



Fibre Channel Commands

This chapter documents the following commands:

- [fc srp initiator, page 3-2](#)
- [fc srp initiator-wwpn, page 3-5](#)
- [fc srp it, page 3-7](#)
- [fc srp itl, page 3-9](#)
- [fc srp lu, page 3-13](#)
- [fc srp target, page 3-17](#)
- [fc srp-global gateway-portmask-policy restricted, page 3-18](#)
- [fc srp-global itl, page 3-19](#)
- [fc srp-global lun-policy restricted, page 3-23](#)



Note

If you enter a Fibre Channel command and receive an error message that reads, “Operation temporarily failed - try again,” give your Fibre Channel gateway time to finish initializing, then retry the command.

fc srp initiator

To configure an initiator—normally a SAN-attached host but in IB terms a SRP host combined with a Server Switch—to communicate with a Fibre Channel SAN across a Fibre Channel gateway on your Server Switch, enter the **fc srp initiator** command in Global Configuration mode. To deny SAN access to the SRP host, to delete an initiator from the running configuration, or to reconfigure the description of the initiator to an empty string, use the **no** form of this command.

```
fc srp initiator guid extension { auto-bind | bootup target target-wwpn lu logical-unit |
description descr | discover-itl | pkey pkey-value | wwnn wwnn-value }
```

```
no fc srp initiator guid extension [description]
```

Syntax Description	
<i>guid</i>	Global unique identifier (GUID) of the SRP host. Note The GUID of your SRP host appears printed on the HCA in your server, and you can use host driver utilities to view the GUID. For more information, refer to the <i>Host Channel Adapter Installation Guide</i> .
<i>extension</i>	GUID extension of the SRP host.
auto-bind	1. Creates the initiator entry in the configuration file and binds the host to a world-wide node name (WWNN) that your Server Switch generates internally to uniquely identify the host. 2. Creates virtual ports for this initiator on every possible physical FC gateway port on your Server Switch. FC devices use these virtual ports to communicate with the initiator.
bootup	Configures the SRP host to boot from a Fibre Channel logical unit (LU).
target	Specifies the world-wide port name (WWPN) of the port of the FC storage device that stores image that you want the initiator to boot.
<i>target-wwpn</i>	WWPN of the port of the FC storage device that stores image that you want the initiator to boot.
lu	Specifies the logical unit (LU) that stores image that you want the initiator to boot.
<i>logical-unit</i>	Logical ID of the LU that stores image that you want the initiator to boot.
description	(Optional) Assigns an alphanumeric ASCII description string to the initiator.
<i>descr</i>	Alphanumeric ASCII description string to assign to the initiator.
discover-itl	Discovers initiator-target-LUN (ITL) combinations and adds them to your configuration file. Targets refer to SAN storage devices, and LUNs refer to the logical units within SAN storage devices.
pkey	Assigns a partition key (P_key) to the initiator. Note Your Server Switch does not currently support partition keys for SRP.
<i>pkey-value</i>	16-bit partition key to assign to the initiator. Assign multiple partition keys by appending a colon, then the next key (aa:aa:bb:bb:cc:cc:dd:dd).

wwnn	Creates the initiator entry in the configuration file and assigns a manually-entered WWNN to the initiator.
<i>wwnn-value</i>	WWNN to assign to the initiator.

Defaults

By default, no P_keys apply to initiators. By default, global policies apply to initiators. Configure global policies with **fc srp-global** commands.

Command Modes

Global Configuration (config) mode.

Usage Guidelines**Platform Availability:**

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user, Fibre Channel read-write user

Configure initiators so SRP hosts can communicate with SANs.

**Note**

When you configure new initiators, those initiators inherit the global policies that exist at that time. When you change global policies, the new global policies do not apply to existing initiators.

Before you can customize an initiator, you must create an initiator entry with the **auto-bind** keyword or the **wwnn** keyword. Once you identify a host as an initiator, you can customize the initiator with the remaining keywords.

Command Keyword Usage Guidelines:

- **auto-bind**

You must create initiators and assign, or *bind*, a WWNN (an identifier that FC devices recognize) to each initiator so that FC devices can communicate with initiators. When you use the **auto-bind** keyword to create an initiator and generate a WWNN for an initiator, your Server Switch creates a virtual port (NL_Port) that represents the initiator on every physical port on the FC gateway. Your Server Switch assigns an internally-generated WWPNN to each virtual port. Each physical port on the FC gateway supports 32 virtual ports to form a virtual FC arbitrated loop.

**Note**

We strongly recommend that you use the **auto-bind** keyword to assign WWNNs to initiators as you configure the initiators. If you do manual configuration, you may create duplicate WWNNs that create traffic conflicts.

- **description**

Enter a description to help identify an initiator without reading its GUID and extension.

- **discover-itl**

Discover ITLs to add all available initiator-target-LUN (ITL) groups to the running configuration. For detailed information on ITLs, refer to the *Fibre Channel Gateway User Guide*.

- pkey

Refer to the *Element Manager User Guide* to learn more about partitions.

- wwnn

When you enter a question mark (?) after the **wwnn** keyword, the CLI provides a recommended WWNN value.

Examples

The following example adds an initiator to the running configuration and automatically configures the WWNN of the initiator and the WWPNS of the virtual ports that point to the initiator from the physical FC gateway ports:

```
SFS-7000P(config)# fc srp initiator 00:00:2C:90:01:1b:b7:50 00:00:00:00:00:00:00:00
auto-bind
```

The following example assigns the description **InfiniBand Host** to an existing initiator. The name now appears in the **show fc srp initiator** command output:

```
SFS-7000P(config)# fc srp initiator 00:00:2C:90:01:1b:b7:50 00:00:00:00:00:00:00:00
description "InfiniBand Host"
```

The following example discovers all potential initiator-target-LUN (ITL) combinations that your Server Switch can support and adds them to the running configuration. To view the results of this command, enter the **show fc srp itl** command:

```
SFS-7000P(config)# fc srp initiator 00:00:2C:90:01:1b:b7:50 00:00:00:00:00:00:00:00
discover-itl
```

Related Commands

[fc srp-global lun-policy restricted](#)
[show fc srp initiator](#)

fc srp initiator-wwpn

To manually create, on a physical FC gateway port, a virtual port that points to an initiator, enter the **fc srp initiator-wwpn** command in Global Configuration mode.

fc srp initiator-wwpn *guid extension slot#/port# wwpn*

Syntax Description

<i>guid</i>	Global unique identifier (GUID) of the SRP host (initiator) that you want to connect to a Fibre Channel SAN.
<i>extension</i>	GUID extension of the SRP host that you want to connect to a Fibre Channel SAN.
<i>slot#</i>	Slot of the FC gateway expansion module that you want to use.
<i>port#</i>	Fibre Channel gateway port that you want to use to connect your initiator to the SAN.
<i>wwpn</i>	WWPN to assign to the new virtual port.

Defaults

This command has no default settings.

Command Modes

Global Configuration (config) mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user or Fibre Channel read-write user.

Configure WWPNs for initiators so that FC devices can recognize them and communicate with them. With virtual ports (NL_ports), physical FC ports can point to multiple initiators, and multiple ports can point to the same initiator. For instance, if you have Initiators X and Y and Physical FC Ports A and B, you can create the following virtual ports:

- virtual port AX on port A that points to initiator X
- virtual port AY on port A that points to initiator Y
- virtual port BX on port B that points to initiator X
- virtual port BY on port B that points to initiator Y

As you can see, in this way, multiple virtual ports can point to one initiator and individual physical ports can support multiple initiators.

When you enter a question mark (?) after the *port#* variable, the CLI provides a suggested WWPN value.



Note

Use the recommended WWPN unless you have a compelling reason to do otherwise. We *strongly* recommend that you use the **fc srp initiator** command with the **auto-bind** keyword to create initiator entries and assign WWPNs to initiators.

Examples

The following example uses the online help (?) to find the recommended WWPN value, then configures a virtual port on port 1 on the FC gateway expansion module in slot 7:

```
SFS-7000P(config)# fc srp initiator-wwpn 00:00:2c:90:01:1b:b7:50 00:00:00:00:00:00:00:00
7/1 ?
<wwpn>                                - wwpn
Suggested wwpn = 20:03:00:05:ad:70:00:02
SFS-7000P(config)# fc srp initiator-wwpn 00:00:2c:90:01:1b:b7:50 00:00:00:00:00:00:00:00
7/1 20:03:00:05:ad:70:00:02
SFS-7000P(config)#
```

Related Commands

fc srp initiator
show fc srp initiator

fc srp it

To configure an *initiator-target* (IT) pair—a fully-configured link between an initiator and a target storage device port—with your Server Switch, enter the **fc srp it** command in Global Configuration mode. To delete or reconfigure an IT pair entry from the configuration file, use the **no** form of this command.

```
fc srp it guid extension wwpn {description “descr” | discover-itl | gateway-portmask-policy
{default | test-mode | restricted port-selection}}
```

```
no fc srp it guid extension wwpn [test-mode | gateway-portmask-policy restricted
port-selection]
```

Syntax Description	
<i>guid</i>	Global unique identifier (GUID) of the initiator.
<i>extension</i>	GUID extension of the initiator.
<i>wwpn</i>	World-wide port name (WWPN) of the target port of the FC storage device.
description	Assigns a description to the initiator-target pair.
<i>descr</i>	Alphanumeric description to assign to the initiator target.
discover-itl	Discovers initiator-target-LUN (ITL) groups for the specified target and adds them to the configuration file. For detailed information on ITLs, refer to the <i>Fibre Channel Gateway User Guide</i> .
gateway-portmask-policy	(Optional) Designates the physical FC gateway ports that the initiator can use to access the storage port. When you add FC gateway ports to the policy, the initiator cannot use those ports to access the storage. When you use the no keyword to remove FC gateway ports from the policy, the initiator can access the storage through those ports.
default	Assigns the global gateway portmask policy to the IT. To view your default policy, enter the show fc srp-global command (in User Exec mode or Privileged Exec mode) and view the default-gateway-portmask-policy field.
restricted	(Optional) Denies the initiator access to the ports that you specify with the <i>port-selection</i> variable. Use the no form of the command to add ports to the policy to grant the initiator access.
<i>port-selection</i>	(Optional) Port, list of ports, or range of ports to which you grant or deny the initiator access.
test-mode	(Optional) Sets an inactive initiator-target pairing to test mode, which configures the FC gateway to log in to storage persistently and block log-ins from SRP hosts (initiators). Use test mode as you set up your Fibre Channel connections, then use the no form of the command to return to normal mode.
	Note You cannot configure an active IT to test mode. Active ITs must remain in normal mode.
	Note A test-mode configuration does not persist across reboots.

Defaults

By default, this policy denies initiators access to all targets.

Command Modes

Global Configuration (config) mode.

Usage Guidelines**Platform Availability:**

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user or Fibre Channel read-write user.

The **fc srp it** command sets policies that control the extent to which the initiator accesses Fibre Channel gateway ports. Use the **no** form of this command with the **gateway-portmask-policy** keyword to grant an initiator access to the ports you specify.

**Note**

We strongly recommends that you let your Server Switch populate the running configuration with IT pairs; do not manually enter IT pairs.

Examples

The following example assigns a description of **entry** to an existing IT:

```
SFS-7000P(config)# fc srp it 00:00:2c:90:01:1b:b7:40 00:00:00:00:00:00:00:00
21:00:00:04:cf:75:6b:3b description "entry"
```

```
Topspin-360(config)# fc srp it 00:02:c9:02:00:40:0e:d4 00:00:00:00:00:00:00:00 2
1:00:00:04:cf:86:a0:1f test-mode
Topspin-360(config)# fc srp it 00:02:c9:02:00:40:0e:d4 00:00:00:00:00:00:00:00 2
1:00:00:04:cf:86:a0:1f normal-mode
Error: Unrecognized command
```

```
Topspin-360(config)# no fc srp it 00:02:c9:02:00:40:0e:d4 00:00:00:00:00:00:00:00
0 21:00:00:04:cf:86:a0:1f test-mode
Topspin-360(config)#
```

Related Commands

[fc srp-global gateway-portmask-policy restricted](#)
[show fc srp it](#)
[show interface fc](#)

fc srp itl

To configure an initiator-target-LUN (ITL) group—a fully-configured link between an initiator and Fibre Channel storage—on your Server Switch, enter the **fc srp itl** command in Global Configuration mode. To delete an ITL entry or reset the description of an ITL to an empty string, use the **no** form of this command.



Note

For a breakdown of the different actions that you can perform with the **fc srp itl** command, refer to [Table 3-1](#).

```
fc srp itl guid extension wwpn LUN {description “descr” |
dynamic-gateway-port-failover [default] |
dynamic-gateway-port-loadbalancing [default] | dynamic-path-affinity [default] |
gateway-portmask-policy {default | restricted {port-selection | all}} |
io-hi-mark mark [default] | lun-policy {default | restricted} | max-retry retry [default]
| min-io-timeout timeout [default] | srp-lunid lunid logical-id logical-id}
```

```
no fc srp itl guid extension wwpn LUN {description | dynamic-gateway-port-failover |
dynamic-gateway-port-loadbalancing | dynamic-path-affinity |
gateway-portmask-policy restricted port-selection | io-hi-mark | lun-policy
restricted | max-retry | min-io-timeout}
```

Syntax Description

<i>guid</i>	Global unique identifier (GUID) of the initiator.
<i>extension</i>	GUID extension of the initiator.
<i>wwpn</i>	World-wide port name (WWPN) of the target port of the FC storage device.
<i>LUN</i>	FC LUN ID of the FC storage disk.
description	Assigns a text description to the ITL.
<i>descr</i>	Alphanumeric description (up to 50 characters) to assign to the initiator-target-LUN.
dynamic-gateway-port-failover	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
default	(Optional) Sets an attribute to its global default value.
dynamic-gateway-port-loadbalancing	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
dynamic-path-affinity	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
gateway-portmask-policy	Defines the port restrictions that apply to the initiator for that ITL.
restricted	Denies the initiator access to select ports or LUNs for the ITL. Grants the initiator access to select ports or LUNs when you use the no keyword.
<i>port-selection</i>	Port, list of ports, or range of ports that the initiator can or cannot access for the ITL.

all	Specifies all ports.
lun-policy	Permits the initiator to access the LUN or denies the initiator access to the LUN.
io-hi-mark	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
mark	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
max-retry	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
retry	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
min-io-timeout	The fc srp itl command no longer supports this syntax. Note This syntax appears for legacy purposes. Use the config fc srp lu command to set this feature.
timeout	The fc srp itl command no longer supports this syntax. This syntax appears for legacy purposes.
srp-lunid	Specifies a LUN ID called the SRP LUN ID to which you map an existing FC LUN ID. Essentially, this keyword creates an alias LUN ID.
lunid	SRP LUN ID that maps to an existing FC LUN ID. This value appears in the srp-lunid field of the show fc srp itl command output.
logical-id	Specifies the FC LUN ID to map to the SRP LUN ID.
logical-id	Complete Logical ID (entered without colons, as per the example below) of the LU that maps to the user-created SRP LUN ID. This value appears in the fc-lunid field of the show fc srp itl command output.

Defaults

Default values and behaviors appear in the Syntax Description and [Table 3-1 on page 3-11](#).

Command Modes

Global Configuration (config) mode.

Usage Guidelines**Platform Availability:**

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user or Fibre Channel read-write user.

The **fc srp itl** command configures new ITLs and sets policies to control access that the SCSI RDMA Protocol (SRP) initiator has to the Fibre Channel storage devices on a per-lun basis. An “initiator-target-lun” (ITL) identifies a fully-configured link between an initiator and storage.

When an ITL entry is created, the gateway-portmask-policy setting is independent of its IT entry. You may change the setting on a per ITL basis. However, a port is accessible for an ITL only when the port is accessible for both the IT and ITL entries.

The port list specified in this command creates an accumulative effect to the actual gateway-portmask-policy. For example, if your current mask is 2/1 and 2/2, after you enter the **config fc srp itl gateway-portmask-policy restricted 2/1** command, the result of the mask for this ITL would be 2/2. The same effect applies to the no-command for gateway-portmask-policy.

We recommend that you create ITLs with the **discover-itl** keyword in the CLI or the **Discover LUNs** button in Element Manager.

Table 3-1 *fc srp itl Command Usage Examples*

Example	Result
fc srp itl <i>guid extension wwpn LUN</i> srp-lunid <i>lunid logical-id logical-id</i>	Creates an SRP LUN ID alias for an existing FC LUN ID.
no fc srp itl <i>guid extension wwpn LUN</i>	Deletes an ITL entry from the ITL table.
fc srp itl <i>guid extension wwpn LUN</i> description " <i>descr</i> "	Assigns a text description to the ITL.
no fc srp itl <i>guid extension wwpn LUN</i> description	Resets the description of the ITL to an empty string.
fc srp itl <i>guid extension wwpn LUN</i> gateway-portmask-policy restricted <i>port-selection</i>	Denies the ITL access to the ports that you specify with the <i>port-selection</i> variable.
fc srp itl <i>guid extension wwpn LUN</i> gateway-portmask-policy default	Applies the current IT gateway-portmask-policy configuration to the ITL. The whole port list is copied from the IT entry to the ITL entry. You configure the default access with the fc srp-global gateway-portmask-policy restricted command.
no fc srp itl <i>guid extension wwpn LUN</i> gateway-portmask-policy restricted <i>port-selection</i>	Grants the ITL access to the ports that you specify with the <i>port-selection</i> variable. Default: An ITL entry inherits its gateway-portmask-policy configuration from its IT entry at entry creation time.
fc srp itl <i>guid extension wwpn LUN</i> lun-policy restricted	Denies the initiator access to the storage.
no fc srp itl <i>guid extension wwpn LUN</i> lun-policy restricted	Grants the initiator access to the storage.
fc srp itl <i>guid extension wwpn LUN</i> lun-policy default	Resets the LUN-policy to the global default. Set the default with the fc srp-global lun-policy restricted command.

Examples

This example denies the initiator access to port 1 of Fibre Channel interface card 6 for this ITL:

```
SFS-7000P(config)# fc srp itl 00:00:2c:90:01:1b:b7:40 00:00:00:00:00:00:00:00
21:00:00:04:cf:75:6b:3b 00:00:00:00:00:00:00:00 gateway-portmask-policy restricted 6/1
```

The following example creates a SRP LUN and maps a LU to it:

```
SFS-7000P(config)# fc srp itl 00:02:c9:01:07:fc:64:a0 00:00:00:00:00:00:00:00
21:00:00:04:cf:fb:8c:87 00:00:00:00:00:00:00:00 srp-lunid 01:01:01:01:01:01:01
logical-id 0103000820000004cfff8c870000000000000000000000000000000000000000
000000000000000000000000000000000000000000000000000000000000000000
```

Related Commands

[fc srp lu](#)
[fc srp target](#)
[show fc srp-global](#)
[show fc srp initiator](#)
[show fc srp it](#)
[show fc srp itl](#)
[show fc srp lu](#)

fc srp lu

To configure a logical unit, enter the **fc srp lu** command in Global Configuration mode. To delete a logical unit or to set a LU attribute to the factory default value, use the **no** form of this command.

```
fc srp lu logical-id { description "descr" | device-category { random target wwpn |
sequential target wwpn } | dynamic-gateway-port-failover [default] |
dynamic-gateway-port-loadbalancing [default] | dynamic-path-affinity [default] |
io-hi-mark mark [default] | max-retry retry [default] | min-io-timeout timeout
[default] | target wwpn }
```

```
no fc srp lu logical-id { dynamic-gateway-port-failover |
dynamic-gateway-port-loadbalancing | dynamic-path-affinity | target }
```

Syntax	Description
<i>logical-id</i>	LU identifier in 64-byte, hexadecimal format <i>without colons</i> (see example).
description	Assigns a textual description to the LU.
<i>descr</i>	Alphanumeric description to assign to the LU.
device-category	Configures the device category of the LU: random (disk) or sequential (tape).
random	Identifies a LU for a random device.
sequential	Identifies a LU for a sequential device
dynamic-gateway-port-failover	Enables dynamic gateway port failover so that if one gateway port fails, the other port on the gateway maintains the traffic to the LU.
default	(Optional) Sets an attribute to its global default value.
dynamic-gateway-port-loadbalancing	Enables gateway port load balancing across multiple ports for this LU to optimize performance and utilize all available bandwidth.
dynamic-path-affinity	Enables dynamic path affinity for this LU, which locks a storage connection to a path for the duration of data transfer to provide faster, more efficient data delivery.
io-hi-mark	Configures the maximum amount of I/O that the LU can send to the initiator.
<i>mark</i>	Maximum amount of I/O (integer value from 1 - 256) that the initiator can send to the storage device (LU). This value defaults to 5.
max-retry	Maximum number of times that the initiator unsuccessfully sends data to a LU before the initiator identifies the LU as inaccessible.
<i>retry</i>	Integer value from 1 - 100. The <i>retry</i> variable defaults to 5.
min-io-timeout	Configures the maximum amount of time during which the storage device can accept I/O.
<i>timeout</i>	Maximum amount of time during which a storage device can accept I/O. Integer value from 1 - 1800. This value defaults to 10.
target	Specifies a target to add to the LU target list.
<i>wwpn</i>	World-wide port name (WWPN) of the target port to add to the LU target list.

Defaults Refer to the Syntax Description for default behavior and values.

Command Modes Global Configuration (config) mode.

Usage Guidelines **Platform Availability:**

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user or Fibre Channel read-write user.

Use the **fc srp lu** command to configure LU attributes.

We recommend that you do not manually create LUs. We recommend that you let your gateway card(s) detect LUs. The gateway card automatically creates LU entries when it discovers LUs.

For the following settings, the LU entry gets the default from srp-global settings at entry creation time depending on the LU category.

Once a LU entry is created, the LU settings are independent of the srp-global. You may change the settings on a per LU basis using this command.

[Table 3-2](#) provides usage guidelines for this command.

Table 3-2 Usage Guidelines for fc srp lu Command Arguments

Argument	Description
dynamic-gateway-port-failover	Default: the configured value of the srp-global itl command for this LU category(random/sequential). Allows the controller to select an alternate gateway interface port if the primary path fails. Enter the fc srp lu command with this keyword to enable this feature. Otherwise, use the no form of the command string to disable this feature. If you enable this policy, you implicitly disable port load balancing and dynamic path affinity.
dynamic-gateway-port-loadbalancing	Default: the configured value of the srp-global itl command for this LU category(random/sequential). Allows data to be sent between the initiator and Fibre Channel target using all available ports on the gateway interface. Port selection relies upon comparative I/O traffic. The controller attempts to distribute traffic equally between the ports. Enter the fc srp lu command with this keyword to enable this feature. Otherwise, user the no form of the command string to disable this feature. If you enable this policy, you implicitly disable port failover and dynamic path affinity.

Table 3-2 **Usage Guidelines for `fc srp lu` Command Arguments (continued)**

Related Commands

[fc srp itl](#)
[show fc srp initiator](#)
[show interface fc](#)
[show fc srp-global](#)
[show fc srp lu](#)

fc srp target

To configure targets, enter the **fc srp target** command in Global Configuration mode. To delete a target from the running configuration, use the **no** form of this command.

fc srp target *wwpn* {**description** *desc* | **ioc-guid** *guid*}

no fc srp target *wwpn* [**description** | **service-name**]

Syntax Description

<i>wwpn</i>	World-wide port name (WWPN) of the target port.
description	(Optional) Applies a text description to the target port.
<i>desc</i>	Description to apply to the target port.
ioc-guid	Manually assigns an I/O Controller (IOC) to the target.
<i>guid</i>	GUID of the IOC to assign to the target.
service-name	(Optional) Configures the service name of the target to an empty string.

Defaults

The service name serves as the default target name.

Command Modes

Global Configuration (config) mode.

Usage Guidelines

Platform Availability:

Cisco SFS 3001, Cisco SFS 3012

Privilege Level:

Unrestricted read-write user or Fibre Channel read-write user.

Use the **fc srp target** command to configure target attributes.

We recommend that you allow your gateway cards to detect targets. We recommend that you let your gateway card(s) detect targets. A gateway card automatically creates FC-SRP target entries when it discovers targets.

Examples

The following example assigns a name to identify the target easily:

```
SFS-7000P(config)# fc srp target 21:00:00:04:cf:75:6b:3b description jumbalya
```

Related Commands

fc srp itl
show interface fc
show fc srp initiator

fc srp-global gateway-portmask-policy restricted

To deny new initiators port access to FC gateway ports, enter the **fc srp-global gateway-portmask-policy restricted** command in Global Configuration mode. To grant port access to new initiators, enter the **no** form of this command.

fc srp-global gateway-portmask-policy restricted

no fc srp-global gateway-portmask-policy restricted

Syntax Description This command has no arguments or keywords.

Defaults Restricted

Command Modes Global Configuration (config) mode.

Usage Guidelines

Platform Availability:
Cisco SFS 3001, Cisco SFS 3012

Privilege Level:
Unrestricted read-write user or Fibre Channel read-write user.

Apply the default policy to new ITs and ITLs to restrict access so new SRP initiators do not use the Fibre Channel gateway or see the Fibre Channel fabric. If you do not restrict access, new SRP initiators can communicate through the FC gateway ports. You can modify access policies on an individual basis with the **fc srp itl** command.



Note

Policies only apply to ITs and ITLs that you create after you configure the policies.

Examples The following example denies port access to all new ITLs:

```
SFS-7000P(config)# fc srp-global gateway-portmask-policy restricted
```

Related Commands

[show fc srp initiator](#)
[show interface fc](#)

fc srp-global itl

To configure the default attributes that your Server Switch assigns to all new ITLs, enter the **fc srp-global itl** command in Global Configuration mode. To configure any attribute to an empty string or disable an attribute, use the **no** form of this command.

```
fc srp-global itl [sequential] {dynamic-gateway-port-failover |  
dynamic-gateway-port-loadbalancing | dynamic-path-affinity | io-hi-mark mark |  
max-retry retry | min-io-timeout timeout}
```

```
no fc srp-global itl [sequential] {dynamic-gateway-port-failover |  
dynamic-gateway-port-loadbalancing | dynamic-path-affinity | io-hi-mark |  
max-retry | min-io-timeout}
```

Syntax Description	
sequential	(Optional) Configures SRP global defaults for ITLs of sequential access devices.
dynamic-gateway-port-failover	The fc srp-global itl command no longer supports this syntax. This syntax appears for legacy purposes.
dynamic-gateway-port-loadbalancing	The fc srp-global itl command no longer supports this syntax. This syntax appears for legacy purposes.
dynamic-path-affinity	The fc srp-global itl command no longer supports this syntax. This syntax appears for legacy purposes.
io-hi-mark	Assigns the maximum number of I/O requests that the initiator can send to the storage device.
<i>mark</i>	Maximum number of requests that the initiator can send to the storage device.
max-retry	Assigns the maximum number of consecutive, failed attempts to pass traffic to a LUN that the initiator makes before it identifies the LUN as inaccessible.
<i>retry</i>	Number of retries before an initiator recognizes a LUN as inaccessible.
min-io-timeout	Configures the maximum amount of time during which the storage device can accept I/O.
<i>timeout</i>	Maximum amount of time during which a storage device can accept I/O.

Defaults By default, the **fc srp-global itl** command configures ITLs for random (non-sequential) targets. For additional default values, see [Table 3-3 on page 3-20](#).

Command Modes Global Configuration (config) mode.

Usage Guidelines **Platform Availability:**
Cisco SFS 3001, Cisco SFS 3012

Privilege Level:
Unrestricted read-write user or Fibre Channel read-write user.

Table 3-3 provides usage guidelines for this command.

Table 3-3 Usage Guidelines for `fc srp-global itl` Command Arguments

Policy	Description
sequential	(Optional) Configures SRP global defaults for LUs of sequential access devices. Without this keyword, the configuration will be for the global defaults for LUs of random access devices.
dynamic-gateway-port-failover	SRP global defaults for LUs of random/sequential access devices. Default for random devices: false Default for sequential devices: true This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Allows the controller to select an alternate gateway interface port if the primary path fails. Enter the fc srp-global itl command with this keyword to enable this feature. Otherwise, include the no keyword at the beginning of the command string to disable this feature. If you enable this policy, you implicitly disable port load balancing and dynamic path affinity.
dynamic-gateway-port-loadbalancing	SRP global defaults for LUs of random/sequential access devices. Default for random devices: true Default for sequential devices: false This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Allows data to be sent between the initiator and Fibre Channel target using all available ports on the gateway interface. Port selection relies upon comparative I/O traffic. The controller attempts to distribute traffic equally between the ports. Enter the fc srp-global itl command with this keyword to enable this feature. Otherwise, include the no keyword at the beginning of the command string to disable this feature. If you enable this policy, you implicitly disable port failover and dynamic path affinity.

Table 3-3 *Usage Guidelines for fc srp-global itl Command Arguments (continued)*

Policy	Description
dynamic-path-affinity	SRP global defaults for LUs of random/sequential access devices. Default for random devices: false Default for sequential devices: false This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Allows the system to maintain a preference for a specific path. If the number of outstanding I/Os becomes excessive, or the path fails, the gateway uses an alternate path. When enabled, the gateway uses the current path until the path condition changes. Note Frequent switching degrades performance. Enter the fc srp-global itl command with this keyword to enable this feature. Otherwise, include the no keyword at the beginning of the command string to disable this feature. If you enable this policy, you implicitly disable port failover and port loadbalancing.
io-hi-mark <i>mark</i>	SRP global defaults for LUs of random/sequential access devices. Default for random devices: 16 Default for sequential devices: 1 This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Sets the maximum number of I/O requests that can be sent per logical unit. The value, an integer, must fall between 1 and 256. The hi mark defaults to 16. Enter the fc srp-global itl command with this keyword and the desired io-hi-mark value to set this feature.

Table 3-3 Usage Guidelines for *fc srp-global itl* Command Arguments (continued)

Policy	Description
max-retry <i>retry</i>	SRP global defaults for LUs of random/sequential access devices. Default for random devices: 5 Default for sequential devices: 1 This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Number of times the same I/O request may be sent to a logical unit. Increase the value if heavy traffic runs, or increase the min-io-timeout value. The value, an integer, must fall between 1 and 100. The retry value defaults to 5. Enter the fc srp-global itl command with this keyword and the desired max-retry value to set this feature.
min-io-timeout <i>timeout</i>	SRP global defaults for LUs of random/sequential access devices. Default for random devices: 10 Default for sequential devices: 60 This value is applied to LU entries as their default setting at entry creation time. You can overwrite the value on LU basis later. Maximum amount of time allowed for I/O traffic to be accepted by a logical unit. Increase this value (or increase the max-retry value) if you use a known slow connection. The value, an integer, must fall between 1 and 1800. The timeout defaults to 10 seconds.

Examples

The following example sets the I/O high mark of the ITL to 32:

```
SFS-7000P(config)# fc srp itl 00:05:ad:00:00:01:29:c5 00:00:00:00:00:00:00:00  
21:00:00:04:cf:f6:c2:ab 00:00:00:00:00:00:00:00 io-hi-mark 32
```

Related Commands

[show interface fc](#)
[show fc srp-global](#)

fc srp-global lun-policy restricted

Enable LUN masking on all new ITs and ITLs, with the **fc srp-global lun-policy restricted** command in Global Configuration mode. Disable default LUN masking with the **no** form of the command.

fc srp-global lun-policy restricted

no fc srp-global lun-policy restricted

Syntax Description This command has no arguments or keywords.

Command Modes Global Configuration (config) mode.

Usage Guidelines

Platform Availability:
Cisco SFS 3001, Cisco SFS 3012

Privilege Level:
Unrestricted read-write user or Fibre Channel read-write user.

Enable global LUN masking to deny LUN access to new initiators so that they cannot communicate with SAN nodes until you grant them access on an individual basis. Disable LUN masking to grant new ITLs immediate access to all LUNs.



Note

An initiator requires both port and LUN access before it can successfully access a LUN. To grant port access, use the **fc srp-global gateway-portmask-policy restricted**, **fc srp it** and **fc srp itl** commands.



Note

Policies only apply to ITs and ITLs that you create after you configure the policies.

Examples The following example denies all new initiators access to all LUNs:

```
SFS-7000P(config)# fc srp-global lun-policy restricted
```

Defaults Restricted.

■ `fc srp-global lun-policy restricted`

Related Commands

[authentication](#)
[radius-server](#)
[fc srp it](#)
[fc srp itl](#)
[fc srp-global gateway-portmask-policy restricted](#)
[show fc srp-global](#)