadecimal.
diag-code	16-bit diagnostic code. See section 14.2.5.6.1 Interpretation of Diagcode, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information. This field does not currently apply to your Server Switch.
mkey-lease-period	Initial value of the lease-period timer, in seconds. The lease period is the length of time that the M_Key protection bits are to remain non-zero after a SubnSet (PortInfo) fails an M_Key check. After the lease period expires, clearing the M_Key protection bits allows any subnet manager to read (and then set) the M_Key. Set this field to 0 to indicate that the lease period never expires. See *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 14.2.4, "Management Key."
link-width-enabled	Enabled link width (bandwidth). The value (an integer) indicates the enabled link-width sets for this port. The value may be • 0 (no state change), • 1 (1x), • 2 (4x), • 3 (1x or 4x), • 8 (12x), • 9 (1x or 12x), • 10 (4x or 12x), • 11 (1x, 4x or 12x), • 255 (set this parameter to the link-width-supported value).
link-width-supported	Supported link width. The value appears as 1 (1x), 3 (1x or 4x), or 11 (1x, 4x, or 12x).
link-width-active	Active link width. Used in conjunction with LinkSpeedActive to determine the link rate between two nodes. The value appears as 1 (1x), 2 (4x), or 8 (12x).

Table 6-41 show ib sm port Command Field Descriptions (continued)

Field	Description
link-speed-supported	Supported link speed. The value appears as 1 (2.5 Gbps).
state	A higher form of addressing than PhyState, state determines that the nodes can actually communicate and indicates the state transition that has occurred. A transition identifies a port change from down to initialize, initialize to down, armed to down, or active to down as a result of link state machine logic. Changes to the port state resulting from SubnSet have no affect on this parameter value. The value appears as noStateChange, down, initialize, armed, or active.
phy-state	Indicates the physical state of the port, whether or not electricity flows between nodes and that they can perform a handshake. The value appears as noStateChange, sleeping, polling, disabled, portConfigurationTraining, linkup, or linkErrorRecovery. The state, upon power-up, defaults to polling.
link-down-def-state	Default LinkDown state to return to. The value appears as noStateChange, sleeping, or polling. See section 5.5.2, Status Outputs (MAD GET), *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
mkey-prot-bits	Management key protection bits for the port. The bits are 0, 1, 2, and 3. See section 14.2.4.1, Levels of Protection, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
lmc	Local-identifier mask control (LMC) for multi-path support. A LMC resides on each channel adapter and router port on the subnet. It provides multiple virtual ports within a single physical port. The value of the LMC specifies the number of path bits in the LID. A value of 0 (zero) indicates one LID can apply to this port. See sections 3.5.10, Addressing, and 4.1.3, Local Identifiers, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
link-speed-active	Speed of an active link. The value appears as 1 (2.5 Gbps).
link-speed-enabled	Maximum speed that the link can handle. The value appears as 0 (No state change), 1 (2.5 Gbps), or 3 (value derived from link-speed-supported).
neighbor-mtu	Active maximum transmission unit enabled on this port for transmit. Check the mtu-cap value at both ends of every link and use the lesser speed. The value appears as mtu256, mtu512, mtu1024, mtu2048, or mtu4096.
master-sm-SL	Administrative service level required for this port to send a non-SMP message to the subnet manager.
VL-cap	Maximum range of data virtual lanes supported by this port. The value appears as vl0, vl0ToVl1, vl0ToVl3, vl0ToVl7, or vl0ToVl14. See also oper-VL. Each port can support up to 15 virtual lanes (VLs 0 - 15). The VL-cap field displays the range of those lanes (for example, lanes 0 - 7) that the port currently supports.
VL-high-limit	Maximum high-priority limit on the number of bytes allowed for transmitting high-priority packets when both ends of a link operate with multiple data virtual-lanes. Used with the virtual-lane arbitration table. The maximum high-limit matches the vl-arb-high-cap on the other side of the link and then negotiating downward.

Table 6-41 show ib sm port Command Field Descriptions (continued)

Field	Description
VL-arb-high-cap	Highest arbitration value allowed by the arbiter in determining the next packet in a set of packets to send across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. See section 14.2.5.9, VL Arbitration Table, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
VL-arb-low-cap	Lowest arbitration value allowed by the arbiter in determining the next packet in a set of packets to send across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. See section 14.2.5.9, VL Arbitration Table, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
mtu-cap	Used in conjunction with neighbor-mtu to determine the maximum transmission size supported on this port. The lesser of mtu-cap and neighbor-mtu determines the actual MTU used. The value appears as 256, 512, 1024, 2048, or 4096.
VL-stall-count	Number of sequentially dropped packets at which the port enters a VLStalled state. The virtual lane exits the VLStalled state (8 * HLL) units after entering it. See section 18.2.5.4, Transmitter Queuing, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for a description of HLL.
HOQ-life	Maximum duration allowed to packets at the head of a virtual-lane queue. Used with VL-stall-count to determine the outgoing packets to discard.
oper-VL	Administrative limit for the number of virtual lanes allowed to the link. Do not set this above the VL-cap value. The value appears as vl0, vl0-Vl1, vl0-Vl3, vl0-Vl7, or vl0-Vl14.
in-part-enforce	Boolean value that indicates whether or not to support optional partition enforcement for the packets that were received by this port. No default value applies.
out-part-enforce	Boolean value that indicates whether or not to support optional partition enforcement for the packets transmitted by this port. No default value applies.
in-filter-raw-pkt-enforce	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets that were received by this port. No default value applies.
out-filter-raw-pkt-enforce	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets transmitted by this port. No default value applies.
mkey-violation	Number of subnet management packets (SMPs) that have been received on this port with invalid M_Keys since initial power up or the last reset. See section 14.2.4, Management Key, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
pkey-violation	Number of subnet management packets that have been received on this port with invalid P_Keys since initial power up or the last reset. See section 9.2.7, partition key (P_KEY), *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.

Table 6-41 show ib sm port Command Field Descriptions (continued)

Field	Description
qkey-violation	Number of subnet management packets that have been received on this port with invalid Q_Keys since initial power up or the last reset. See section 10.2.4, Q Keys, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
guid-cap	Number of GUID entries allowed for this port in the port table. Any entries that exceed this value are ignored on write and read back as zero. See section 14.2.5.5, GUIDCap, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
subnet-timeout	Maximum propagation delay allowed for this port to reach any other port in the subnet. This value also affects the maximum rate at with traps can be sent from this port. Switch configuration affects delay. Requestors may use this parameter to determine the interval to wait for a response to a request. Duration matches (4.096 ms * 2^SubnetTimeout).
resp-time	Maximum time allowed between the port reception of a subnet management packet and the transmission of the associated response. See section 13.4.6.2, Timers and Timeouts, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
local-phy-error	Threshold at which ICRC, VCRC, FCCRC, and all physical errors result in an entry into the BAD PACKET or BAD PACKET DISCARD states of the local packet receiver. See section 7.12.2, Error Recovery Procedures, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
local-overrun-error	Threshold at which the count of buffer overruns, across consecutive flow-control update periods, result in an overrun error. A possible cause of such errors is when an earlier packet has physical errors and the buffers are not immediately reclaimed.

Examples

The following example displays the details of the ports that the specified subnet manager manages:

```
SFS-7000P> show ib sm port subnet-prefix fe:80:00:00:00:00:00:00

================================================================================
                          Subnet Management Ports
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                node-guid : 00:02:c9:01:07:e4:41:d0
                 if-index : 1
                     mkey : 00:00:00:00:00:00:00:00
               gid-prefix : fe:80:00:00:00:00:00:00
                      lid : 2
            master-sm-lid : 1
                 cap-mask : 00:10:02:48
                diag-code : 10:26
          mkey-lease-period : 15
         link-width-enabled : 3
       link-width-supported : 3
          link-width-active : 2
       link-speed-supported : 1
```

```
                 state : active
             phy-state : no state change
    link-down-def-state : polling
         mkey-prot-bits : 0
                    lmc : 0
      link-speed-active : 1
     link-speed-enabled : 1
           neighbor-mtu : 2048
           master-sm-SL : 0
                 VL-cap : vl0-vl7
          VL-high-limit : 0
       VL-arb-high-cap : 8
        VL-arb-low-cap : 8
               mtu-cap : 2048
        VL-stall-count : 16
              HOQ-life : 7
                oper-VL : vl0-vl7
       in-part-enforce : false
      out-part-enforce : false
  in-filter-raw-pkt-enf : false
 out-filter-raw-pkt-enf : false
        mkey-violation : 0
        pkey-violation : 0
        qkey-violation : 0
              guid-cap : 32
        subnet-timeout : 8
             resp-time : 8
       local-phy-error : 0
    local-overrun-error : 0
```

The following example displays a summary of the ports that the specified subnet manager manages:

```
SFS-7000P> show ib sm port subnet-prefix fe:80:00:00:00:00:00:00 summary
```

```
================================================================================
                        Subnet Manager Port Summary
================================================================================
subnet-prefix           node-guid               if-index     lid   state
--------------------------------------------------------------------------------
fe:80:00:00:00:00:00:00 00:02:c9:01:07:e4:41:d0 1            2     active
fe:80:00:00:00:00:00:00 00:02:c9:01:07:e4:41:d0 2            3     active
fe:80:00:00:00:00:00:00 00:02:c9:01:07:e4:57:b0 1            6     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 0            1     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 1            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 2            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 3            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 4            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 5            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 6            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 7            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:60 8            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 0            4     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 1            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 2            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 3            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 4            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 5            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 6            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 7            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:62 8            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 0            5     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 1            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 2            0     active
```

```
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 3            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 4            0     active
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 5            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 6            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 7            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:1c:64 8            0     down
fe:80:00:00:00:00:00:00 00:05:ad:00:00:01:29:8f 1            7     active
SFS-7000P>
```

Related Commands

ib sm
show ib sm configuration
show ib sm multicast
show ib sm neighbor
show ib sm partition
show ib sm port

show ib sm service

To display services available on your subnet, enter the **show ib sm service** command in User Exec mode or Privileged Exec mode.

show ib sm service [**subnet-prefix** *prefix* [**p_key** *pkey* | **service-gid** *GID* | **service-id** *ID*]] [**summary**]

Syntax Description

subnet-prefix	(Optional) Specifies the subnet prefix of the subnet that you want to display.
prefix	Subnet prefix of the subnet that you want to display.
p_key	(Optional) Specifies a partition with the nodes run services that you want to view.
pkey	(Optional) Partition that contains nodes that run services that you want to view.
service-gid	(Optional) Specifies the Global identifier of the service (the GID of the node that provides the service).
GID	(Optional) Global identifier of the service (node).
service-id	(Optional) Specifies the ID of the service to display.
ID	(Optional) ID of the service to display.
summary	(Optional) Displays a summarized version of the command output.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

User Execute mode, Privileged Execute mode.

Privilege Level:

InfiniBand read-only user.

Services represent actions or functions that a node can perform across the network at the request of another node. Nodes register their services with the subnet manager so other nodes can discover and use these services. The Global identifier of a service matches the Global identifier of the host that provides the service.

Command Output:

Table 6-42 describes the fields in the **show ib sm service** command output.

Table 6-42 show ib sm service Command Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the service.
service-id	Service ID of the service.
GID	Global identifier of the service.
p_key	Partition key of the service.
lease	Specifies the lease service.
service-key	Specifies the service key.
service-name	Name of the service.
service-data	Header of the data types: 8, 16, 32, and 64.
data-8	Specifies data type 8.
data-16	Specifies data type 16.
data-32	Specifies data type 32.
data-64	Specifies data type 64.

Examples

The following example displays the services on the Server Switch:

```
SFS-120# show ib sm service subnet-prefix fe:80:00:00:00:00:00:00

================================================================================
                        Summary of Services on Device
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
               service-id : 10:00:0c:e1:00:41:54:53
                      GID : fe:80:00:00:00:00:00:00:02:c9:02:00:00:24:41
                    p_key : ff:ff
                    lease : indefinite
              service-key : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
             service-name : DAPL Address Translation Service
             service-data :
                   data-8 : 00:00:00:00:00:00:00:00:00:00:00:00:c0:a8:01:02
                  data-16 : 0000:0000:0000:0000:0000:0000:0000:0000
                  data-32 : 00000000:00000000:00000000:00000000
                  data-64 : 0000000000000000:0000000000000000

            subnet-prefix : fe:80:00:00:00:00:00:00
               service-id : 10:00:0c:e1:00:41:54:53
                      GID : fe:80:00:00:00:00:00:00:02:c9:02:00:00:24:7d
                    p_key : ff:ff
                    lease : indefinite
              service-key : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
             service-name : DAPL Address Translation Service
             service-data :
                   data-8 : 00:00:00:00:00:00:00:00:00:00:00:00:c0:a8:01:01
                  data-16 : 0000:0000:0000:0000:0000:0000:0000:0000
                  data-32 : 00000000:00000000:00000000:00000000
                  data-64 : 0000000000000000:0000000000000000
```

The following example displays a summary of the services on the Server Switch:

```
SFS-120# show ib sm service subnet-prefix fe:80:00:00:00:00:00:00 summary

================================================================================
                         Summary of Services on Device
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
               service-id : 10:00:0c:e1:00:41:54:53
                      GID : fe:80:00:00:00:00:00:00:02:c9:02:00:00:24:41
             service-data :
                   data-8 : 00:00:00:00:00:00:00:00:00:00:00:00:c0:a8:01:02
                  data-16 : 0000:0000:0000:0000:0000:0000:0000:0000
                  data-32 : 00000000:00000000:00000000:00000000
                  data-64 : 0000000000000000:0000000000000000

            subnet-prefix : fe:80:00:00:00:00:00:00
               service-id : 10:00:0c:e1:00:41:54:53
                      GID : fe:80:00:00:00:00:00:00:02:c9:02:00:00:24:7d
             service-data :
                   data-8 : 00:00:00:00:00:00:00:00:00:00:00:00:c0:a8:01:01
                  data-16 : 0000:0000:0000:0000:0000:0000:0000:0000
                  data-32 : 00000000:00000000:00000000:00000000
                  data-64 : 0000000000000000:0000000000000000
```

Related Commands

ib sm
show ib sm configuration
show ib sm multicast
show ib sm neighbor
show ib sm partition
show ib sm port

show ib sm subscription

To display event subscriptions or information records managed by your subnet manager on this device, enter the **show ib sm subscription** command in User Exec mode or Privileged Exec mode.

show ib sm subscription [**subnet-prefix** {subnet-*prefix*} [**lid** *LID*] [**node-guid** *GUID* [**port-num** *port-num*]] [**summary**]

Syntax Description

subnet-prefix	(Optional) Specifies the subnet prefix of the subnet managers that you want to display.
subnet-prefix	(Optional) Subnet prefix of the subnet managers that you want to display.
lid	(Optional) Specifies the LID of the service (the LID of the node that provides the service).
LID	(Optional) LID of the service (node), for example: aa:aa:aa:aa:aa:aa:aa:aa
node-guid	(Optional) Specifies the global identifier of the node (the GID of the node that provides the service).
GUID	(Optional) Global identifier of the service (node).
port-num	(Optional) Specifies the port number
port-num	(Optional) Port number.
summary	(Optional) Displays a summarized version of the command output.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Subscriptions represent the local ID of a node, which matches the local ID of the host that provides the service. The global ID of a service matches the global ID of the host that provides the service.

Command Output:

Table 6-43 describes the fields in the **show ib sm service** command output.

Table 6-43 show ib sm subscription Command Field Descriptions

Field	Description
LID	Local ID of the node.
node-guid	Global ID of the host.

Table 6-43 show ib sm subscription Command Field Descriptions (continued)

Field	Description
port-num	Port number.
LID range	Specifies the LID range.
is-generic	Specifies the is generic value.
trap-num-device-id	Name of the service.

Examples

The following example displays a summary of the event subscriptions managed on the Server Switch:

```
Topspin-120# show ib sm subscription subnet-prefix fe:80:00:00:00:00:00:00 summary
================================================================================
Summary of Event Subscriptions Managed
================================================================================
LID node-guid port-num LID-range is-generic trap-num-device-id
--------------------------------------------------------------------------------
985 00:05:ad:00:00:01:29:aa 1 65535-0 true 65
993 00:05:ad:00:00:01:29:ad 1 65535-0 true 65
Topspin-120# show ib sm subscription subnet-prefix fe:80:00:00:00:00:00:00 node-guid
00:05:ad:00:00:01:29:aa

================================================================================
Summary of Event Subscriptions Managed
================================================================================
subnet-prefix : fe:80:00:00:00:00:00:00
LID : 985
node-guid : 00:05:ad:00:00:01:29:aa
port-num : 1
source-QPN : 00:00:01
GID : 00:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
LID-range-start : 65535
LID-range-end : 0
is-generic : true
trap-num-device-id : 65
producer-type-vendor-id : subnet-management
type : subnet-management
resp-time-value : 0
```

Related Commands

ib sm
show ib sm configuration
show ib sm multicast
show ib sm neighbor
show ib sm partition
show ib sm port

show ib sm switch

To display the attributes of all InfiniBand switches in your fabric (for debug purposes), enter the **show ib sm switch** command in User Exec mode or Privileged Exec mode.

show ib sm switch {**subnet-prefix** *prefix* | **all**} [**node-guid** *guid*][**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the subnet managers that you want to view.
prefix	Subnet prefix of the subnet managers that you want to view.
all	Displays the attributes of all subnet managers that run on your InfiniBand fabric.
node-guid	(Optional) Specifies the GUID of the switch that you want to view.
guid	(Optional) GUID of the switch that you want to view.
summary	(Optional) Displays a summarized version of the command output.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Switch information may be reported for all the switches on a specific subnet or all the switches comprising a specific node. The output may also be displayed in summary form.

Command Output:

Table 6-44 describes the fields in the **show ib sm switch** command output.

Table 6-44 show ib sm switch Command Field Descriptions

Field	Description
subnet-prefix	64-bit value that identifies the InfiniBand subnet to which this node belongs.
node-guid	64-bit GUID of the node.
linear-fdb-cap	Maximum number of entries allowed in the linear unicast forwarding table. 0 (zero) indicates the absence of a linear forwarding database.
random-fdb-cap	Maximum number of entries allowed in the random unicast forwarding table. 0 (zero) indicates an absence of a random forwarding database.
mcast-fdb-cap	Maximum number of entries allowed in the multicast forwarding table.

Table 6-44 show ib sm switch Command Field Descriptions (continued)

Field	Description
linear-fdb-top	Specifies the top of the linear forwarding table. Packets that were received with unicast LIDs greater than this value are discarded by the switch. This parameter applies only to switches that implement linear forwarding tables. Switches that implement random forwarding tables ignore this parameter.
default-port	Specifies the default port to which to forward all the unicast packets from other ports when the destination location ID (DLID) does not exist in the random forwarding table.
default-pri-mcast-port	Specifies the default port to which to forward all the multicast packets from other ports when the DLID does not exist in the multicast forwarding table.
def-non-pri-mcast-port	Specifies the port to which to forward all the multicast packets from default-pri-mcast-port when the DLID does not exist in the multicast forwarding table.
life-time-value	Specifies the duration a packet can live in the switch. Time units are in milliseconds. See section 18.2.5.4, Transmitter Queueing, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
port-state-change	Indicates a change in port state. The value changes from NotInTransition to PortInTransition anytime the State parameter of a port changes from down to initialize, initialize to down, armed to down, or active to down, as a result of link state machine logic.
lid-per-port	Number of LID/LMC combinations that may be assigned to a given external port for switches that support the random forwarding table. This value is always 0. 0 indicates one LID per port.
partition-enf-cap	Number of entries in this partition enforcement table per physical port. 0 (zero) indicates that the Server Switch does not support partition enforcement.
in-enf-cap	Indicates if the switch can enforce partitions on received packets. The value appears as true or false.
out-enf-cap	Indicates if the Server Switch can enforce partitions on transmitted packets. The value appears as true or false.
in-filter-raw-pkt-cap	Indicates if the Server Switch can enforce raw packets on received packets. The value appears as true or false.
out-filter-raw-pkt-cap	Indicates if the switch enforces raw packets on transmitted packets. The value appears as true or false.

Examples

The following example displays attributes of the InfiniBand switch with a guid of 00:05:ad:00:00:00:13:81:

```
SFS-7000P# show ib sm switch subnet-prefix  fe:80:00:00:00:00:00:00 node-guid
00:05:ad:00:00:00:13:81
============================================================
                Subnet Management Switches
============================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                node-guid : 00:05:ad:00:00:00:13:81
           linear-fdb-cap : 49152
           random-fdb-cap : 0
```

```
           mcast-fdb-cap : 1024
          linear-fdb-top : 1024
            default-port : 255
       def-pri-mcast-port : 255
   def-non-pri-mcast-port : 255
         life-time-value : 11
       port-state-change : port in transition
            lid-per-port : 0
       partition-enf-cap : 64
              in-enf-cap : false
             out-enf-cap : false
    in-filter-raw-pkt-cap : true
   out-filter-raw-pkt-cap : true
SFS-7000P#
```

The following example displays the switches of a subnet in summary form:

```
SFS-7000P# show ib sm switch subnet-prefix fe:80:00:00:00:00:00:00 summary
================================================================================
                         Subnet Manager Switch Summary
================================================================
subnet-prefix           node-guid
--------------------------------------------------------------------------------
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:7f
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:81
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:83
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:85
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:87
fe:80:00:00:00:00:00:00 00:05:ad:00:00:00:13:89
SFS-7000P#
```

Related Commands

ib sm
show ib sm configuration
show ib sm multicast
show ib sm neighbor
show ib sm partition
show ib sm port

show ib sm switch-elem-route

This command displays all the external ports of all the server switches through which traffic enters and exits as it travels from the source LID to the destination LID. To display the subnet manager route switch element table, enter the **show ib sm switch-elem-route** command in User Exec mode or Privileged Exec mode.

show ib sm switch-elem-route subnet-prefix {*prefix* [**src-lid** *srclid* **dst-lid** *dstlid*] | **all**} [**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the route.
prefix	Subnet prefix of the route.
src-lid	(Optional) Specifies the source LID of the route.
srclid	(Optional) Source LID of the route.
dst-lid	(Optional) Specifies the destination LID of the route.
dstlid	(Optional) Destination LID of the route.
all	(Optional) Specifies all routes in the subnet.
summary	(Optional) Displays fewer output fields.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-45 describes the field of this command output.

Table 6-45 show ib sm switch-elem-route Command Output Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the route.
src-lid	Source LID of the route.
dst-lid	Destination LID of the route.
chassis-GUID	Chassis that runs the route.

Table 6-45 show ib sm switch-elem-route Command Output Field Descriptions (continued)

Field	Description
input-port	Input port of the route.
output-port	Output port of the route.

Examples

The following example displays the subnet manager route switch element table for one source and destination:

```
SFS-7000P# show ib sm switch-elem-route subnet-prefix fe:80:00:00:00:00:00:00 src-lid 858
dst-lid 857

================================================================================
                      SM Switch Route Element
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                  src-lid : 858
                  dst-lid : 857
             chassis-GUID : 00:05:ad:00:00:00:03:00
               input-port : 0/7
              output-port : 0/8
```

The following example displays a summary of the subnet manager route switch element table for one source and destination:

```
SFS-7000P# show ib sm switch-elem-route subnet-prefix fe:80:00:00:00:00:00:00 src-lid 889
dst-lid 9 summary

================================================================================
                      SM Switch Route Elements Summary
================================================================================
            subnet-prefix : fe:80:00:00:00:00:00:00
                  src-lid : 1
                  dst-lid : 1
```

Related Commands

ib sm

show ib sm switch-route

This command displays all the ports, both internal and external, of all the Server Switches through which traffic travels from a source LID to a destination LID. The complete path that traffic takes through the InfiniBand fabric from the source LID to the destination LID, enter the **show ib sm switch-route** command in User Exec mode or Privileged Exec mode.

show ib sm switch-route subnet-prefix {*prefix* [**src-lid** *srclid* **dst-lid** *dstlid*] | **all**} [**summary**]

Syntax Description

subnet-prefix	Specifies the subnet prefix of the route.
prefix	Subnet prefix of the route.
src-lid	(Optional) Specifies the source LID of the route.
srclid	(Optional) Source LID of the route.
dst-lid	(Optional) Specifies the destination LID of the route.
dstlid	(Optional) Destination LID of the route.
all	Specifies all routes in the subnet.
summary	(Optional) Displays fewer output fields.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-46 describes the fields in the command output.

Table 6-46 show ib sm switch-route Command Output Field Descriptions

Field	Description
subnet-prefix	Subnet prefix of the route.
src-lid	Source LID of the route.
dst-lid	Destination LID of the route.
node-GUID	Node that runs the route.

Table 6-46 show ib sm switch-route Command Output Field Descriptions (continued)

Field	Description
input-port	Input port of the route.
output-port	Output port of the route.

Examples

The following example displays all switch routes:

```
SFS-7000P# show ib sm switch-route subnet-prefix all

================================================================================
                        SM Switch Route
================================================================================
             subnet-prefix : fe:80:00:00:00:00:00:00
                   src-lid : 2
                   dst-lid : 2

             subnet-prefix : fe:80:00:00:00:00:00:00
                   src-lid : 2
                   dst-lid : 889

             subnet-prefix : fe:80:00:00:00:00:00:00
                   src-lid : 889
                   dst-lid : 2

                 node-GUID : 00:05:ad:00:00:02:5a:95
                input-port : 5
               output-port : 0

             subnet-prefix : fe:80:00:00:00:00:00:00
                   src-lid : 889
                   dst-lid : 889
```

The following example displays the switch route for one source/destination LID pair:

```
SFS-7000P# show ib sm switch-route subnet-prefix fe:80:00:00:00:00:00:00 src-lid 858
dst-lid 857

================================================================================
                                SM Switch Route
================================================================================
             subnet-prefix : fe:80:00:00:00:00:00:00
                   src-lid : 858
                   dst-lid : 857
                 node-GUID : 00:05:ad:00:00:00:03:00
                input-port : 7
               output-port : 8
```

Related Commands

ib sm

show ib-agent channel-adapter

'To view the attributes of InfiniBand agents for channel adapters (gateways and controllers) on your Server Switch, enter the show **ib-agent channel-adapter** command in Privileged Exec mode or User Exec mode.

show ib-agent channel-adapter node-info

Syntax Description

node-info	InfiniBand information for the channel adapter (CA).

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Each system channel adapter runs its own subnet-management agent.

Command Output:

Table 6-47 describes the fields in the **show ib-agent channel-adapter** command output.

Table 6-47 show ib-agent channel-adapter Command Field Descriptions

Field	Description
guid	Globally unique identifier of the CA as an 8-byte string.
type	Type of device this SMA supports. The field always displays “adapter.”
lid	LID of the channel-adapter port.
base-version	Supported base management datagram version supported.
class-version	Supported subnet-management class.
port-guid	Globally unique identifier of the node port.
partition-cap	Number of entries in the partition table for channelAdapter, router, and switch management ports. This displays, at a minimum, 1 for all nodes including switches.
device-id	Device ID information, as assigned by the device manufacturer.
revision	Device revision, as assigned by the device manufacturer.
local-port-num	Number of the link port which received this request; otherwise, the field displays 0.
vendor-id	Device vendor, per the IEEE standard.

Table 6-47 show ib-agent channel-adapter Command Field Descriptions (continued)

Field	Description
trap-buffer	Special purpose string buffer for InfiniBand trap data.
num-ports	Number of physical ports on this node.
string	Node description string. Unicode characters are 16 bits.

Examples

The following example displays the attributes of the InfiniBand host with a GUID of 00:05:ad:00:00:00:13:17:

```
SFS-3012# show ib-agent channel-adapter 00:05:ad:00:00:00:13:17 node-info
==============================================================================
                              SMA Node Information
==============================================================================
                    guid : 00:05:ad:00:00:00:13:17
                    type : adapter
                     lid : 14
            base-version : 1
           class-version : 1
               port-guid : 00:05:ad:00:00:00:13:18
           partition-cap : 64
               device-id : 5a:44
                revision : 00:00:00:a0
          local-port-num : 1
               vendor-id : 00:05:ad
             trap-buffer :
               num-ports : 2
                  string : slot 7: /dev/ts_ua0

                    guid : 00:05:ad:00:00:00:13:17
                    type : adapter
                     lid : 0
            base-version : 1
           class-version : 1
               port-guid : 00:05:ad:00:00:00:13:18
           partition-cap : 64
               device-id : 5a:44
                revision : 00:00:00:a0
          local-port-num : 1
               vendor-id : 00:05:ad
             trap-buffer :
               num-ports : 2
                  string : slot 7: /dev/ts_ua0
```

Related Commands

ib-agent

show ib-agent summary

To view the attributes of all InfiniBand agents on your Server Switch, enter the **show ib-agent summary** command in Privileged Exec mode or User Exec mode.

show ib-agent summary

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Subnet-management agent information may be displayed in a summary form. This summary helps you assign IP addresses to Ethernet interface gateways because the summary supplies much of the important information you need to configure gateways, such as GUID and LID values.

This command is also useful for gathering information about which GUIDs are present in which switch chassis. Also, use this command when working with output that is presented in terms of GUIDs, for example, output from the **show sm** commands. Having a list of GUIDs for each switch chassis in the network is necessary for locating a GUID.

Command Output:

Table 6-48 describes the fields in the **show ib-agent summary** command output.

Table 6-48 show ib-agent summary Command Field Descriptions

Field	Description
slot	Chassis slot to which the HCA or switch connects.
type	Type of node being managed. The value appears as adapter, switch, router, or error. The **error** value indicates an unknown type.
state	Logical state of the port. The value appears as either “down” or “active.”
port	SMA-node port-number.
guid	Globally unique identifier of the InfiniBand node (switch or channel adapter).

Table 6-48 show ib-agent summary Command Field Descriptions (continued)

Field	Description
string	Node description string. Defaults to the chassis slot and internal device name used by the chassis OS to communicate with the device. This default can be overridden with the **ib-agent** configuration command
lid	LID, in decimal format, of this port.

Examples

The following example displays a summary of all the SMA nodes:

```
SFS-7000P# show ib-agent summary
================================================================================
              SMA Node Information Summary
================================================================================
slot  type       state  port  guid                    string              lid
--------------------------------------------------------------------------------
7     adapter    active 1     00:05:ad:00:00:00:13:17  slot 7:  /dev/ts_ua0 14
7     adapter    down   2     00:05:ad:00:00:00:13:17  slot 7:  /dev/ts_ua0  0
16    switch     active 0     00:05:ad:00:00:00:13:7f  slot 16: /dev/ts_ua0  2
16    switch     active 0     00:05:ad:00:00:00:13:81  slot 16: /dev/ts_ua1  4
16    switch     active 0     00:05:ad:00:00:00:13:83  slot 16: /dev/ts_ua2  6
16    switch     active 0     00:05:ad:00:00:00:13:85  slot 16: /dev/ts_ua3  8
16    switch     active 0     00:05:ad:00:00:00:13:87  slot 16: /dev/ts_ua4 10
16    switch     active 0     00:05:ad:00:00:00:13:89  slot 16: /dev/ts_ua5 12
1     adapter    down   1     00:05:ad:00:00:00:13:f3  slot 1:  /dev/ts_ua0  0
1     adapter    active 2     00:05:ad:00:00:00:13:f3  slot 1:  /dev/ts_ua0  1
4     adapter    active 1     00:05:ad:00:00:00:14:14  slot 4:  /dev/ts_ua0 15
4     adapter    down   2     00:05:ad:00:00:00:14:14  slot 4:  /dev/ts_ua0  0
SFS-7000P#
```

Related Commands

ib sm
ib-agent
show ib sm configuration
show ib sm multicast
show ib sm neighbor
show ib sm partition
show ib sm port

show ib-agent switch

To view the attributes of InfiniBand agents for switches on your Server Switch, enter the **show ib-agent switch** command in Privileged Exec mode or User Exec mode.

show ib-agent switch {*guid* | **all**} {**linear-frd-info lid** {*lids* | **all**} | **mcast-info lid** {*lids* | **all**} | **node-info** | **pkey-info** | **port-info** | **sl-vl-map** | **switch-info**}

Syntax Description

guid	GUID of the switch that you want to view.
all	• When the **all** keyword follows the **show ib-agent switch** command, it displays statistics for all switches in the chassis. • When the **all** keyword follows the **lid** keyword, it displays the attributes of all applicable ports.
linear-frd-info	Linear forwarding tables of specified switches.
lid	Local IDs of the ports that you want to view.
lids	LID, list of LIDs, or range of LIDs that you want to view.
mcast-info	Multicast forwarding tables of specified switches.
node-info	Attributes of specified switch nodes.
pkey-info	Partition key table of specified switch nodes.
port-info	Port attributes of specified switch nodes.
sl-vl-map	Service level (SL) to virtual lane (VL) mapping table for specified switch nodes.
switch-info	Displays InfiniBand attributes specific to InfiniBand switches.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Command Output:

Table 6-49 describes the fields in the **linear-frd-info** keyword output.

Table 6-49 linear-frd-info Keyword Output Field Descriptions

Field	Description
switch-guid	GUID of the switch.
lid	LID of the port.
0 - 7	Represents ports 0 - 7 on an InfiniBand switch card.

Table 6-50 describes the fields in the **mcast-info** keyword output.

Table 6-50 mcast-info Keyword Output Field Descriptions

Field	Description
node-guid	GUID of the switch with the LID immediately following.
block-index	Determines which multicast LIDs and ports on the current switch chip are displayed in the following table. See the Multicast Forwarding Table section of the Subnet Management chapter of the InfiniBand specification for details.
lid	LIDs of the ports on the switch.
port-mask	Shows to which ports a multicast packet for the given LID will be transmitted.

Table 6-51 describes the fields in the **node-info** keyword output.

Table 6-51 node-info Keyword Output Field Descriptions

Field	Description
guid	GUID of the node.
type	Type of SMA node. This value always appears as “switch.”
lid	LID of the port that connects to the node.
base-version	Base management datagram version that the switch supports.
class-version	Subnet management class that the switch supports.
port-guid	GUID of the port that connects to the node.
partition-cap	Number of partitions that the node supports.
device-id	Manufacturer-assigned device ID.
revision	Manufacturer-assigned device revision.
local-port-num	Number of the link port that received this show request.
vendor-id	Device vendor ID, as per the IEEE standard.
trap-buffer	Number of traps that the node supports.
num-ports	Number of physical ports on the SMA node.
string	SMA node description string.

Table 6-52 describes the fields in the **port-info** keyword output.

Table 6-52 port-info Keyword Output Field Descriptions

Field	Description
node-guid	64-bit GUID of the SMA node to which this port belongs.
port	Number of the port on the SMA node.
mkey	64-bit management key for the port. For more information, see sections 14.2.4, "Management Key" and 3.5.3, "Keys" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
gid-prefix	64-bit global IDprefix for this port. The subnet manager assigns this prefix. For more information, see section 4.1.3, "Local Identifiers" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
lid	16-bit base LID of the port.
master-SML-id	16-bit base LID of the master subnet manager that manages this port.
capability-mask	32-bit bitmask that specifies the supported capabilities of the port. A bit value of 1 (one) indicates a supported capability. The bits are as follows: • 0, 11-15, 18, 21-31 (Reserved and always 0.), • 1 IsSM, • 2 IsNoticeSupported, • 3 IsTrapSupported, • 4 IsResetSupported, • 5 IsAutomaticMigrationSupported, • 6 IsSLMappingSupported, • 7 IsMKeyNVRAM (supports M_Key in NVRAM), • 8 IsPKeyNVRAM (supports P_Key in NVRAM), • 9 IsLEDInfoSupported, • 10 IsSMdisabled, • 16 IsConnectionManagementSupported, • 17 IsSNMPTunnelingSupported, • 19 IsDeviceManagementSupported, • 20 IsVendorClassSupported. Values are expressed in hexadecimal.
diag-code	16-bit diagnostic code. For more information, see section 14.2.5.6.1, "Interpretation of Diagcode" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
mkey-lease-period	Initial value of the lease-period timer, in seconds. The lease period indicates the length of time that the M_Key protection bits remain non-zero after a SubnSet (Portinfo) fails an M_Key check. After the lease period expires, clearing the M_Key protection bits allows any subnet manager to read (and then set) the M_Key. Set this field to 0 to indicate that the lease period never expires. For more information, see section 14.2.4, Management Key in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
local-port-num	Number of the link port that received this SNMP request.

Table 6-52 port-info Keyword Output Field Descriptions (continued)

Field	Description
link-width-enabled	Integer value that indicates the enabled link-width sets for this port. The value may be any of the following: • 0 (no state change) • 1 (1x) • 2 (4x) • 3 (1x or 4x) • 8 (12x) • 9 (1x or 12x) • 10 (4x or 12x) • 11 (1x, 4x, or 12x) • 255 (sets this parameter to the LinkWidthSupported value).
link-width-supported	Supported link width. Value may be any of the following: • 1x • 1x or 4x • 1x, 4x, or 12x
link-width active	Active width of the link. Value may be 1x, 4x, or 12x.
link-speed-supported	Supported link speed. This value always appears as 2.5 Gbps.
state	Displays the logical state of the port. If this parameter is anything other than "down," it indicates that the port has successfully completed link negotiation and is physically communicating with another port in the subnet. The most common states are down, init, and active. Init means that the port has completed its physical negotiation, but the subnet manager has not yet brought it to the active state, so it cannot yet transmit or receive data traffic. Active means the port is fully operational. See the PortInfo section of the Subnet Management chapter of the InfiniBand specification for more information.
port-phys	Displays the physical state of the port. This parameter indicates the state of the low-level hardware link negotiation. The most common states are polling, disabled, and linkup. Polling means that the port is enabled but is not communicating with another port. Disabled means that the port is shut down and will not communicate with another port, even if connected. Linkup means that the port has complete link negotiations with another port and is physically ready to pass traffic. See the PortInfo section of the Subnet Management chapter of the InfiniBand specification for more information.
link-down-def	LinkDown state to return to. The value appears as noStateChange, sleeping, or polling. For more information, see section 5.5.2, "Status Outputs" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
mkey-protect-bits	Management key protection bits for the port. The bits are 0, 1, 2, and 3. For more information, see section 14.2.4.1, "Levels of Protection" of *InfiniBand Architecture®, Vol. 1, Release 1.1*.

Table 6-52 port-info Keyword Output Field Descriptions (continued)

Field	Description
lmc	Local-identifier mask control (LMC) for multipath support. A LMC resides on each channel adapter and router port on the subnet. It provides multiple virtual ports within a single physical port. The value of the LMC specifies the number of path bits in the LID. A value of 0 allows one LID on the port. For more information, see sections 3.5.10, "Addressing" and 4.1.3, "Local Identifiers" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
ls-active	Speed of an active link. The field displays 2.5 Gbps.
ls-active-enabled	Maximum speed that the link can handle. The value can be 0 (no state change), 1 (2.5 Gbps), or 3 (value derived from LinkSpeedSupported).
neighbor-MTU	Active maximum transmission unit (MTU) enabled on this port for transmission. The subnet manager is responsible for checking the MTUCap on both ends of a link and setting the neighbor-MTU on both sides appropriately. The value appears as 256, 512, 1024, 2048, or 4096.
master-SMSL	Administrative service level required for this port to send a non-SMP message to the subnet manager.
VL-cap	Maximum range of data virtual lanes (VLs) supported by this port.
VL-high-limit	Maximum high-priority limit on the number of bytes allowed for transmitting high-priority packets when both ends of a link operate with multiple data virtual lanes. Used with the virtual-lane arbitration table. The maximum high-limit is determined by checking the v1-arbitration-high-cap on the other side of the link and then negotiating downward.
VL-arbitration-high-cap	Highest arbitration value allowed by the arbiter in determining the next packet in a set of packets to transmit across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. For more information, see section 14.2.5.9, "VL Arbitration Table" of *InfiniBand Architecture®, Vol. 1, Release 1.1*.
VL-arbitration-low-cap	Lowest arbitration value allowed by the arbiter in determining the next packet in a set of packets to transmit across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. For more information, see section 14.2.5.9, "VL Arbitration Table" of *InfiniBand Architecture®, Vol. 1, Release 1.1*.
MTU-cap	Determines, with neighbor-mtu, the maximum transmission size supported on this port. The lesser of MTUCap and NeighborMTU determines the actual MTU used. The value appears as 256, 512, 1024, 2048, or 4096.
VL-stall-count	Number of sequentially dropped packets at which the port enters a VLStalled state. For more information, see section 18.2.5.4, "Transmitter Queuing" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
HOQ-life	Maximum duration allowed to packets at the head of a virtual-lane queue. Used with VLStallCount to determine the outgoing packets to discard.
op-VLs	Administrative limit for the number of virtual lanes allowed to the link. Do not set this above the VLCap value.
pkey-enf-in	Boolean value that indicated whether or not to support optional partition enforcement for the packets that were received by this port.

Table 6-52 port-info Keyword Output Field Descriptions (continued)

Field	Description
pkey-enf-out	Boolean value that indicates whether or not to support optional partition enforcement for the packets transmitted by this port.
filter-raw-pkt-in	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets that were received by this port.
filter-raw-pkt-out	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets transmitted by this port.
mkey-violations	Number of subnet management packets (SMPs) that have been received on this port with invalid M_Keys since initial power-up or last reset. For more information see section 14.2.4, "Management Key" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
pkey-violations	Number of subnet management packets that have been received on this port with invalid P_Keys since initial power-up or the last reset. For more information, see section 9.2.7, "Partition Key" in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
qkey-violations	Number of subnet management packets that have been received on this port with invalid Q_Keys since initial power up or the last reset. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 10.2.4, "Q Keys."
guid-cap	Number of GUID entries allowed for this port in the port table. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 14.2.5.5, "GUIDCap."
subnet-timeout	Maximum propagation delay allowed for this port to reach any other port in the subnet. This value also affects the maximum rate at which traps can be sent from this port.
resp-time-value	Maximum time allowed between the port reception of a subnet management packet and the transmission of the associated response. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 13.4.6.2, "Timers and Timeouts."
local-phys-err	Threshold at which ICRC, VCRC, FCCRC, and all physical errors result in an entry into the BAD PACKET or BAD PACKET DISCARD states of the local packet receiver. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 7.12.2, "Error Recovery Procedures."
overrun-err	Threshold at which the count of buffer overruns across consecutive flow-control update periods results in an overrun error.
sl-vl-map	Service lane to virtual lane map. Fields in this mapping as described in Table 6-53.

Table 6-53 describes the fields in the **sl-vl-map** keyword output.

Table 6-53 sl-vl-map Keyword Output Field Descriptions

Field	Description
node-guid	GUID of the SMA node.
in-ib-port	The ingress port of an InfiniBand data packet.
out-ib-port	The egress port of an InfiniBand data packet.
SL to VL mapping	For each service lane, show the underlying virtual lane which will be used for a packet on the given ingress port, which will be routed out the given egress port.

Table 6-54 describes the switch info keyword output fields.

Table 6-54 switch info Keyword Output Field Descriptions

Field	Description
guid	GUID of the SMA node.
lft-cap	The current maximum used entry in the Linear Forwarding Table.
rft-cap	The maximum capacity of the switch Random Forwarding Table. (This capacity is generally unmet, since only one LFT or RFT is implemented on any given switch and all Cisco SFS 7000 switches use the LFT.)
mft-cap	The maximum capacity of the Multicast Forwarding Table.
lft-top	The current maximum used entry in the Linear Forwarding Table.
default-port	Port used if the Random Forwarding Table is implemented. This port is the one to which packets are sent when the LID is not specified in the Random Forwarding Table.
def-mcast-pri-port	Default Multicast Primary Port—port to which multicast packets are sent when the LID is not present in the Multicast Forwarding Table.
def-mcast-NP-port	Default Multicast Not Primary Port—Same as above, but for multicast packets arriving on the Default Multicast Primary Port.
life-time-value	Specifies the maximum time a packet can live in the switch. See the InfiniBand specification for the definition of this value.
port-state-change	Indicates that a port on the switch has changed its state. Used by the subnet manager to determine if it needs to look at the port states.
lids-per-port	Specifies the number of LID/LMC combinations that may be used per port if the Random Forwarding Table is implemented.
partition-enf-cap	The number of entries in the Partition Enforcement Table per port.
inbound-enf-cap	Indicates whether or not the switch is capable of partition enforcement on inbound (received) packets.
outbound-enf-cap	Indicates whether or not the switch is capable of partition enforcement on outbound (transmitted) packets.
filter-raw-pkt-in-cap	Indicates whether or not the switch is capable of raw packet enforcement on inbound (received) packets.
filter-raw-pkt-out-cap	Indicates whether or not the switch is capable of raw packet enforcement on outbound (transmitted) packets.

The following example displays the linear forwarding details of the InfiniBand switch:

```
SFS-7000P# show ib-agent switch 00:05:ad:00:00:00:13:7f linear-frd-info lid 2
=====================================================================
                    Linear Forwarding Information
=====================================================================
switch-guid : 00:05:ad:00:00:00:13:7f
lid     0     1     2     3     4     5     6     7
---     ----- ----- ----- ----- ----- ----- ----- -----
0                   0
SFS-7000P#
```

The following example displays the multicast information of the InfiniBand switch:

```
SFS-7000P# show ib-agent switch 00:05:ad:00:00:00:13:7f mcast-info lid all
=============================================================================
                             Multicast Information
=============================================================================
node-guid  : 00:05:ad:00:00:00:13:7f
block-index : 0
lid     port-mask
49152   00:00
49153   00:00
49154   00:00
49155   00:00
49156   00:00
49157   00:00
49158   00:00
49159   00:00
49160   00:00
49161   00:00
49162   00:00
49163   00:00
49164   00:00
…
```

The following example displays attributes of the InfiniBand nodes that connect to the switch:

```
SFS-7000P# show ib-agent switch all node-info
=====================================================================
                    SMA Node Information
=====================================================================
                     guid : 00:05:ad:00:00:00:13:7f
                     type : switch
                      lid : 2
             base-version : 1
            class-version : 1
                port-guid : 00:05:ad:00:00:00:13:7f
            partition-cap : 1
                device-id : a8:7c
                 revision : 00:00:00:a0
           local-port-num : 255
                vendor-id : 00:05:ad
              trap-buffer :
                num-ports : 9
                   string : slot 16: /dev/ts_ua0
```

The following example displays the port attributes of the switch:

```
SFS-7000P# show ib-agent switch 00:05:ad:00:00:00:13:7f port-info
========================================================================
                                Port Information
========================================================================
                node-guid : 00:05:ad:00:00:00:13:7f
                     port : 0
                     mkey : 00:00:00:00:00:00:00:00
              gid-prefix : 00:00:00:00:00:00:00:00
                      lid : 2
           master-SML-id : 1
         capability-mask : 00:00:02:08
                diag-code : 00:00
       mkey-lease-period : 00:00
          local-port-num : 255
      link-width-enabled : 1x, 4x
    link-width-supported : 1x, 4x
       link-width-active : 1x
    link-speed-supported : 2.5 Gbps
                   state : active
              port-phys : nop
          link-down-def : polling
       mkey-protect-bits : 0
                     LMC : 0
              ls-active : 2.5 Gbps
       ls-active-enabled : 2.5 Gbps
            neighbor-MTU : 256
             master-SMSL : 0
                  VL-cap : VL0 - VL7
           VL-high-limit : 0
  VL-arbitration-high-cap : 8
   VL-arbitration-low-cap : 8
                 MTU-cap : 1024
         VL-stall-count : 0
               HOQ-life : 7
                 op-VLs : VL0 - VL7
            pkey-enf-in : 0
           pkey-enf-out : 0
       filter-raw-pkt-in : 0
      filter-raw-pkt-out : 0
         mkey-violations : 0
         pkey-violations : 0
         qkey-violations : 0
                guid-cap : 1
          subnet-timeout : 31
         resp-time-value : 8
          local-phys-err : 4
             overrun-err : 0
```

The following example displays the service level to virtual lane mapping table on the switch:

```
SFS-7000P# show ib-agent switch 00:05:ad:00:00:00:13:7f sl-vl-map
=====================================================================
                                  SLVL-Map Table
=====================================================================
                node-guid : 00:05:ad:00:00:00:13:7f
               in-ib-port : 0
              out-ib-port : 0
                  sl0toVl : 0
                  sl1toVl : 0
                  sl2toVl : 0
                  sl3toVl : 0
                  sl4toVl : 0
                  sl5toVl : 0
                  sl6toVl : 0
                  sl7toVl : 0
                  sl8toVl : 0
                  sl9toVl : 0
                 sl10toVl : 0
                 sl11toVl : 0
                 sl12toVl : 0
                 sl13toVl : 0
                 sl14toVl : 0
                 sl15toVl : 0
…
```

The following example displays SMA switch information:

```
SFS-7000P# show ib-agent switch all switch-info

=============================================================================
                            SMA Switch Information
=============================================================================
                    guid : 00:05:ad:00:00:00:02:40
                 lft-cap : 49152
                 rft-cap : 0
                 mft-cap : 1024
                 lft-top : 1024
            default-port : 255
      def-mcast-pri-port : 255
       def-mcast-NP-port : 255
         life-time-value : 11
       port-state-change : 0
           lids-per-port : 0
       partition-enf-cap : 64
         inbound-enf-cap : 1
        outbound-enf-cap : 1
   filter-raw-pkt-in-cap : 1
  filter-raw-pkt-out-cap : 1
```

Related Commands

ib sm
show ib sm configuration
show ib sm neighbor
show ib sm partition
show ib sm port

show interface ethernet

To display the attributes of Ethernet ports, enter the **show interface ethernet** command in User Exec mode or Privileged Exec mode.

show interface ethernet {*port-selection* | **all**} [**ip** {*ip-address* | **all**} **ip-info** | **ip-backup** {*backup-address* | **all**} | **statistics**]

Syntax Description

port-selection	Port, list of port, or range of ports that you want to view.
all	• Displays the attributes of all the Ethernet ports on your Server Switch when you enter it after the **show interface ethernet** command. • Displays details on all IP addresses when you enter it after the **ip** keyword. • (Optional) Displays details on all backup IP addresses when you enter it after the **ip-backup** keyword.
ip	(Optional) Displays IP address table of the ports that you specify.
ip-address	(Optional) IP address with the details that you want to view.
ip-info	(Optional) Displays statistical data of the transmissions that occur on IP addresses.
ip-backup	(Optional) Displays statistical data of the transmissions that occur on the backup IP addresses.
backup-address	(Optional) Backup IP address with the details that you want to view.
statistics	(Optional) Displays Ethernet interface statistics for diagnostic purposes.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Ethernet read-only user.

Use this command to help diagnose Ethernet connectivity problems.

Command Output:

Table 6-55 describes the fields in the **show interface ethernet** command output.

Table 6-55 show interface ethernet Command Field Descriptions

Field	Description
port	Port number, in slot#/port# format.
name	Administratively-configured port name.
type	Type of port.
desc	Name that you assign with the **name** command.
last-change	Time of the most recent configuration change that a user made to the port.
mac-address	MAC address of the port.
mtu	Maximum transmission unit (MTU) of the port, in bytes.
auto-negotiate-supported	Displays “yes” if the port supports auto-negotiation.
auto-negotiate	Displays “enabled” if you have configured auto-negotiation to run on the port.
admin-status	Administrative status of the port.
oper-status	Operational status of the port.
admin-speed	Administrative speed that you configured on the port.
oper-speed	Operational (actual) speed at which the port runs. Actual speed differs from admin speed if the port on the other end of the connection cannot support the speed that you configured.
admin-duplex	Administrative duplex type (half or full) that you configured to run on the port.
oper-duplex	Operational (actual) duplex type at which the port runs. Actual duplex type differs from admin duplex type if the port on the other end of the connection cannot support the type that you specified.
link-trap	Displays “enabled” if you configured the port to send link traps with the **link-trap** command.
action	Action (such as flushing the ARP table) that you had the interface perform.
result	Status of the action that you had the interface perform.

Table 6-56 describes the fields in the **ip** keyword output.

Table 6-56 ip Keyword Output Field Descriptions

Field	Description
port	Port number, in card#port# format. A port# of **0** represents the gateway port of the interface card.
address	IP address that you assigned to the port.
mask	Subnet mask that you assigned to the port.
bcast-addr format	IP broadcast address format that the port uses.

Table 6-56 ip Keyword Output Field Descriptions (continued)

Field	Description
reasm max-size	Size of the largest IP datagram which this port can receive and reassemble from incoming fragmented IP datagrams.
type	Displays “primary” or “backup” to indicate that the interface card acts as the primary or backup interface for the IP address that appears in the address field.
status	Displays “active” or “inactive” to indicate that the card actively services IP packets addressed to the IP address in the address field or does not service packets to the specified address.

Table 6-57 describes the fields in the **ip-info** keyword output.

Table 6-57 ip-info Keyword Output Field Descriptions

Field	Description
port	Port number, in slot#/port# format.
default-ttl	Default time-to-live value, in seconds.
in-receives	Cumulative number of input datagrams (including errors) that interfaces received for the IP address that you specified with the **ip** keyword.
in-hdr-errors	Cumulative number of datagrams that interfaces discarded. Reasons to discard a datagram include the following: • bad checksums • version number mismatches • format errors • exceeded time-to-live values • IP option processing errors
in-addr-errors	Cumulative number of input datagrams that ports discarded because the IP address in the destination field of the header of the datagram was not a valid address to be received by the port.
forw-datagrams	Cumulative number of datagrams that arrived at the port en-route to a final destination. For non-IP-gateway ports, this value includes only packets that the port Source-Routed successfully.
in-unknown-protos	Cumulative number of datagrams that the port successfully received but discarded due to an unknown or unsupported protocol.
in-discards	Cumulative number of datagrams that the port discarded for a reason other than a problem with the datagram (for example, lack of buffer space).
in-delivers	Cumulative number of input datagrams that the port successfully delivered to IP user-protocols, including Internet Control-Message Protocol (ICMP).
out-requests	Cumulative number of IP datagrams that local IP user-protocols (including ICMP) supplied to IP in-requests. This counter does not include any datagrams counted as forw-datagrams.
out-discards	Cumulative number of output IP datagrams that the port discarded for a reason other than a problem with the datagram (for example, lack of buffer space).

Table 6-57 ip-info Keyword Output Field Descriptions (continued)

Field	Description
out-no-routes	Cumulative number of IP datagrams that the port discarded because a route could not be found to transmit them to their destination. This counter includes any packets counted in forw-datagrams that still qualify. This counter also includes any datagrams that a Server Switch cannot route because all of the gateways on the Server Switch are down.
frag-OKs	Cumulative number of IP datagrams that the port has successfully fragmented.
frag-fails	Cumulative number of IP datagrams that the port discarded because the port could not fragment them. (For instance, this situation occurs when the Don't Fragment flag of the datagram is set.)
frag-creates	Cumulative number of IP datagram fragments that the port has generated.

Table 6-58 describes the fields in the **ip-backup** keyword output.

Table 6-58 ip-backup Keyword Output Field Descriptions

Field	Description
if-index	Port number.
priority	Priority of the backup address that you applied with the **ip** command.

Table 6-58 describes the fields in the **statistics** keyword output.

Table 6-59 statistics Keyword Output Field Descriptions

Field	Description
port	Port identifier, in slot#/port# format.
name	Administrative port name that you configured with the **name** command. The parenthetical identifier represents the SNMP identifier.
in-octets	Cumulative number of octets that arrived at the port, including framing characters.
in-ucast-pkts	Cumulative number of incoming packets destined for a single port.
in-multicast-pkts	Cumulative number of incoming packets destined for the ports of a multicast group.
in-broadcast-pkts	Cumulative number of incoming packets destined for all ports on the fabric.
in-discards	Cumulative number of inbound packets that the port discarded for a reason other than a packet error (for example, lack of buffer space).
in-errors	Number of inbound packets with errors that the port discarded.

Table 6-59 statistics Keyword Output Field Descriptions (continued)

Field	Description
in-unknown-protos	For packet-oriented interfaces, the number of packets that were received through the interface and were discarded because of an unknown or unsupported protocol. For character-oriented or fixed-length interfaces that support protocol multiplexing, the number of transmission units received through the interface that were discarded because of an unknown or unsupported protocol. For any interface that does not support protocol multiplexing, this counter is always 0.
out-octets	Total number of octets transmitted out of the interface, including framing characters.
out-ucast-pkts	Total number of packets that higher-level protocols requested be transmitted and that were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.
out-multicast-pkts	Total number of packets that higher-level protocols requested be transmitted and that were addressed to a multicast address at this sub-layer, including those that were discarded or not sent. For a MAC layer protocol, this includes both Group and Functional addresses.
out-broadcast-pkts	Total number of packets that higher-level protocols requested to be transmitted and that were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent.
out-discards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted. One possible reason for discarding such a packet could be to free-up buffer space.
our-errors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.
alignment-errors	A count of frames received on a particular interface that are not an integral number of octets in length and do not pass the FCS check. The count represented by an instance of this object is incremented when the alignmentError status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions obtain are counted exclusively according to the error status presented to the LLC. This counter does not increment for 8-bit wide group encoding schemes.
fcs-errors	A count of frames received on a particular interface that are an integral number of octets in length but do not pass the FCS check. This count does not include frames received with frame-too-long or frame-too-short error. The count represented by an instance of this object is incremented when the frameCheckError status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions obtain are counted exclusively according to the error status presented to the LLC. Coding errors detected by the physical layer for speeds above 10 Mbps will cause the frame to fail the FCS check.

Table 6-59 statistics Keyword Output Field Descriptions (continued)

Field	Description
single-collision-frames	A count of successfully transmitted frames on a particular interface for which transmission is inhibited by exactly one collision. A frame that is counted by an instance of this object is also counted by the corresponding instance of the out-ucast-pkts, out-multicast-pkts, or out-broadcast-pkts, and is not counted by the corresponding instance of the multiple-collision-frames object. This counter does not increment when the interface is operating in full-duplex mode.
multiple-collision-frames	A count of successfully transmitted frames on a particular interface for which transmission is inhibited by more than one collision. A frame that is counted by an instance of this object is also counted by the corresponding instance of the out-ucast-pkts, out-multicast-pkts, or out-broadcast-pkts, and is not counted by the corresponding instance of the single-collision-frames object. This counter does not increment when the interface is operating in full-duplex mode.
sqe-test-errors	A count of times that the SQE TEST ERROR message is generated by the PLS sublayer for a particular interface. The SQE TEST ERROR is set in accordance with the rules for verification of the SQE detection mechanism in the PLS Carrier Sense Function, as described in IEEE Std. 802.3, 1998 Edition, section 7.2.4.6. This counter does not increment on interfaces operating at speeds greater than 10 Mbps or on interfaces operating in full-duplex mode.
deferred-transmissions	A count of frames for which the first transmission attempt on a particular interface is delayed because the medium is busy. The count represented by an instance of this object does not include frames involved in collisions. This counter does not increment when the interface is operating in full-duplex mode.
late-collisions	The number of times that a collision is detected on a particular interface later than one Ethernet slot-time unit into the transmission of a packet. A late collision included in a count represented by an instance of this object is also considered as a generic collision for purposes of other collision-related statistics. This counter does not increment when the interface is operating in full-duplex mode.
excessive-collisions	A count of frames for which transmission on a particular interface fails due to excessive collisions. This counter does not increment when the interface is operating in full-duplex mode.
internal-mac-transmit-errors	A count of frames for which transmission on a particular interface fails due to an internal MAC sublayer transmit error. A frame is only counted by an instance of this object if it is not counted by the corresponding instance of the late-collisions object, the excessive-collisions object, or the carrier-sense-errors object. The precise meaning of the count represented by an instance of this object is implementation-specific. In particular, an instance of this object may represent a count of transmission errors on a particular interface that is not otherwise counted.

Table 6-59 statistics Keyword Output Field Descriptions (continued)

Field	Description
carrier-sense-errors	Number of times that the carrier sense condition was lost or never asserted when attempting to transmit a frame on a particular interface. The count represented by an instance of this object is incremented at most once per transmission attempt, even if the carrier sense condition fluctuates during a transmission attempt. This counter does not increment when the interface is operating in full-duplex mode.
frame-too-longs	A count of frames received on a particular interface that exceed the maximum permitted frame size. The count represented by an instance of this object is incremented when the frame-too-longs status is returned by the MAC service to the LLC (or other MAC user). Received frames for which multiple error conditions obtain are counted exclusively according to the error status presented to the LLC.
internal-mac-receive-errors	A count of frames for which reception on a particular interface fails due to an internal MAC sublayer receive error. A frame is only counted by an instance of this object if it is not counted by the corresponding instance of the frame-too-longs, alignment-errors, or fcs-errors object. The precise meaning of the count represented by an instance of this object is implementation-specific. In particular, an instance of this object may represent a count of receive errors on a particular interface that is not otherwise counted.

Examples

The following example shows the general information about a specific IP address on an Ethernet interface port:

```
SFS-7000P# show inter ether 4/1 ip 10.3.22.4
=============================================================================
                          IP Address Table
=============================================================================
port  address         mask            bcast-addr reasm    type     status
                                      format     max-size
-----------------------------------------------------------------------------
4/1   10.3.22.4       255.255.255.0   1          0        primary  active
SFS-7000P#
```

The following examples displays statistical data regarding the IP transactions of all the IP addresses on an interface port. Statistical data is comprised of transmission errors, requests, discards, packet fragments, and so on.

```
SFS-7000P# show inter ether 4/1 ip all ip-info
=============================================================================
                        IP Information
=============================================================================
                     port : 4/1
              default-ttl : 0
              in-receives : 0
            in-hdr-errors : 0
           in-addr-errors : 0
           forw-datagrams : 0
         in-unknown-protos : 0
               in-discards : 0
               in-delivers : 0
```

```
             out-requests : 0
             out-discards : 0
           out-no-routes : 0
                frag-OKs : 0
              frag-fails : 0
             frag-creates : 0
SFS-7000P#
```

The following example displays traffic statistics for port 4/1:

```
SFS-7000P# show interface ethernet 4/1 statistics
================================================================================
                     Ethernet Interface Statistics
================================================================================
                          port : 4/1
                          name : 4/1 (257)
                     in-octets : 0
                   in-ucast-pkts : 0
               in-multicast-pkts : 0
               in-broadcast-pkts : 0
                     in-discards : 0
                       in-errors : 0
               in-unknown-protos : 0
                      out-octets : 0
                  out-ucast-pkts : 0
              out-multicast-pkts : 0
              out-broadcast-pkts : 0
                    out-discards : 0
                      out-errors : 0

                alignment-errors : 0
                      fcs-errors : 0
       single-collision-frames : 0
     multiple-collision-frames : 0
                sqe-test-errors : 0
         deferred-transmissions : 0
                late-collisions : 0
           excessive-collisions : 0
  internal-mac-transmit-errors : 0
           carrier-sense-errors : 0
                frame-too-longs : 0
   internal-mac-receive-errors : 0
SFS-7000P#
```

Related Commands

half-duplex
ip
trunk-group

show interface fc

To display the attributes of Fibre Channel ports, enter the **show interface fc** command in User Exec mode or Privileged Exec mode.

show interface fc {*port-selection* | **all**} [**statistics** | **targets** | **virtual-ports**]

Syntax Description

port-selection	Port, list of ports, or range of ports to display.
all	Displays all Fibre Channel ports on your Server Switch.
statistics	(Optional) Displays traffic statistics for the ports that you specify.
targets	(Optional) Displays the targets that the portss that you specify can access.
virtual-ports	(Optional) Displays the virtual ports that the FC gateway mapped to the ports that you specify.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Fibre Channel read-only user.

The administrative (admin) status, speed, and connection-type reflect the values you had assigned. The operational (oper) status, speed, and connection-type reflect the values derived from the physical hardware and its connections. This situation allows you to verify your configuration settings against the actual hardware. The admin/oper pairs do not have to match for you to use the card. However, if there is a mismatch, the operational value is used.

Command Output:

Table 6-60 describes the fields in the **show interface fc** command output.

Table 6-60 show interface fc Command Field Descriptions

Field	Description
port	Fibre Channel gateway port number, in slot#/port# format.
name	Administrative port name that you configure with the **name** command.
type	Identifies the type of the port. All type identifiers begin with “fc” for Fibre Channel ports.

Table 6-60 show interface fc Command Field Descriptions (continued)

Field	Description
desc	Text description of the interface port. The default is the port identifier in the form slot#/port#. The parenthetical number to the right of the description is the SNMP identifier. The SNMP identifier is useful if you are running your own SNMP software.
last-change	Time of the most recent configuration change that a user made to the port.
fc-address	Fibre Channel Protocol address of the port.
wwnn	World-wide node name of the port. The WWNN defaults to 00:00:00:00:00:00:00:00.
wwpn	World-wide port name of the port. The WWPN defaults to 00:00:00:00:00:00:00:00.
mtu	Maximum Transmission Unit (MTU) of the port. The MTU value defaults to 2080 bytes.
auto-negotiate-supported	Displays **yes** if the port supports auto-negotiation or no if the port does not support auto-negotiation.
auto-negotiate	Indicates if the Fibre Channel port on the interface card is configured to automatically negotiate connection parameters when it connects with a Fibre Channel device. If auto-negotiation is enabled, the connection speed and mode (duplex, half-duplex) are determined at the time of connection. If the device does not support auto-negotiation, this field still displays a value, but the value does not apply. The value is **enabled** or **disabled**. The default is disabled. This field is set by the **auto-negotiate** command.
admin-status	Indicates if you have enabled the port for configuration and use. The value of this field may be up or "down." The default is **"**down.**"** The field is set by the **shutdown** command.
oper-status	Indicates if the port is physically ready for configuration and use. The value of this field may be up or "down." If this field is down but the admin-status is up, check that the Fibre Channel interface card is securely seated in the slot and a cable is attached between the port and the target FC device.
admin-speed	Indicates the speed administratively assigned to the Fibre Channel port. The value of this field may be 2 Gbps or 1 Gbps. Speed defaults to 2 Gbps. You can configure this setting with the **speed** command.
oper-speed	Indicates the maximum speed of the Fibre Channel port, based upon the attached Fibre Channel cable and polling the connected Fibre Channel device.
admin-connection-type	Indicates the type of connection administratively assigned to the interface port. The value may be forceNLPort for the fc2port2G, force-e, force-f, auto-e, or auto-f for the fc4port2G, forceBPort, or none. The default is forceNLPort. This field is set by the **type** command.

Table 6-60 show interface fc Command Field Descriptions (continued)

Field	Description
oper-connection-type	Indicates the type of connection dynamically discovered for the interface port.
link-trap	Indicates if connection link errors are to be captured and sent to trap recipients. The value may be either enabled or disabled. This field is set by the **link-trap** command.

Table 6-61 describes the fields in the **statistics** keyword output.

Table 6-61 statistics Keyword Output Field Descriptions

Field	Description
port	Fibre Channel gateway port number, in slot#/port# format.
name	Administratively assigned or default name of the port. The default name is the port name in the form slot#/port#. Configure this field with the **name** command. The number in parentheses to the right of the name is the SNMP identifier. The SNMP identifier is useful if you are running your own SNMP software.
in-octets	Cumulative number of octets received on the interface, including framing characters.
in-ucast-pkts	Cumulative number of packets, delivered by this sub-layer to a higher layer, that were not addressed to a multicast or broadcast address at this sub-layer.
in-multicast-pkts	Cumulative number of packets, delivered by this sub-layer to a higher layer, that were addressed to a multicast address at this sub-layer. For a MAC layer protocol, this includes both Group and Functional addresses.
in-broadcast-pkts	Cumulative number of packets, delivered by this sub-layer to a higher layer, that were addressed to a broadcast address at this sub-layer.
in-discards	Cumulative number of inbound packets that were discarded even though no errors had been detected to prevent their being delivered to a higher-layer protocol. One possible reason for discarding such a packet can be to free-up buffer space.
in-errors	For packet-oriented interfaces, the cumulative number of inbound packets that contained errors that prevented them from being delivered to a higher-layer protocol. For character-oriented or fixed-length interfaces, the number of inbound transmission units that contained errors preventing them from being delivered to a higher-layer protocol.
in-unknown-protos	For packet-oriented interfaces, the cumulative number of packets that were received through the interface that were discarded because of an unknown or unsupported protocol. For character-oriented or fixed-length interfaces that support protocol multiplexing, the number of transmission units received through the interface that were discarded because of an unknown or unsupported protocol. For any interface that does not support protocol multiplexing, this counter is always 0.

Table 6-61 statistics Keyword Output Field Descriptions (continued)

Field	Description
out-octets	Cumulative number of octets transmitted out of the interface, including framing characters.
out-ucast-pkts	Cumulative number of packets that higher-level protocols requested be transmitted and that were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.
out-multicast-pkts	Cumulative number of packets that higher-level protocols requested be transmitted and that were addressed to a multicast address at this sub-layer, including those that were discarded or not sent. For a MAC layer protocol, this includes both Group and Functional addresses.
out-broadcast-pkts	Cumulative number of packets that higher-level protocols requested to be transmitted and that were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent.
out-discards	Cumulative number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted. One possible reason for discarding such a packet could be to free-up buffer space.
out-errors	For packet-oriented interfaces, the cumulative number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.
link-events	Cumulative number of link events processed by the Fibre Channel interface port.
fcp-cmds-outstanding	Cumulative number of FCP commands outstanding on the Fibre Channel interface port.
fcp-cmds-completed	Cumulative number of FCP commands completed on the Fibre Channel interface port.
fcp-errors	Cumulative number of FCP errors encountered on the Fibre Channel interface port.
fc-initiator-IO	Cumulative number of transactions between the Fibre Channel initiator and this port.

Table 6-62 describes the fields in the **targets** keyword output.

Table 6-62 targets Keyword Output Field Descriptions

Field	Description
wwpn	World-wide port name (WWPN) of the target.
wwnn	World-wide node name (WWNN) of the target.
description	Dynamically-assigned or administratively-assigned description of the target. Enter the **fc srp target** command with the **description** keyword to configure this field.
ioc-guid	I/O controller (IOC) GUID of the FC gateway that accesses the target.
service-name	Name of the service that the target runs.

Table 6-62 targets Keyword Output Field Descriptions (continued)

Field	Description
protocol-ids	Lists the protocols that the target supports.
fc-address	Fibre Channel protocol address of the target.
mtu	Maximum transmission unit (MTU) of the target, in bytes.
connection-type	For this release, all targets connect to NL_Ports.
physical-access	Port, in slot#/port# format, on your Server Switch to which the target connects.

Table 6-63 describes the fields in the **virtual-ports** keyword output.

Table 6-63 virtual-ports Keyword Output Field Descriptions

Field	Description
guid	GUID of the physical initiator.
extension	GUID extension of the physical initiator.
initiator-description	Administratively-assigned description of the initiator.
wwnn	World-wide node name (WWNN) of the initiator.
port	Physical port on your Server Switch to which the virtual port maps.
wwpn	World-wide port name (WWPN) of the virtual port.
fc-address	Fibre Channel protocol address of the virtual port.

Examples

The following example shows the output of the **show interface fc** command without the **statistics** keyword:

```
SFS-7000P# show interface fc 5/1
================================================================================
                      Fibre Channel Interface Info
================================================================================
                     port : 5/1
                     name : 5/1
                     type : fc2GFX
                     desc : 5/1 (321)
              last-change : none
               fc-address : 00:00:00
                     wwnn : 00:00:00:00:00:00:00:00
                     wwpn : 00:00:00:00:00:00:00:00
                      mtu : 2080
 auto-negotiate-supported : yes
           auto-negotiate : enabled
             admin-status : up
              oper-status : down
              admin-speed : 2gbps
               oper-speed : unknown
              oper-duplex : unknown
    admin-connection-type : force-NL
     oper-connection-type : down
                link-trap : enabled
```

The following example displays all FC targets that the FC interfaces encounter:

```
SFS-7000P# show interface fc all targets
================================================================================
                                    Fc Targets
================================================================================
                     wwpn: 50:06:01:60:10:20:4e:31
                     wwnn: 50:06:01:60:90:20:4e:31
              description: SRP.T10:5006016010204E31
                 ioc-guid: 00:05:ad:00:00:01:38:80
             service-name: SRP.T10:5006016010204E31
             protocol-ids: 04:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
               fc-address: 61:07:13
                      mtu: 0
          connection-type: nl-port
          physical-access: 9/2

                     wwpn: 50:06:01:68:10:20:4e:31
                     wwnn: 50:06:01:60:90:20:4e:31
              description: SRP.T10:5006016810204E31
                 ioc-guid: 00:05:ad:00:00:01:38:80
             service-name: SRP.T10:5006016810204E31
             protocol-ids: 04:00:00:00:00:00:00:00:00:00:00:00:00:00:00:00
<output truncated>
```

The following example displays all virtual ports on the interface:

```
SFS-7000P# show interface fc all virtual-ports
================================================================================
                                Fc Virtual Ports
================================================================================
                     guid: 00:05:ad:00:00:12:34:56
                extension: 00:00:00:00:00:00:00:00
    initiator-description: kauai
                     wwnn: 20:01:00:05:ad:01:5a:5c
                     port: 9/1
                     wwpn: 20:01:00:05:ad:91:5a:5c
              fc-address: 61:0a:02

                     guid: 00:05:ad:00:00:12:34:56
                extension: 00:00:00:00:00:00:00:00
    initiator-description: kauai
                     wwnn: 20:01:00:05:ad:01:5a:5c
                     port: 9/2
                     wwpn: 20:01:00:05:ad:95:5a:5c
              fc-address: 61:05:02
```

Related Commands

fc srp-global gateway-portmask-policy restricted
fc srp-global itl
fc srp it
fc srp target
show fc srp initiator
show interface fc
type

show interface gateway

To display attributes of the internal InfiniBand gateway ports of Fibre Channel and Ethernet expansion modules, enter the **show interface gateway** command in User Exec mode or Privileged Exec mode.

show interface gateway *slot-selection* [**fc srp initiator-target** *guid extension* | {**ip** | **ip-backup**} {**ip-address** | **all**} | **sma** {**node-info** | **port-info** [**details**]}| **statistics**]

Syntax Description

slot-selection	Internal gateway port that you want to view.
fc srp initiator-target	(Optional) Displays FC targets that an initiator can access.
guid	(Optional) GUID of the initiator.
extension	(Optional) GUID extension of the initiator.
ip	(Optional) Displays attributes of IP addresses on the card.
ip-backup	Displays attributes of backup IP addresses on the card.
ip-address	Individual IP address with the attributes that you want to view.
all	Displays attributes of all addresses.
sma	Displays SMA information.
node-info	Displays SMA node information
port-info	Displays SMA port information.
details	(Optional) Displays detailed SMA port information.
statistics	(Optional) Displays gateway statistics of the card.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3012, Cisco SFS 3001

Privilege Level:

Fibre Channel read-only user.

Use this command to troubleshoot connectivity issues. Verify that the show output matches the configuration file.

Command Output:

Table 6-64 describes the fields in the **show interface gateway** command output.

Table 6-64 show interface gateway Command Field Descriptions

Field	Description
gateway	Number of the slot in which the gateway resides.
name	Administrative name that you configure with the **name** command.
type	Type of interface card, either Ethernet or Fibre Channel.
desc	Description of the port, in slot#/port# format. The port identifier appears as zero (**0**) to indicate an internal port. The number in parentheses serves as the SNMP identifier.
last-change	Time of the most recent configuration change that a user made to the port.
mtu	Maximum transmission unit (MTU) of the internal gateway port.
admin-status	Administrative status of the gateway that you configure with the **shutdown** command.
oper-status	Actual status of the gateway.

Table 6-65 describes the fields that appear when you use the **fc srp initiator-target** argument with the **show interface gateway** command.

Table 6-65 fc srp initiator-target Keyword Output Field Descriptions

Field	Description
wwpn	World-wide port name (WWPN) of the target that the initiator can access.
wwnn	Wold-wide node name (WWNN) of the target that the initiator can access.
description	Description of the target.
ioc-guid	GUID of the IOC assigned to the target.
service-name	Service that the target runs.
protocol-ids	Lists the protocols that the target supports.
fc-address	Fibre Channel protocol address of the target.
mtu	Maximum transmission unit (MTU) of the target.
connection-type	Type of connection between the storage and the InfiniBand host. The field will always display **nl-port**, because all storage-to-IB host connections occur over a virtual port, or NL_Port.
physical-access	Port or ports through which the target connects to the initiator.

Table 6-66 describes the fields that appear when you use the **ip** keyword with the **show interface gateway** command.

Table 6-66 ip Keyword Output Field Descriptions

Field	Description
port	Port number, in card#port# format. A port# of **0** represents the gateway port of the interface card.
address	IP address that you assigned to the port.
mask	Subnet mask that you assigned to the port.
bcast-addr format	IP broadcast address format that the port uses.
reasm max-size	Size of the largest IP datagram that this port can receive and reassemble from incoming fragmented IP datagrams.
type	Displays “primary” or “backup” to indicate that the interface card acts as the primary or backup interface for the IP address that appears in the “address” field.
status	Displays “active” or “inactive” to indicate that the card actively services IP packets addressed to the IP address in the “address” field or does not service packets to the specified address.

Command Output:

Table 6-67 describes the fields that appear when you use the **ip-backup** keyword with the **show interface gateway** command.

Table 6-67 ip-backup Keyword Output Field Descriptions

Field	Description
if-index	Numeric identifier, or “interface index,” of the port, in slot#/port# notation.
priority	Displays the priority of each backup address.

Note This keyword applies to Fibre Channel cards only.

Table 6-68 statistics Keyword Output Field Descriptions

Field	Description
slot-id	Chassis slot that contains the gateway that you want to display.
link-events	Cumulative number of link events that the gateway has processed.
srp-cmds-outstanding	Cumulative number of unresolved SRP commands on the gateway.
srp-cmds-completed	Cumulative number of SRP commands that the gateway executed.
srp-errors	Cumulative number of SRP errors that the gateway encountered.
srp-initiated-ios	Cumulative number of I/O transactions that initiators requested of FC devices through the gateway.
srp-bytes-read	Cumulative number of I/O bytes that the gateway has read.
srp-bytes-written	Cumulative number of I/O bytes that the gateway has written.

Table 6-68 statistics Keyword Output Field Descriptions (continued)

Field	Description
srp-connections	Cumulative number of I/O connections that the gateway has used.
fcp-cmds-outstanding	Cumulative number of unresolved FCP commands on the gateway.
fcp-cmds-completed	Cumulative number of FCP commands that the gateway executed.
fcp-errors	Cumulative number of FCP errors that the gateway encountered.
fcp-initiated-ios	Cumulative number of I/O replies that FC devices sent through the gateway in response to SRP requests from initiators.
fcp-bytes-read	Cumulative number of Fibre Channel Protocol bytes that the card has read since it came up.
fcp-bytes-written	Cumulative number of Fibre Channel Protocol bytes that the card has written since it came up.

Examples

The following example displays the attributes of the IP address of the gateway port:

```
SFS-7000P# show interface gateway 5 ip all
=============================================================================
                                IP Address Table
=============================================================================
port  address         mask            bcast-addr reasm    type     status
                                      format     max-size
-----------------------------------------------------------------------------
4/0   10.3.22.0       255.255.255.0   1          0        primary  active
SFS-7000P#
```

The following example uses the **show interface gateway** command to display general gateway properties. The information fields displayed depend upon the interface type. The example below displays the properties of a Fibre Channel gateway port. To see the properties of an Ethernet port, see the description of "show interface ethernet" section on page 6-148.

```
SFS-7000P# show interface gateway 4
================================================================
================================================================
               Gateway Information
================================================================
                  gateway : 4
                     name : 4/0
                     type : fc-gateway
                     desc : 4/0 (320)
              last-change : none
                      mtu : 0
             admin-status : up
              oper-status : up
SFS-7000P#
```

The following example displays traffic statistics for the internal gateway port:

```
SFS-7000P# show inter gateway 2 stat
================================================================
                    Gateway Statistics
================================================================
                  slot-id: 2
              link-events: 0
     srp-cmds-outstanding: 0
       srp-cmds-completed: 0
                srp-errors: 0
        srp-initiated-ios: 0
           srp-bytes-read: 0
         srp-bytes-written: 0
           srp-connections: 0
     fcp-cmds-outstanding: 0
       fcp-cmds-completed: 0
                fcp-errors: 0
        fcp-initiated-ios: 0
           fcp-bytes-read: 0
         fcp-bytes-written: 0
SFS-7000P#
```

Related Commands

fc srp initiator
fc srp it
show ip

show interface ib

To display attributes of InfiniBand ports, enter the **show interface ib** command in User Exec mode or Privileged Exec mode.

show interface ib *port-selection* [**sma** {**node-info** | **port-info** [**detail**]} | **statistics**]

Syntax Description

port-selection	Port, list of ports, or range of ports that you want to view.
sma	(Optional) Displays subnet management agent (SMA) information.
node-info	(Optional) Displays node-based SMA information.
port-info	(Optional) Displays port-based SMA information
detail	(Optional) Displays detailed, port-based SMA information.
statistics	(Optional) Displays InfiniBand interface traffic statistics.

Defaults

See Table 6-69 through Table 6-73.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

InfiniBand read-only user.

Without the optional **sma** or **statistics** keywords, the **show interface ib** command displays general information about the InfiniBand interface port, such as its administrative status, its operational speed and status, and duplex mode.

Command Output:

Table 6-69 describes the fields in the **show interface ib** command output.

Table 6-69 show interface ib Command Field Descriptions

Field	Description
port	Identifies the InfiniBand interface card and port. The format is slot#/port#.
name	User assigned name. If no name is assigned, the port name is displayed instead. This field is set by the **name** command.

Table 6-69 show interface ib Command Field Descriptions (continued)

Field	Description
type	Identifies the type of the InfiniBand card. Supported cards are ib1xTX, ib1xFX, ib4xTX, ib4xFX, and ib4xTXP. This field is set by the **type** command.
desc	Description of the port, in slot#/port# format. The number in parentheses serves as the SNMP identifier.
last-change	Time at which the InfiniBand port configuration was last changed.
mtu	Maximum Transmission Unit for the InfiniBand port. Used to configure the MTU size of IP network traffic.
auto-negotiate supported (select Server Switches)	Displays "yes" if the port supports auto-negotiation or "no" if the port does not support auto-negotiation.
auto-negotiate (select Server Switches)	Indicates if the InfiniBand port on the interface card is configured to automatically negotiate connection parameters when it connects with an InfiniBand device. If auto-negotiation is enabled, the connection speed is determined at the time of connection. If the device does not support auto-negotiation, this field still displays a value, but the value does not apply. The value is **enabled** or **disabled**. The default is disabled. This field is set by the **auto-negotiate** command.
admin-status	Indicates if you have enabled the port for configuration and use. The value of this field may be up or "down." The default is "down." The field is set by the **shutdown** command.
oper-status	Indicates if the port is physically ready for configuration and use. The value of this field may be up or "down." If this field is down but the admin-status is up, check that the InfiniBand interface card is securely seated in the slot and a cable is attached between the port and the target InfiniBand host.
admin-speed (select Server Switches)	Indicates the speed administratively assigned to the InfiniBand port. You can configure this setting with the **speed** command.
oper-speed (select Server Switches)	Indicates the maximum speed of the InfiniBand port, based upon the attached InfiniBand cable and polling the connected InfiniBand device.

Table 6-69 show interface ib Command Field Descriptions (continued)

Field	Description
link-trap	Indicates if connection link errors are to be captured and sent to trap recipients. The value may be either enabled or disabled. This field is set by the **link-trap** command.
dongle-type	Displays the port power connector dongle type variable.

The administrative (admin) status, speed, and connection-type reflect the values you had assigned. The operational (oper) status, speed, and connection-type reflect the values derived from the physical hardware and its connections. This allows you to verify your configuration settings against the actual hardware. The admin/oper pairs do not have to match for you to use the card. However, if there is a mismatch, the oper value is used.

Table 6-70 describes the fields that appear when you use the **sma node-info** argument with the **show interface ib** command.

Table 6-70 sma node-info Keyword Output Field Descriptions

Field	Description
guid	GUID of the host.
type	Type of SMA node. This value always appears as switch.
lid	Base Local Identifier (LID) of the port.
base-version	Base management datagram version that the switch supports.
class-version	Subnet management class that the switch supports.
port-guid	GUID of the ports that you specified with the *port-selection* variable.
partition-cap	Maximum number of partitions that the port supports.
device-id	Manufacturer-assigned device ID.
revision	Manufacturer-assigned device revision.
local-port-num	Number of the link port that received this show request.
vendor-id	Device vendor ID, as per the IEEE standard.
trap-buffer	Special purpose string buffer for InfiniBand Trap Data.
num-ports	Number of physical ports on the SMA node.
string	SMA node description string.

Table 6-71 describes the fields that appear when you use the **sma port-info** argument with the **show interface ib** command.

Table 6-71 sma port-info Keyword Output Field Descriptions

Field	Description
node-guid	GUID of the InfiniBand host that connects to the port.
port	Host port that connects to your Server Switch.

Table 6-71 sma port-info Keyword Output Field Descriptions

Field	Description
mkey	64-bit management key for this port. See section 14.2.4, Management Key and 3.5.3, Keys, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
gid-prefix	64-bit global ID prefix for this port. This prefix is assigned by the subnet manager, based upon the port router and the rules for local identifiers. See section 4.1.3, Local Identifiers, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
lid	16-bit base-LID of this port.
capability-mask	32-bit bitmask that specifies the supported capabilities of the port. A bit value of 1 (one) indicates a supported capability. The bits are 0, 11-15, 18, 21-31 (Reserved and always 0.), 1 IsSM, 2 IsNoticeSupported, 3 IsTrapSupported, 4 IsResetSupported, 5 IsAutomaticMigrationSupported, 6 IsSLMappingSupported, 7 IsMKeyNVRAM (supports M_Key in NVRAM), 8 IsPKeyNVRAM (supports P_Key in NVRAM), 9 Is LED Info Supported, 10 IsSMdisabled, 16 IsConnectionManagementSupported, 17 IsSNMPTunnelingSupported, 19 IsDeviceManagementSupported, 20 IsVendorClassSupported.Values are expressed in hexadecimal.
state	A higher form of addressing than PhyState, state determines that the nodes can actually communicate and indicates the state transition that has occurred. A transition is a port change from down to "initialize", "initialize" to "down," "armed" to "down," or active to down as a result of link state machine logic. Changes to the port state resulting from SubnSet have no affect on this parameter value. The value is noStateChange, down, initialize, armed, or active.

Table 6-72 describes the fields that appear when you use the **sma port-info details** argument with the **show interface ib** command.

Table 6-72 sma port-info details Keyword Output Field Descriptions

Field	Description
node-guid	GUID of the InfiniBand host that connects to the port.
port	Host port that connects to your Server Switch.
mkey	64-bit management key for this port. See section 14.2.4, Management Key and 3.5.3, Keys, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
gid-prefix	64-bit global ID prefix for this port. This prefix is assigned by the subnet manager, based upon the port router and the rules for local identifiers. See section 4.1.3, Local Identifiers, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
lid	16-bit base-LID of this port.
master-sm-lid	16-bit base LID of the master subnet manager managing this port.

Table 6-72 sma port-info details Keyword Output Field Descriptions (continued)

Field	Description
capability-mask	32-bit bitmask that specifies the supported capabilities of the port. A bit value of 1 (one) indicates a supported capability. The bits are 0, 11-15, 18, 21-31 (Reserved and always 0.), 1 IsSM, 2 IsNoticeSupported, 3 IsTrapSupported, 4 IsResetSupported, 5 IsAutomaticMigrationSupported, 6 IsSLMappingSupported, 7 IsMKeyNVRAM (supports M_Key in NVRAM), 8 IsPKeyNVRAM (supports P_Key in NVRAM), 9 Is LED Info Supported, 10 IsSMdisabled, 16 IsConnectionManagementSupported, 17 IsSNMPTunnelingSupported, 19 IsDeviceManagementSupported, 20 IsVendorClassSupported.Values are expressed in hexadecimal.
diag-code	16-bit diagnostic code. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 14.2.5.6.1, "Interpretation of Diagcode."
mkey-lease-period	Initial value of the lease-period timer in seconds. The lease period is the length of time that the M_Key protection bits are to remain non-zero after a SubnSet (PortInfo) fails an M_Key check. After the lease period expires, clearing the M_Key protection bits allows any subnet manager to read (and then set) the M_Key. Set this field to 0 to indicate that the lease period is never to expire. See *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 14.2.4, "Management Key."
local-port-num	Number of the link port that received this request; otherwise, the value is 0.
link-width-enabled	Enabled link width (speed). The value is an integer that indicates the enabled link-width sets for this port. The value may be • 0 (no state change) • 1 (1x) • 2 (4x) • 3 (1x or 4x) • 8 (12x) • 9 (1x or 12x) • 10 (4x or 12x) • 11 (1x, 4x or 12x) • 255 (set this parameter to the link-width-supported value)
link-width-supported	Supported link width. The value is 1 (1x), 3 (1x or 4x), or 11 (1x, 4x, or 12x).
link-width-active	Active link width. This parameter is used with LinkSpeedActive to determine the link rate between the two connected nodes. The value is width1x, width4x, or width12x.
link-speed-supported	Speed that the link between the host and your device supports.

Table 6-72 sma port-info details Keyword Output Field Descriptions (continued)

Field	Description
state	A higher form of addressing than PhyState, state determines that the nodes can actually communicate and indicates the state transition that has occurred. A transition is a port change from down to "initialize", "initialize" to "down," "armed" to "down," or active to down as a result of link state machine logic. Changes to the port state resulting from SubnSet have no affect on this parameter value. The value is noStateChange, down, initialize, armed, or active.
port-phys	Indicates the actual state of the port. Determines that electricity flows between nodes so they can hand-shake. The value is noStateChange, sleeping, polling, disabled, portConfigurationTrainig, linkup, or linkErrorRecovery.
link-down-def	Default LinkDown state to return to. The value is noStateChange, sleeping, or polling. See section 5.5.2, Status Outputs (MAD GET), *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
mkey-protect-bits	Management key protection bits for the port. The bits are 0, 1, 2, and 3. See section 14.2.4.1, Levels of Protection, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
lmc	Local-identifier mask control (LMC) for multipath support. A LMC is assigned to each channel adapter and router port on the subnet. It provides multiple virtual ports within a single physical port. The value of the LMC specifies the number of path bits in the LID. A value of 0 (zero) indicates one LID is allowed on this port. See sections 3.5.10, Addressing, and 4.1.3, Local Identifiers, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
ls-active	Speed of an active link. The value is 1 (2.5 Gbps).
ls-active-enabled	Maximum speed the link is capable of handling. The value is 0 (No state change), 1 (2.5 Gbps), or 3 (value derived from link-speed-supported).
neighbor-mtu	Active maximum transmission unit enabled on this port for transmit. Check the mtu-cap value at both ends of every link and use the lesser speed. The value is mtu256, mtu512, mtu1024, mtu2048, or mtu4096.
master-sm-sl	Administrative service level required for this port to send a non-SMP message to the subnet manager.
vl-cap	Maximum range of data virtual lanes supported by this port. The value is vl0, vl0ToVl1, vl0ToVl3, vl0ToVl7, or vl0ToVl14. See also oper-VL.
vl-high-limit	Maximum high-priority limit on the number of bytes allowed for transmitting high-priority packets when both ends of a link operate with multiple data virtual-lanes. Used with the virtual-lane arbitration table. The maximum high-limit is determined by checking the vl-arb-high-cap on the other side of the link and then negotiating downward.
vl-arbitration-high-cap	Highest arbitration value allowed by the arbiter in determining the next packet in a set of packets to send across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. See section 14.2.5.9, VL Arbitration Table, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.

Table 6-72 sma port-info details Keyword Output Field Descriptions (continued)

Field	Description
vl-arbitration-low-cap	Lowest arbitration value allowed by the arbiter in determining the next packet in a set of packets to send across the link. Used with the virtual-lane arbitration table and specified as a VL/Weight pair. See section 14.2.5.9, VL Arbitration Table, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for more information.
mtu-cap	Used in conjunction with neighbor-mtu to determine the maximum transmission size supported on this port. The lesser of mtu-cap and neighbor-mtu determines the actual MTU used. The value is 256, 512, 1024, 2048, or 4096.
vl-stall-count	Number of sequentially dropped packets at which the port enters a VLStalled state. The virtual lane exits the VLStalled state (8 * HLL) units after entering it. See section 18.2.5.4, Transmitter Queuing, *InfiniBand Architecture®, Vol. 1, Release 1.1*, for a description of HLL.
hoq-life	Maximum duration allowed to packets at the head of a virtual-lane queue. Used with VL-stall-count to determine the outgoing packets to discard.
op-vls	Administrative limit for the number of virtual lanes allowed to the link. Do not set this above the VL-cap value. The value is vl0, vl0-Vl1, vl0-Vl3, vl0-Vl7, or vl0-Vl14.
pkey-enf-in	Boolean value that indicated whether or not to support optional partition enforcement for the packets that were received by this port.
pkey-enf-out	Boolean value that indicates whether or not to support optional partition enforcement for the packets transmitted by this port.
filter-raw-pkt-in	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets that were received by this port.
filter-raw-pkt-out	Boolean value that indicates whether or not to support optional raw packet enforcement for the raw packets transmitted by this port.
mkey-violations	Number of subnet management packets (SMPs) that have been received on this port with invalid M_Keys since initial power-up or last reset. For more information see section 14.2.4, “Management Key” in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
pkey-violations	Number of subnet management packets that have been received on this port with invalid P_Keys since initial power-up or the last reset. For more information, see section 9.2.7, “Partition Key” in *InfiniBand Architecture®, Vol. 1, Release 1.1*.
qkey-violations	Number of subnet management packets that have been received on this port with invalid Q_Keys since initial power up or the last reset. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 10.2.4, “Q Keys.”
guid-cap	Number of GUID entries allowed for this port in the port table. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 14.2.5.5, “GUIDCap.”
subnet-timeout	Maximum propagation delay allowed for this port to reach any other port in the subnet. This value also affects the maximum rate at which traps can be sent from this port.

Table 6-72 sma port-info details Keyword Output Field Descriptions (continued)

Field	Description
resp-timeout	Maximum time allowed between the port reception of a subnet management packet and the transmission of the associated response. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 13.4.6.2, "Timers and Timeouts."
local-phys-err	Threshold at which ICRC, VCRC, FCCRC, and all physical errors result in an entry into the BAD PACKET or BAD PACKET DISCARD states of the local packet receiver. For more information, see *InfiniBand Architecture®, Vol. 1, Release 1.1*, section 7.12.2, "Error Recovery Procedures."
overrun-err	Threshold at which buffer count overruns across consecutive flow-control update periods and results in an overrun error.

Command Output:

Table 6-73 describes the fields that appear when you use the **statistics** keyword with the **show interface ib** command.

Table 6-73 statistics Keyword Output Field Descriptions

Field	Description
port	Port identifier, in slot#/port# format.
name	Administrative port name that you configured with the **name** command.
in-octets	Cumulative number of octets that arrived at the port, including framing characters.
in-ucast-pkts	Cumulative number of incoming packets destined for a single port.
in-multicast-pkts	Cumulative number of incoming packets destined for the ports of a multicast group.
in-broadcast-pkts	Cumulative number of incoming packets destined for all ports on the fabric.
in-discards	Cumulative number of inbound packets that the port discarded for a reason other than a packet error (for example, lack of buffer space).
in-errors	Number of inbound packets with errors that the port discarded.
in-unknown-protos	For packet-oriented interfaces, the number of packets that were received through the interface that were discarded because of an unknown or unsupported protocol. For character-oriented or fixed-length interfaces that support protocol multiplexing, the number of transmission units received through the interface that were discarded because of an unknown or unsupported protocol. For any interface that does not support protocol multiplexing, this counter is always 0.
out-octets	Total number of octets transmitted out of the interface, including framing characters.
out-ucast-pkts	Total number of packets that higher-level protocols requested be transmitted and that were not addressed to a multicast or broadcast address at this sub-layer, including those that were discarded or not sent.

Table 6-73 statistics Keyword Output Field Descriptions (continued)

Field	Description
out-multicast-pkts	Total number of packets that higher-level protocols requested be transmitted and that were addressed to a multicast address at this sub-layer, including those that were discarded or not sent.
out-broadcast-pkts	Total number of packets that higher-level protocols requested to be transmitted and that were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent.
out-discards	Number of outbound packets that were chosen to be discarded even though no errors had been detected to prevent their being transmitted. One possible reason for discarding such a packet could be to free-up buffer space.
out-errors	For packet-oriented interfaces, the number of outbound packets that could not be transmitted because of errors. For character-oriented or fixed-length interfaces, the number of outbound transmission units that could not be transmitted because of errors.

Examples

The following example shows the output of the **show interface ib** command without the **sma** or **statistics** keywords:

```
SFS-270# show interface ib 4/7
================================================================================
                        InfiniBand Interface Information
================================================================================
                     port : 1
                     name : 1
                     type : ib4xTXP
                     desc : 1 (65)
              last-change : none
                      mtu : 0
 auto-negotiate-supported : yes
           auto-negotiate : disabled
             admin-status : up
              oper-status : down
              admin-speed : 10gbps
               oper-speed : unknown
                link-trap : enabled
                phy-state : polling
              dongle-type : ib4xFX
```

The following example shows the output of the **show interface ib** command with the **statistics** keyword:

```
SFS-270# show interface ib 4/7 statistics

                        InfiniBand Interface Statistics
================================================================================

                            port : 4/7
                            name : 4/7
                       in-octets : 0
                     in-ucast-pkts : 0
                  in-multicast-pkts : 0
                  in-broadcast-pkts : 0
                        in-discards : 0
                          in-errors : 0
                  in-unknown-protos : 0
                         out-octets : 0
                     out-ucast-pkts : 0
                 out-multicast-pkts : 0
                 out-broadcast-pkts : 0
                       out-discards : 0
                         out-errors : 0
```

Related Commands **ib-agent**
name

show interface mgmt-ethernet

To show the configuration of the Ethernet Management port on the controller card of your Server Switch, enter the **show interface mgmt-ethernet** command in User Exec mode or Privileged Exec mode.

show interface mgmt-ethernet

Syntax Description

This command has no arguments or keywords.

Defaults

The gateway address value defaults to 0.0.0.0.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

The Ethernet Management port is an Out-of-Band Management (OBM) port that provides network access to the system chassis in order to run remote CLI and Element Manager sessions. The port must be configured before it can be used.

This command displays the administrative status of the interface port, its assigned IP address and subnet mask, plus the IP address of the gateway port used to connect to the Ethernet Management port. If the Ethernet host is directly connected to the Ethernet Management port, without having to go through Ethernet switches, the default gateway-addr value is 0.0.0.0.

On the Cisco SFS 3012, you may access the Ethernet Management port on the currently active controller card only. The CLI always defaults to port 2 on the active controller card.

Command Output:

Table 6-74 describes the fields that appear in the **show interface mgmt-ethernet** command output.

Table 6-74 show interface mgmt-ethernet Command Output Fields

Field	Description
port	Ethernet management port number, in slot#/port# format.
mac-address	MAC address of the Ethernet management port.
auto-negotiate	Displays enabled if the port automatically negotiates link speed.
admin-status	Displays up if you enabled the port and down if you disabled the port.
ip-addr	IP address of the port.
mask	Subnet mask of the port.

Table 6-74 show interface mgmt-ethernet Command Output Fields (continued)

Field	Description
gateway-addr	Gateway configured for the port.
addr-option	Address option of the port (see the command: addr-option, page 2-5).

Examples

The following example displays the configuration of the Ethernet Management port on the active controller:

```
SFS-270# show interface mgmt-ethernet


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

                            Mgmt-Ethernet Information
================================================================================

                     port : 15/1
              mac-address : 00:05:ad:00:19:16
           auto-negotiate : enabled
             admin-status : up
                  ip-addr : 10.3.108.43
                     mask : 255.255.0.0
             gateway-addr : 10.3.0.1
              addr-option : static
```

Related Commands

gateway

show interface mgmt-ib

To display the status and address information for the virtual InfiniBand Management port, enter the **show interface mgmt-ib** command in User Exec mode or Privileged Exec mode.

show interface mgmt-ib

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use this command to verify that you have configured your InfiniBand Management port successfully. Compare this output to the configuration file and check for discrepancies. You must configure the InfiniBand Management port successfully to run telnet, SSH, and Element Manager.

Examples

The following example displays the status and address information of the InfiniBand Management port:

```
SFS-7000P# show interface mgmt-ib
============================================================
                          Mgmt-InfiniBand Information
============================================================
                    descr : Inband Management Port
             admin-status : up
                  ip-addr : 192.168.2.200
                     mask : 255.255.255.0
             gateway-addr : 0.0.0.0
SFS-7000P#
```

Related Commands

gateway
telnet

show interface mgmt-serial

This command displays the default configuration. This configuration cannot be changed. To display the configuration of the Serial Console port on the controller card of your Server Switch, enter the **show interface mgmt-serial** command in User Exec mode or Privileged Exec mode.

show interface mgmt-serial

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

The Serial Console port is the initial connection point with the system chassis and is used to configure the Ethernet Management and Infiniband Management ports. This port must be configured and a management station attached before any interaction with the system chassis is possible.

For the Cisco SFS 3012, you may only access the Serial Console port on the currently active controller card.

Examples

The following example displays the default interface management serial configuration:

```
SFS-7000P# show interface mgmt-serial
================================================================
                        Mgmt-Serial Information
================================================================
               baud-rate : 9600
               data-bits : 8
               stop-bits : 1
                  parity : off
SFS-7000P#
```

Related Commands

show interface mgmt-ethernet
show interface mgmt-ib
shutdown

show inventory

To display the inventory of your Server Switch and to see a description of the chassis and slots, enter the **show inventory** command in User Exec mode or Privileged Exec mode.

show inventory

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

General read-only user.

Command Output:

Table 6-75 describes the fields in the **show inventory** command output.

Table 6-75 Show Inventory Output

Field	Description
Name	Name of the switch.
Description	Description of the chassis or slot.
PID	Password ID.
VID	Volume ID.
SN	Serial number.

Examples

The following example displays the inventory of a Server Switch:

```
SFS-7008P# show inventory

============================================================================
                      Inventory Information
============================================================================
NAME : "chassis-0x5ad00000019d1" , DESCR : "Cisco Topspin 270 Chassis"
PID : TOPSPIN-270 , VID : B0 , SN : USP041800095

NAME : "slot-1" , DESCR : "Cisco Topspin 270 Powered 4x LIM Card"
PID : TS270LIM4XCP , VID : B0 , SN : PY0410xxxxxx

NAME : "slot-5" , DESCR : "Cisco Topspin 270 12X LIM Card"
```

```
PID : TS270LIM12XCP , VID : B0 , SN : PY0430000002

NAME : "slot-6" , DESCR : "Cisco Topspin 270 12X LIM Card"
PID : TS270LIM12XCP , VID : B0 , SN : PY0430000014

NAME : "slot-7" , DESCR : "Cisco Topspin 270 Powered 4x LIM Card"
PID : TS270LIM4XCP , VID : B0 , SN : PY0410xxxxxx

NAME : "slot-8" , DESCR : "Cisco Topspin 270 Powered 4x LIM Card"
PID : TS270LIM4XCP , VID : B0 , SN : PY0410xxxxxx

NAME : "slot-9" , DESCR : "Cisco Topspin 270 Fabric Card"
PID : TS270FABRIC , VID : B1 , SN : USP041300011

NAME : "slot-11" , DESCR : "Cisco Topspin 270 Fabric Card"
PID : TS270FABRIC , VID : B1 , SN : USP041300010

NAME : "slot-12" , DESCR : "Cisco Topspin 270 Fabric Card"
PID : TS270FABRIC , VID : B1 , SN : USP041200010

NAME : "slot-13" , DESCR : "Cisco Topspin 270 Fabric Card"
PID : TS270FABRIC , VID : A0 , SN : USP034000008

NAME : "slot-16" , DESCR : "Cisco Topspin 270 Management I/O Card"
PID : TS270MGMTIO , VID : A5 , SN : MX3054200258

SFS-7008P#
```

Related Commands

show card

show ip

To display IP configuration data, enter the **show ip** command in User Exec mode or Privileged Exec mode.

show ip [**address-table | route | http** [**server secure**]]

Syntax Description

address-table	(Optional) This keyword displays the address information of Ethernet interface ports, Ethernet interface cards, and InfiniBand interface cards. It lists the IP addresses, netmasks, broadcast formats, reassembly sizes, and whether or not the IP address is a primary or backup.
route	(Optional) This keyword displays the Classless Inter-Domain Routing (CIDR) forwarding records or routes (both static and dynamic) of all IP routes to system ports. Included in this information are the route destination, route type, route protocol, next hop, and port used.
http	(Optional) Displays current HTTP settings.
server secure	(Optional) Displays current secure HTTP server settings.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Use this command to view the results of the **ip** command.

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Ethernet read-only user.

Examples

The example below shows the output of the **show ip address-table** command. Note that port 0 always indicates the gateway port of the interface card.

```
SFS-7000P# show ip address-table
================================================================
                                IP Address Table
================================================================
port  address         mask            bcast-addr reasm    type     status
                                      format     max-size
--------------------------------------------------------------------------------
 4/0  192.168.2.1     255.255.255.0   1          0        primary  active
 4/1  192.168.1.1     255.255.255.0   1          0        primary  active
 4/2  192.168.3.1     255.255.255.0   1          0        primary  active
SFS-7000P#
```

The example below shows the local Ethernet routes for the system chassis. Local routes are automatically generated whenever you assign an IP address to a system card or port. The codes shown in the **proto** column are explained in the output header. A next-hop value of 0.0.0.0 always indicates a local route.

```
SFS-7000P# show ip route
================================================================================
                                      IP Routes
================================================================================
Protocol Codes: OT - other     L - local     NM - netmgmt    IC - icmp
E - egp     G - ggp    H - hello     R - rip     IS - ISIS    ES - ES_IS,
CI - ciscoIgrp    BS - bbnSpfIgp    O - OSPF    B - BGP    ID - IDPR

dest            mask             next-hop        port   type   proto metric
--------------------------------------------------------------------------------
10.10.0.3       255.255.255.0    192.168.1.0     4/1    remote NM    0
192.168.1.0     255.255.255.0    0.0.0.0         4/1    local  L     0
192.168.2.0     255.255.255.0    0.0.0.0         4/0    local  L     0
192.168.3.0     255.255.255.0    0.0.0.0         4/2    local  L     0
SFS-7000P#
```

Related Commands

ip

show ip http

To view the configuration of the HTTP server on your Server Switch, enter the **show ip http** command in User Exec mode or Privileged Exec mode.

show ip http

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Ethernet read-only user.

Use this command to determine if your HTTP server actively runs on your Server Switch, and to determine the HTTP port number that it uses.

Command Output:

Table 6-76 describes the fields in the command output.

Table 6-76 show ip http Command Output Field Descriptions

Field	Description
server	Displays “enabled” if you have activated the server with the **ip http server** command. Displays “disabled” if you have deactivated the server with the **no ip http server** command.
port	Displays the HTTP port number that the HTTP server uses.
polling	Displays “enabled” or “disabled” to indicate polling status.

Examples

The following example displays the configuration of the HTTP server on the Server Switch:

```
SFS-270# show ip http
================================================================================
                                IP HTTP Info
================================================================================
                  server : enabled
                    port : 80
                 polling : enabled
```

Related Commands

ip http

show ip http server secure

To view the HTTPS configuration on your Server Switch, enter the **show ip http secure server** command in User Exec mode or Privileged Exec mode.

show ip http secure server

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Ethernet read-only user.

Use this command to determine if HTTPS actively runs on your Server Switch and to determine the HTTPS port number that it uses.

Command Output:

Table 6-77 describes the fields in the command output.

Table 6-77 show ip http Command Output Field Descriptions

Field	Description
secure-server	Displays “enabled” if you have activated the server with the **ip http server** command. Displays “disabled” if you have deactivated the server with the **no ip http server** command.
secure-port	Displays the HTTP port number that the HTTP server uses.
secure-cert-common-name	Certificate name of the secure server.

Examples

The following example displays the HTTPS configuration on the Server Switch:

```
SFS-270# show ip http server secure
================================================================================
                              IP HTTP Secure Info
================================================================================
            secure-server : enabled
              secure-port : 443
  secure-cert-common-name : useMgmtEnetIpAddr
```

Related Commands

ip http

show location

To display the location data on your Server Switch, enter the **show location** command in User Exec mode or Privileged Exec mode.

show location

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

The **show location** command displays some contact information to the user; however, it may be configured to display any desired text string.

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Examples

The following example displays the location information that you configured with the **location** command:

```
SFS-7000P# show location
515 Ellis Street, Mountain View, CA 94043
SFS-7000P#
```

Related Commands

location
snmp-server
show version

show logging

To display the active system log file, enter the **show logging** command in User Exec mode or Privileged Exec mode.

show logging [**end**]

Syntax Description

end	(Optional) Displays approximately the last 10 entries in the system log and then continues to display log entries as they occur.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use this command to view any of the following:

- warnings
- errors
- notifications
- alerts

You may want to set the number of lines displayed per screen using the **terminal length** command. You can also use the **more** command on ts_log instead of the **show logging** command.

The **show logging end** command is the equivalent of using the UNIX **tail -f** command. The CLI continues to display log entries as they occur until you enter **Ctrl-c**. No other CLI commands may be entered until **Ctrl-c** is used to stop the log display.

We recommend that you set the terminal page length to 0 when using the end argument. Otherwise, you need to press the space bar to continue each time the maximum display length is reached. After you set the page length, do not change the terminal window size. Changing window size restores the terminal length to that of the window and restarts paging.

The system log file on the chassis controller is /var/log/topspin.

Examples: The following example displays the last 10 log entries:

```
SFS-7000P# show logging end
Jan  3 11:09:58 igr-cc ib_sm.x[597]: [INFO]: Successfully add pgid
fe80000000000000005ad0000001199 to mgid ff18a01b00000000000005ad00000002
Jan  3 17:02:56 igr-cc port_mgr.x[535]: [INFO]: port down - port=16/7, type=ib4xFX
Jan  3 17:02:58 igr-cc port_mgr.x[535]: [INFO]: port up - port=16/7, type=ib4xFX
Jan  3 18:21:46 igr-cc port_mgr.x[535]: [INFO]: port down - port=16/2, type=ib4xFX
Jan  3 18:21:48 igr-cc port_mgr.x[535]: [INFO]: port up - port=16/2, type=ib4xFX
Jan  3 19:35:55 igr-cc chassis_mgr.x[523]: [CONF]: [super]: config snmp trap-receiver
10.10.253.47
Jan  3 19:35:55 igr-cc chassis_mgr.x[523]: [CONF]: [super]: config snmp trap-receiver
10.10.253.47 version v2c
Jan  3 19:35:55 igr-cc chassis_mgr.x[523]: [CONF]: [super]: config snmp trap-receiver
10.10.253.47 community public
Jan  3 19:35:55 igr-cc chassis_mgr.x[523]: [CONF]: [super]: config snmp trap-receiver
10.10.253.47 community public
```

Related Commands

copy
logging
show fan
telnet
terminal

show ntp

To display

- the current date and time of your Server Switch,
- the Network Time Protocol (NTP) servers that your Server Switch uses to set the system clock,

enter the **show ntp** command in User Exec mode or Privileged Exec mode.

show ntp

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use the **clock set** command to set the time and date. Use the **ntp** command to set the NTP servers that are to maintain the system clock.

Examples

The following example displays the current date and time, as well as NTP server details:

```
SFS-7000P>  show ntp
============================================================
                    NTP Information
============================================================
                     Date : 04/16/03
                     Time : 16:02:43
               Server One : 10.3.120.55
               Server Two : 10.3.120.56
             Server Three : 10.3.120.57
SFS-7000P>
```

Related Commands

ntp
clock set

show power-supply

To display the status of the power supplies on your Server Switch, enter the **show power-supply** command in User Exec mode or Privileged Exec mode.

show power-supply

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

General read-only user.

Use this command to monitor the power supply. This command primarily serves to help management tools continuously monitor power supply status. Errors in the ts_log file may prompt you to check power supply status. Table 6-78 describes the power-supply fields.

Table 6-78 show power-supply Command Field Descriptions

Field	Description
type	Indicates AC power.
oper-status	Displays “up” or “down” to indicate the status of the power supply.
utilization	Displays percentage of power utilization when multiple power supplies provide power. Displays “n/a” when one power supply runs.
voltage	Voltage of the power supply.
product serial-number	Factory-assigned product serial number.
pca serial-number	Printed circuit assembly (PCA) serial number.
pca number	Printed Circuit Assembly (PCA) assembly number.
fru number	Field replaceable unit (FRU) number for the actual switch (select chassis) or chassis (select chassis).

Examples

The following example displays power supply details:

```
SFS-270> show power-supply

================================================================================
                           Power-supply Information
================================================================================
ps    type    oper-status   utilization   voltage
--------------------------------------------------------------------------------
1     AC      up            n/a           48
2     AC      down          n/a           48

================================================================================
                             Power-supply Seeprom
================================================================================
      product            pca                pca                fru
ps    serial-number      serial-number      number             number
--------------------------------------------------------------------------------
1     -                  -                  -                  -
2
```

Related Commands

show backplane
show fan
show sensor

show redundancy-group

To display redundancy group information, enter the **show redundancy-group** command in User Exec mode or Privileged Exec mode.

show redundancy-group [*rlb-id*]

Syntax Description

rlb-id	(Optional) Number of the redundancy group that you want to view.

Defaults

This command displays all redundancy groups by default.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Ethernet read-only user.

Use this command to view redundancy groups and attributes of redundancy groups.

Command Output:

Table 6-79 describes the fields in the command output.

Table 6-79 show redundancy-group Command Field Descriptions

Field	Description
rlb-id	Redundancy group ID.
name	Redundancy group name.
group-p_key	Partition key of the group.
load-balancing	Displays “enabled” if load balancing runs; otherwise, it displays disabled.
broadcast-forwarding	Displays true if broadcast forwarding is enabled; otherwise, it displays false.
multicast	Displays true if multicast forwarding is enabled; otherwise, it displays false.
num-members	Number of members in the redundancy group.
new-member-force-reelection	Displays true if the group is configured to reelect a new primary when a new member joins; otherwise, it displays false.

Examples

The following example displays the redundancy groups on the chassis:

```
SFS-7000P# show redundancy-group


================================================================================
                               Redundancy Groups
================================================================================
                      rlb-id : 1
                        name : QA_Test_1
                 group-p_key : ff:ff
               load-balancing : enabled
         broadcast-forwarding : false
                    multicast : true
                  num-members : 2
 new-member-force-reelection : false



================================================================================
                             Redundancy Group Members
================================================================================

bridge-group src-addr        last-receive
--------------------------------------------------------------------------------
1            192.168.3.248   Thu Jan  1 08:41:19 1970
3            192.168.3.248   Thu Jan  1 09:21:47 1970
```

Related Commands

redundancy-group

show running-status

To execute a thorough range of show commands for a particular technology, enter the **show running-status** command in User Exec mode or Privileged Exec mode.

show running-status {**all** | **ethernet** | **fc** | **ib**} [**to-file**]

Syntax Description

all	Runs show commands for Ethernet, Fibre Channel, and InfiniBand technologies.
ethernet	Runs show commands for Ethernet only.
fc	Runs show commands for Fibre Channel only.
ib	Runs show command for InfiniBand only.
to-file	(Optional) Saves the output of the show commands to a file in the syslog directory on your Server Switch and displays the name of the file.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

This command can generate a large amount of data. Data is displayed per **terminal length** command settings. When executed, this command first prompts you to verify your desire to generate the data. Enter **y** to continue or **n** to cancel.

The default output file is **syslog:igr**_*interface*_**runningstatus**, where *interface* may be ether, fc, ib, or all. If the file already exists, it will be overwritten. This text file may be uploaded to another system using the **copy** command or viewed using the **more** command.

Examples

The following example runs all Ethernet show commands:

```
SFS-7000P> show running-status ethernet
Are you sure you want to continue? [yes/no] y
Gathering system-wide information, please wait.....
SFS-7000P> show arp ethernet
================================================================
                                ARP Information
================================================================
port    physical-address       net-address         type
----------------------------------------------------------------
```

```
SFS-7000P> show arp ib

================================================================
                               ARP Information
================================================================
port physical-address                                net-address   type
----------------------------------------------------------------------------

SFS-7000P> show backplane
================================================================
                              Backplane Seeprom
================================================================
base-mac-addr        chassis-id
----------------------------------------------------------------
1a:0:a:3a:0:a        0x600000000
…
…
```

Related Commands

See most of the other **show** commands.

show interface ethernet
show interface fc

show sensor

To display the temperature at several key locations in your Server Switch, enter the **show sensor** command in User Exec mode or Privileged Exec mode.

show sensor

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

The **show sensor** command identifies the temperature sensors in the system chassis. It also reports their location in the chassis and the current temperature at that location. Chassis temperature should be monitored to verify the cooling efficiency of the blowers and your data center air-conditioning.

Temperatures are in degrees Celsius and vary depending upon their location.

Normal temperature levels for the Cisco SFS 3001 remain 10 to 20 degrees Celsius above the ambient temperature.

75 C would be an alarm temperature and the system will reset itself at 85 C.

Command Output:

Table 6-60 describes the output of the **show sensor** command.

Table 6-80 show sensor Command Field Descriptions

Field	Descriptions
sensor	Number of the temperature sensor.
oper-status	Operational status of the sensor (“up” or “down”).
oper-code (select Server Switches)	Operational code of the sensor.
temperature	Temperature that the sensor reads, in degrees Celsius.
alarm-temp (select Server Switches)	Temperature at which the sensor sounds an alarm.
shutdown-temp (select Server Switches)	Temperature at which the sensor shuts down the Server Switch.

Examples

The following example displays the temperature sensor information on the Server Switch:

```
SFS-270# show sensor


================================================================================
                                Sensor Information
================================================================================

sensor oper-status oper-code  temperature(c)  alarm-temp(c)   shutdown-temp(c)
--------------------------------------------------------------------------------

10/1   up          normal     35              75              85
11/1   up          normal     31              75              85
12/1   up          normal     29              75              85
13/1   up          normal     31              75              85
15/1   up          normal     38              70              80
16/1   up          normal     37              70              80
```

Related Commands

show fan
show power-supply

show snmp

To display the SNMP receivers for link traps on your Server Switch, enter the **show snmp** command in User Exec mode or Privileged Exec mode.

show snmp [**user** {**all** | *user-name*}]

Syntax Description

user	(Optional) Displays SNMP information for all users or for one particular user if you specify that user with the *user-name* variable.
user-name	(Optional) User with the SNMP information that you want to display.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Use this command to verify the SNMP servers that you configure with the **snmp-server** command.

Examples

The following example displays the SNMP trap receivers configured on the Server Switch:

```
SFS-270# show snmp

================================================================================
                                SNMP Information
================================================================================
                 contact : support@topspin.com
                location : 515 Ellis Street, Mountain View, CA 94043

================================================================================
                                 Trap Receivers
================================================================================
ipaddr            version     community        recv-events
--------------------------------------------------------------------------------
```

The following example displays the SNMP trap receivers for all users:

```
SFS-270# show snmp user

================================================================================
                            SNMPv3 User Information
================================================================================
                engine-id : 80:00:18:3b:05:05:00:30:30:30:30:30:31:39:37:64


                 username : admin
                auth-type : sha
           auth-password : C568FC22657A9EF602C0B81EEC159554B89DD75A
                priv-type : des56
           priv-password : C568FC22657A9EF602C0B81EEC159554
         permission-level : ib-rw, ip-ethernet-rw, fc-rw
                   enable : disabled


                 username : guest
                auth-type : none
                priv-type : none
         permission-level : ib-ro, ip-ethernet-ro, fc-ro
                   enable : disabled


                 username : super
                auth-type : md5
           auth-password : C447A2DCD5FE2AD2167DF19401881AE0
                priv-type : des56
           priv-password : C447A2DCD5FE2AD2167DF19401881AE0
         permission-level : unrestricted-rw
                   enable : disabled
```

Related Commands

link-trap
location
logging
snmp-server

show system

To display the current system global settings, enter the **show system** command in User Execute mode or Privileged Execute mode.

show system

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Use this command to verify that the SRP configuration is locked or unlocked.

Examples

The following example indicates that the ib counter reset is enabled:

```
SFS-7000P# show system
================================================================================
                              System Global Settings
================================================================================
  enable ib counter reset : enabled
```

Related Commands

system-mode

show system-mode

Use this command to verify that the SRP configuration is locked or unlocked. To display the current system mode (normal or VFrame), enter the show system-mode command in User Execute mode or Privileged Execute mode.

show system-mode

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

Unrestricted read-write user.

Examples

The following example indicates that the Server Switch is in its default unlocked mode:

```
SFS-7000P# show system-mode


================================================================================
                              System Operation Mode
================================================================================
                oper-mode : normal
```

Related Commands

system-mode

show system-services

Use this command to discover which system services (for example, telnet, ftp, and syslog) run on your Server Switch. You can configure any or all of these services to manage your Server Switch.To display system services such as FTP and telnet, enter the **show system-services** command in User Exec mode or Privileged Exec mode.

show system-services

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Examples

The following example displays the system services that run on the Server Switch:

```
SFS-7000P# show system-services
================================================================================
                              System Services
================================================================================
             ftp service : disabled
          telnet service : enabled
       syslog-server-one : 0.0.0.0
       syslog-server-two : 0.0.0.0
================================================================================
                                NTP Information
================================================================================
                    date : 03/29/06
                    time : 17:01:35
              server-one : 0.0.0.0
              server-two : 0.0.0.0
Press any key to continue (Q to quit)
```

Related Commands

ftp-server enable
history
radius-server
snmp-server
ntp
hostname

ip
telnet
terminal
config TACACS-server host

show terminal

To display terminal parameters, enter the **show terminal** command in User Exec mode or Privileged Exec mode.

show terminal

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use this command to view information about your CLI session. The command provides useful information such as timeout parameters, output-screen length, and history-buffer size.

Examples

The following example displays information about this CLI session.

```
SFS-7000P# show terminal
Console is enabled
Connection host address is 10.10.253.128
Length: 25 lines, Width: 80 columns
Timeouts: enabled, Value: 15 minutes
Session limit is set to 3
History is enabled, history size is 30
Maximum command length is 512 characters
Maximum login attempts is 5
```

Related Commands

telnet
terminal

show trace

To display the system program modules that your Server Switch calls, enter the **show trace** command in User Exec mode or Privileged Exec mode.

show trace app *application-number* [**module** *module-number*] [**card** *card-number*]

Syntax Description

app	Specifies the application to trace.
application-number	Number of the application to trace. Use the online help (?) to view a list of applications and application numbers.
module	(Optional) Specifies the module to trace.
module-number	Number of the module to trace. Use the online help (?) to view a list of modules and module numbers.
card	(Optional) Specifies the card to trace.
card-number	Number of the card to trace. Use the online help (?) to view a list of cards and card numbers.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Use this command for program debugging.

Examples

The following example traces application 9, module 1, card 2:

```
SFS-7000P> show trace app 9 mod 1 card 2
AMF              1    0x0         0x0
```

Related Commands

show logging
trace

show trunk

To display the current configuration of trunk groups, enter the **show trunk** command in User Exec mode or Privileged Exec mode.

show trunk [*trunk id*]

Syntax Description

trunk id	(Optional) ID of the trunk group.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user.

Use this command to view the trunk groups that you have configured on your Server Switch. You can verify trunk-group related changes that you have made to the configuration file with the **show trunk** command.

Examples

The following example displays the trunk groups on the Server Switch:

```
SFS-7000P# show trunk


================================================================================
                                Trunks Groups
================================================================================

          trunk-group-id : 1
        trunk-group-name :
       distribution-type : src-dst-mac
            port-members :
                  enable : false
                     mtu : 0
                mac-addr : 00:00:00:00:00:00
                 ifindex : 45057
```

Related Commands

distribution-type
trunk-group

show user

To display user information for yourself or one or more users on the Server Switch, enter the **show user** command in User Exec mode or Privileged Exec mode. No TACACS+ user information is stored locally, so the command **show user all** shows only local users.

show user [*user* | **all**]

Syntax Description

user	(Optional) User to display.
all	(Optional) Displays all users in the user database.

Defaults

The **show user** command without arguments displays the account information for the user who executes the command.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only and unrestricted read-write user.

Enter the **show user** command with no arguments to display your current user information. The command lists username, access level, status, and login statistics. All users may view their own user information, however, only an unrestricted read-write user may view the user information of others. The **show user** command tracks statistics that start from the last time the Server Switch booted.

Table 6-81 describes the fields in the **show user** command output.

Table 6-81 show user Command Field Descriptions

Field	Description
username	Login name of the user.
password	Encrypted user password.
snmp-community	The SNMP community string that the user needs to run SNMP commands and the Element Manager GUI.
permission-level	Permission restrictions that define the commands in the CLI that the user can access.
admin-status	Displays enabled if the user account can log in and execute commands. Displays disabled if an unrestricted user has suspended the account so no one can use it. Enable or disable an account with the **username** command.
num-logins	Number of times the login logged in since the Server Switch booted.

Table 6-81 show user Command Field Descriptions (continued)

Field	Description
num-unsuccessful-logins	Number of times the login failed to log in successfully since the Server Switch booted.
last-login	Most recent login with the username.
last-unsuccessful-login	Most recent failed login with the username.

Examples

The following example displays the admin user:

```
SFS-7000P> show user admin
================================================================
                    User Information
================================================================
                 username : admin
                 password : $1$IJ5..U6.$lSxb8uqVuUG7kOmiRsxHt1
           snmp-community : private
         permission-level : ib-rw, ip-ethernet-rw, fc-rw
             admin-status : enabled
               num-logins : 1
  num-unsuccessful-logins : 0
               last-login : Thu Apr 10 22:06:48 2003
  last-unsuccessful-login :
SFS-7000P>
```

The following example shows the login information of the current user:

```
SFS-7000P> show user
================================================================
                      User Information
================================================================
                 username : super
                 password : $1$IJ5..U6.$ES3pIhx/ccUaCKgM65vp6.
           snmp-community : secret
         permission-level : unrestricted-rw
             admin-status : enabled
               num-logins : 4
  num-unsuccessful-logins : 0
               last-login : Thu Apr 10 22:06:59 2003
  last-unsuccessful-login :
SFS-7000P>
```

Related Commands

username

show version

This command provides the software version, contact information, system up-time, time of last configuration change, and the last action performed on the Server Switch. To display a general, high-level description of your Server Switch, enter the **show version** command in User Exec mode or Privileged Exec mode.

show version

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

User Execute mode, Privileged Execute mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 7000, Cisco SFS 7008, Cisco SFS 3012, Cisco 4x InfiniBand Switch Module for IBM BladeCenter

Privilege Level:

General read-only user.

Command Output:

Table 6-82 describes the fields in the command output.

Table 6-82 Show Version Command Field Descriptions

Field	Description
system-version	OS version that the Server Switch runs.
contact	Displays the contact information that you configure with the **snmp-server** command. See the"snmp-server" section on page 2-66.
name	Displays the device name that you configure with the hostname command. See the"hostname" section on page 2-41.
location	Displays the location information that you configure with the **snmp-server** command. See the "snmp-server" section on page 2-66.
up-time	Amount of time since last boot.
last-change	Date and time of last configuration change.
last-config-save	Date and time that an administrator last saved the running configuration.
action	Executed action. See the "action" section on page 2-3.

Table 6-82 Show Version Command Field Descriptions (continued)

Field	Description
result	Result of executed action.
oper-mode	System mode of the Server Switch. See the "system-mode" section on page 2-71.
sys-sync-state (select chassis only)	Displays the synchronization state between the primary controller card and the hot standby controller card.

Examples

The following example displays the system version:

```
SFS-7000P# show version


================================================================================
                          System Version Information
================================================================================
           system-version : SFS-7000P TopspinOS 2.4.0 releng #14 05/26/2
005 09:20:57
                  contact : support@topspin.com
                     name : SFS-7000P
                 location : 515 Ellis Street, Mountain View, CA 94043
                  up-time : 1(d):13(h):45(m):12(s)
              last-change : Sat May 28 20:58:21 2005
         last-config-save : Fri May 27 08:12:03 2005
                   action : none
                   result : none
                oper-mode : normal
```

On the Cisco SFS 7008, the output includes the **sys-sync-state** field to display the synchronization state between the primary controller card and the hot standby controller card.

```
 SFS-270# show version


   ================================================================================
                             System Version Information
   ================================================================================
              system-version : TS 96-Port 4x Fabric Copper Switch (3xxxxx-001) Release
2.2.0 releng #9 01/15/2005 10:38:47
                    contact : Local TS support representative
                       name : SFS-7000P
                   location : 515 Ellis St Mountain View CA 94043
                   rack-uid : 0x0
                    up-time : 0(d):0(h):4(m):12(s)
                last-change : none
            last-config-save : none
                     action : none
                     result : none
              sys-sync-state : complete
```

Related Commands

hostname
location
snmp-server
show boot-config