C H A P T E R **13**

FibreChannel Menu Tasks

These topics describe the FibreChannel menu tasks for Element Manager:

Note This chapter describes Fibre Channel storage tasks. For detailed information and configuration samples, see the *Cisco SFS 3000 Series Product Family Fibre Channel Gateway User Guide*.

Some FibreChannel menu options include edit icons. Table 13-1 describes those icons.

Table 13-1 *SRP Navigation Icons*

Icon	Description
	The Copy icon copies the contents of cell(s). Select another editable cell or multiple editable cells, and paste the content.
	The Paste icon places copied content into the cell or cells that you select. You can paste the content of one cell into multiple cells. You can paste the content of two side-by-side cells into multiple rows of side-by-side cells.
	The Reset icon returns cells to the values held before you edited them. **Note** You can only reset cells before you click Apply.

Viewing and Configuring Global SRP Attributes

These topics describe FibreChannel menu tasks for viewing and configuring global SRP attributes:

- Viewing Global SRP Attributes, page 13-2
- Configuring Global ITL Attributes, page 13-3

Viewing Global SRP Attributes

To view global SRP attributes, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Global** tab.

Table 13-2 describes the fields in the tab.

Table 13-2   Global Attribute Field Descriptions

Field	Description
DefaultGatewayPortMaskPolicy	Boolean value that indicates if ports allow new SRP initiators to communicate through the Fibre Channel interface card(s).
DefaultLunPolicy	Boolean value that indicates if new SRP initiators have immediate access to target LUNs.
DefaultItlHiMark	Maximum number of requests that can be sent per logical unit. This value, an integer, falls between 1 and 256. This value defaults to 16.
DefaultItlMaxRetry	Number of times that an initiator may send the same I/O to a logical unit. Increase the value if you expect heavy traffic, or increase the default-itl-min-io-timeout value. The value, an integer, falls between 1 and 100. The value defaults to 5.
DefaultItlMinIoTimeout	Maximum amount of time for a logical unit to accept I/O traffic. Increase this value if you use a known slow connection, or increase the default-itl-max-retry value. The value, an integer, falls between 1 and 1800. The value defaults to 10 seconds.
DefaultItlDynamicPathAffinity	Boolean value that indicates if the system maintains a preference for a specific path. If the number of outstanding I/O requests becomes excessive, or the path fails, the ITL uses an alternative path.

Table 13-2   Global Attribute Field Descriptions (continued)

Field	Description
DefaultItlDynamicGatewayPortLoadBalancing	Boolean value that indicates if data may be sent between the initiator and Fibre Channel target using both ports on the gateway interface. Port selection is based upon comparative I/O traffic. The controller attempts to distribute traffic equally between the ports. This feature runs by default.
DefaultItlDynamicGatewayPortFailover	Boolean value that indicates if the controller may select an alternate gateway interface port if the primary path fails. This feature does not run by default.
DefaultSeqItlHiMark	Default I/O high mark for a sequential device.
DefaultSeqItlMaxRetry	Default for the maximum number of retries for a sequential device.
DefaultSeqItlMinIoTimeout	Default for the maximum number of retries for a sequential device.
DefaultSeqItlDynamicPathAffinity	Default for the dynamic path affinity setting for a sequential device.
DefaultSeqItlDynamicGatewayPortLoadBalancing	Default of the dynamic path affinity setting for a sequential device.
DefaultSeqItlDynamicGatewayPortFailover	Boolean value that indicates if the controller may select an alternate storage port if the primary path fails. This feature does not run by default.

Configuring Global ITL Attributes

Note   When you change global attributes, the new attributes do not apply to existing ITLs. Newly created ITLs have the new global attributes, but you must manually update existing ITLs to match the properties of the new ITLs.

To configure global ITL attributes, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Global** tab.

Step 3   Click one of these radio buttons in the DefaultGatewayPortMaskPolicy field to configure the gateway port mask policy:

- Click the **restricted** radio button to deny new initiators access to Fibre Channel gateway ports.

- Click the **nonRestricted** radio button to grant new initiators access to Fibre Channel gateway ports.

Step 4   In the DefaultLunPolicy field, click one of these radio buttons to configure the LUN mask policy:

- Click the **restricted** radio button to deny new initiators access to logical units.

- Click the **nonRestricted** radio button to grant new initiators access to logical units.

Step 5   Configure global defaults for nonsequential (random) storage devices as follows:

- **a.** In the DefaultItlHiMark field, enter an integer value, between 1 and 256, to specify the maximum number of requests that Fibre Channel gateways send to individual logical units.

- **b.** In the DefaultItlMaxRetry field, enter an integer value, between 1 and 100, to specify the number of times that an initiator may send the same I/O to a logical unit.

- **c.** In the DefaultItlMinIoTimeout field, enter an integer value, between 1 and 1800, to specify the amount of time (in seconds) for an ITL to accept I/O traffic.

- **d.** (Optional) Check the **DefaultItlDynamicPathAffinity** check box.

- **e.** (Optional) Check the **DefaultItlDynamicGatewayPortLoadBalancing** check box.

- **f.** (Optional) Check the **DefaultItlDynamicGatewayPortFailover** check box.

Step 6   Configure global defaults for sequential (tape) storage devices as follows:

- **a.** In the DefaultSeqItlHiMark field, enter an integer value, between 1 and 256, to specify the maximum number of requests that Fibre Channel gateways will send to individual logical units.

- **b.** In the DefaultSeqItlMaxRetry field, enter an integer value, between 1 and 100, to specify the number of times an initiator may send the same I/O to a logical unit.

- **c.** In the DefaultSeqItlMinIoTimeout field, enter an integer value, between 1 and 1800, to specify the amount of time (in seconds) for an ITL to accept I/O traffic.

- **d.** (Optional) Check the **DefaultSeqItlDynamicPathAffinity** check box.

- **e.** (Optional) Check the **DefaultSeqItlDynamicGatewayPortLoadBalancing** check box.

- **f.** (Optional) Check the **DefaultSeqItlDynamicGatewayPortFailover** check box.

Step 7   Click **Apply**.

Viewing and Configuring SRP Initiators

View or configure SRP initiators either in tabular format in the Element Manager SRP window or in modular format in the Storage Manager.

These topics describe the FibreChannel menu tasks for viewing and configuring SRP initiators:

Viewing SRP Initiators

To view SRP initiators in tabular format in the SRP window, follow these steps:

Step 1 From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2 Click the **Initiators** tab.

Table 13-3 describes the fields in the tab.

Table 13-3   Initiators Table Field Descriptions

Field	Description
Guid	Global Identifier of the initiator.
Extension	GUID extension of the initiator.
Description	ASCII text identifier of the initiator.
Wwnn	Fibre Channel gateway-assigned world-wide node name of the initiator.
Credit	Maximum number of outstanding SRP requests for each initiator connection.
State	When an initiator logs in to a target, the gateway port through which the connection goes through is marked '1'B. Otherwise, the port is marked '0'B.
PkeyCount	Number of partitions of which the initiator is a member (maximum of 16).
Pkeys	Partition keys of the partitions of which the initiator is a member.
BootupTargetWwpn	World-wide port name of the target that the initiator boots by default.
BootupFcLunId	Identifier of the LU that contains the boot image that the initiator boots.
AltBootupTargetWwpn	World-wide port name of the alternate target that the initiator boots.
AltBootupFcLunId	Identifier of the LU that contains the alternate boot image that the initiator boots.
Action	Last initiator action. This action can be any of the following: • none–initial State before the initiator takes any action. • discoveritl–Discovers and creates ITL entities for this initiator without the initiator logging in. • autoBind–Binds the initiator to its WWNN and WWPNs.
Result	Result of the action in the Action column.

Configuring Existing SRP Initiators

To configure existing SRP initiators (hosts), follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Initiators** tab.

Step 3   Identify the initiator entry that you want to reconfigure and locate that entry in the Initiators table.

Step 4   (Optional) In the Description column, double-click the cell, and then edit the description.

Step 5   (Optional) In the Wwnn column, double-click the cell, and then edit the WWNN.

> **Note**   We strongly recommend that you never manually edit an existing world-wide node name.

Step 6   (Optional) In the Pkeys column, double-click the cell, and then edit the partition keys.

> **Note**   We strongly recommend that you never manually edit an existing partition key entry.

Step 7   (Optional) In the BootupTargetWwpn field double-click the cell, and enter a new boot target.

Step 8   (Optional) In the BootupFcLunId field, double-click the cell, and enter a new boot LUN.

Step 9   (Optional) Click the cell in the Action column and choose an action from the drop-down menu.

The action executes when you click **Apply** and the result appears in the Result column of the table.

Step 10   Click **Apply**.

Viewing and Managing SRP Initiators with Storage Manager

These topics describe how to view and manage SRP initiators with Storage Manager:

Viewing SRP Initiators with Storage Manager

To view SRP initiators with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **SRP Hosts** folder.

The SRP Hosts display appears in the right pane. Table 13-4 describes the fields in this pane.

Table 13-4   SRP Hosts Field Descriptions Pane

Field	Description
Host	Hostname of the initiator.
WWNN	Fibre Channel gateway-assigned world-wide node name of the initiator.
Ports Registered With	Fibre Channel gateway ports through which the initiator connects to storage.

Viewing General SRP Initiator Details with Storage Manager

To view general SRP initiator details with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Click the initiator with details that you want to view.

The details appear in the right pane. Table 13-5 describes the fields in this pane.

Table 13-5   Initiator Details Field Descriptions Pane

Field	Description
SRP Initiator ID	GUID and GUID extension of the initiator, separated by a forward-slash (/).
Ports Registered With	Fibre Channel gateway ports through which the initiator connects to storage.
WWNN	Fibre Channel gateway-assigned world-wide node name of the initiator.
Description	ASCII text identifier of the initiator.
Boot Target WWPN	World-wide port name of the target that the initiator boots by default.
Boot FC LUN	Identifier of the LU that contains the boot image that the initiator boots.
AltBootupTargetWwpn	World-wide port name of the target that the initiator boots as an alternate.

Table 13-5   Initiator Details Field Descriptions Pane (continued)

Field	Description
AltBootupFcLunId	Identifier of the LU that contains the boot image that the initiator boots as an alternate.
WWPNs	When you configure an initiator and autobind the initiator to a WWNN and to WWPNs, autobinding creates virtual WWPNs for each possible Fibre Channel gateway port that could potentially appear on the server switch. • The Slot/Port column of the WWPNs table displays all of the potential Fibre Channel gateway ports on the chassis. • The WWPN column of the WWPNs table displays the WWPN that autobinding created for each possible physical Fibre Channel gateway port. Storage devices use these WWPNs to communicate with the initiator. • The Fibre Channel Address column of the WWPNs table displays the Fibre Channel address of the virtual port. When the physical Fibre Channel gateway port does not connect to storage, the address appears as 00:00:00. • VSAN ID of the interface that is statically assigned.

Viewing Initiator-Target Connections with Storage Manager

To view initiator-target connections with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the SRP Hosts folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Click the initiator with connections to targets that you want to view, and then click the **Targets** tab.

The Targets Visible to This Hos**t** table appears in the right display. Table 13-6 describes the fields in this table.

Table 13-6   Targets Field Descriptions

Field	Description
Target WWPN	WWPNs of the target ports that the initiator sees.
Current Access	Fibre Channel gateway ports through which the initiator accesses the target storage port.
Physical Access	Fibre Channel gateway ports that physically connect the initiator to the target storage port.

Table 13-6   Targets Field Descriptions (continued)

Field	Description
Port Mask	Fibre Channel gateway ports (real and potential) that grant the initiator access to the target storage port.
Mode	Mode of the IT pair (**normal** or **test**).

Configuring the Mode of an Initiator-Target Pair

To configure the mode of an initiator-target pair, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Click the initiator with connections to targets that you want to view, and then click the **Targets** tab.

The Targets Visible to This Host table appears in the right pane.

Step 4   Click the entry of the IT pair that you want to configure, and then click **Edit**.

An IT Properties window opens.

Step 5   In the Mode field, click either the **Normal** or **Test** radio button.

✎

Note   The Current Access field must not contain any entries in order for you to configure the mode.

Viewing Initiator-LUN Connections with Storage Manager

To view initiator-LUN connections with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Click the initiator with connections to the LUNs that you want to view, and then click the **LUN Access** tab.

Table 13-7 describes the fields that appear in the right pane.

Table 13-7   LUN Access Field Descriptions

Field	Description
Available LUNs	Displays LUNs that the initiator has discovered but cannot currently access. Expand the **gateway** icon ( ), and then expand the **target** icon ( ) to display the **LUN** icon ( ). **Note** When the initiator cannot communicate with the target or LUN, the icon appears gray instead of blue.
Accessible LUNs	Displays LUNs that the initiator currently accesses. Expand the **gateway** icon ( ), and then expand the **target** icon ( ) to display the **LUN** icon ( ).

Discovering LUNs with Storage Manager

To discover the LUNs with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Click the initiator with connections to the LUNs that you want to view, and then click the **LUN Access** tab.

Step 4   Click **Discover LUNs**.

Deleting an Initiator with Storage Manager

To delete an initiator entry with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **SRP Hosts** folder.

Step 3   Select the initiator that you want to remove, and then click **Remove**.

Configuring Existing SRP Initiators with Storage Manager

To configure existing SRP initiators with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

A list of configured initiators appears beneath the SRP Hosts folder.

Step 3   Select the initiator that you want to configure, and then click the **General** tab.

Step 4   (Optional) In the Description field, edit the ASCII text description.

Step 5   (Optional) From the Boot Target WWPN drop-down menu, choose a boot target.

Step 6   (Optional) From the Boot Fibre Channel LUN drop-down menu, choose a boot LUN.

Step 7   Click **Apply**.

Viewing and Editing Initiator WWPNs

These topics describe how to view and edit initiator WWPNs:

- Viewing Initiator WWPNs, page 13-11
- Editing Virtual WWPNs, page 13-12

Viewing Initiator WWPNs

To view the initiator WWPNs that Fibre Channel gateway ports use to direct SAN traffic to SRP hosts, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Initiator WWPN** tab.

Table 13-8 describes the fields that appear in the display.

Table 13-8   Initiator WWPN Field Descriptions

Field	Description
Guid	Global unique identifier of the initiator.
Extension	GUID extension of the initiator.
Port	Physical Fibre Channel gateway port (real or potential).
Wwpn	Virtual world-wide port name that the physical Fibre Channel gateway port uses to direct SAN traffic to the initiator.
FcAddress	Fibre Channel address of the virtual port that directs SAN traffic to the SRP host.
VsanIndex	Index of the VSAN to which this interface is assigned.

Editing Virtual WWPNs

To edit a virtual WWPN, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Initiator WWPN** tab.

Step 3   In the Wwpn column, double-click the cell of the virtual WWPN that you want to edit, and then change the value.

Note   We strongly recommend that you never manually edit a virtual WWPN.

Step 4   Click **Apply**.

Viewing and Managing Target Ports

These topics describe how to view, edit, or add target ports:

Viewing Target Ports

To view the target ports that your Fibre Channel gateway has discovered, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Targets** tab.

Table 13-9 describes the fields that appear in the Targets table.

Table 13-9   Targets Table Field Descriptions

Field	Description
Wwpn	World-wide port name of the target storage port.
Description	ASCII text description of the target storage port. By default, the service name appears in this field.
IocGuid	Global unique identifier of the I/O controller (on the server switch) that manages the target.
ServiceName	Name of the Fibre Channel service.
ProtocolIds	Identifier of the Fibre Channel protocol.
FcAddress	Fibre Channel address of the target port.
Mtu	Maximum transmission unit of the target port.
PhysicalAccess	Physical Fibre Channel gateway ports that provide a path to the target port.
Wwnn	World-wide node name of the target storage device.
ConnectionType	All InfiniBand connections appear as Fibre Channel NL_Ports.
ActiveVsanIndex	Index of the VSAN to which this target belongs to

Editing SRP Targets

To edit SRP targets, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Targets** tab.

The Targets table appears.

Step 3   Identify the target that you want to edit and locate the appropriate entry in the table.

Step 4   (Optional) In the Description column, double-click the cell, and edit the ASCII description.

Step 5   (Optional) In the IocGuid column, double-click the cell, and edit the I/O controller GUID.

> ✎
> **Note**   We strongly recommend that you do not manually edit the I/O controller GUID value.

Step 6   Click **Apply**.

Adding SRP Targets

To manually add SRP targets, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Targets** tab.

The Targets table appears.

Step 3   Click **Insert**.

The Insert SRP Targets window appears.

Step 4   In the Wwpn field, enter the WWPN of the target.

Step 5   In the IocGuid field, enter the GUID of the I/O controller for the target.

Step 6   Click **Insert**.

Step 7   Click **Apply**.

Viewing SRP Targets with Storage Manager

To view SRP targets with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Targets** folder.

The Targets Ports display appears. Table 13-10 describes the fields in the display.

Table 13-10   Targets Field Descriptions

Field	Description
Number of Active Targets	Number of active targets that connect to the server switch.
Number of Inactive Targets	Number of inactive targets that connect to the server switch.
Total Number of Targets	Number of targets that connect to the server switch.
WWPN	World-wide port name of the target port.

Table 13-10   Targets Field Descriptions (continued)

Field	Description
Description	ASCII text description of the target port.
Physical Access	Fibre Channel gateway ports that connect the server switch to the target port.

Editing SRP Targets with Storage Manager

To edit SRP target entries with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **Targets** folder.

A list of discovered targets appears below the folder.

Step 3   In the Targets folder, select the target that you want to edit.

Target details appear in the right pane of the display.

Step 4   (Optional) In the Description field, edit the ASCII description.

Step 5   Click **Apply**.

Viewing and Editing Initiator-Target-LUN Groups

These topics describe how to view and edit initiator-target-LUN (ITL) groups:

Viewing ITL Groups

To view ITLs, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **ITLs** tab.

Table 13-11 describes the fields that appear in the **ITLs** table.

Table 13-11   ITLs Table Field Descriptions

Field	Description
Guid	Global unique identifier of the initiator in the ITL.
Extension	GUID extension of the initiator in the ITL.
TargetWwpn	World-wide port name of the target port in the ITL.
FcLunId	Fibre Channel LUN identifier of the LUN in the ITL.
DeviceCategory	Type of storage device (random or sequential).
Description	Description of the ITL, in ASCII characters.
SrpLunId	Virtual LUN ID of the LUN in the ITL, used for LUN masking.
LogicalId	Identifier of the logical unit (LU) that the LUN in the ITL represents.
GatewayPortMaskPolicy	Physical Fibre Channel gateway ports that connect the initiator to the target and LUN.
LunPolicy	Displays restricted if the initiator does not have access to the LUN in the ITL and nonRestricted if the initiator accesses the LUN.
State	Ports through which an IT connection occurs.
PhysicalAccess	Ports through which the ITL is physically accessible.

Editing ITLs

To edit ITLs, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **ITLs** tab.

Step 3   Identify the ITL that you want to edit and locate the entry in the ITLs table.

Step 4   (Optional) In the Description cell, double-click the cell and edit the description.

Step 5   (Optional) In the SrpLunID column, double-click the cell and edit the LUN mask.

For details on LUN masking, see the *Cisco SFS 3000 Series Product Family Fibre Channel Gateway User Guide*.

Step 6   (Optional) In the LogicalId column, double-click the cell and edit the LU identifier.

✎

Note   We strongly recommend that you never manually edit the LogicalId field.

Step 7   (Optional) Edit the gateway port-mask policy as follows:

a.   In the GatewayPortMaskPolicy column, double-click the cell.

The GatewayPortMaskPolicy window opens.

b. Check the check boxes of the ports that you want to add; uncheck the check boxes of the ports that you want to remove

c. Click **OK**.

Step 8   (Optional) In the LunPolicy column, click the cell and choose **restricted** or **nonRestricted** from the drop-down menu.

Step 9   Click **Apply**.

Viewing and Editing Initiator-Target Pairs

These topics describe how to view and edit initiator-target (IT) pairs:

Viewing ITs

To view IT pairs, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **ITs** tab.

Table 13-12 describes the fields that appear in the **ITs** table.

Table 13-12   IT Table Field Descriptions

Field	Description
Guid	Global unique identifier of the initiator in the IT pair.
Extension	GUID extension of the initiator in the IT pair.
TargetWwpn	World-wide port name of the target port in the IT pair.
Description	ASCII text description of the IT pair.
GatewayPortMaskPolicy	Fibre Channel gateway ports that let the initiator access the target.
State	Fibre Channel gateway ports that the IT pair currently uses.
PhysicalAccess	Fibre Channel gateway ports that create a physical connection between the target and the initiator.
Mode	Mode of the IT pair (normal or test).
Action	Last action that the IT pair took.
Result	Result of the last action that the IT pair took.

Editing ITs

To edit ITs, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **ITs** tab.

Step 3   Identify the IT that you want to edit and locate the entry in the ITs table.

Step 4   (Optional) In the Description cell, double-click the cell, and edit the description.

Step 5   (Optional) Edit the gateway port-mask policy as follows:

a.   In the GatewayPortMaskPolicy column, double-click the cell.

The GatewayPortMaskPolicy window opens.

b.   Check the check boxes of ports to add; uncheck the check boxes of the ports to remove.

c.   Click **OK**.

Step 6   (Optional) In the Action column, click the cell and choose an action from the menu.

The action executes when you click **Apply**, and the result of the action appears in the Result column.

Step 7   Click **Apply**.

Viewing and Managing Logical Units

These topics describe how to view, edit, and add logical units (LUs):

- Viewing LUs, page 13-18
- Editing LU Entries, page 13-19
- Manually Adding SRP LUs, page 13-20
- Viewing LUs with Storage Manager, page 13-21
- Editing LU Attributes with Storage Manager, page 13-21
- Editing Initiator Access to a LU, page 13-22

Viewing LUs

To view the logical units (LU) that your Fibre Channel gateways have discovered, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **LUs** tab.

Table 13-13 describes the fields in the table.

Table 13-13   Logical Units Field Descriptions

Field	Description
LogicalId	ID of the LU.
DeviceCategory	Displays random or sequential to identify the type of LUN.
Description	User-defined LU description.
HiMark	Maximum number of outstanding requests from the initiator to the storage that the ITL can maintain.
MaxRetry	Number of failed communication attempts that must occur before the LUN identifies the initiator as inaccessible.
MinIoTimeout	Maximum amount of time that elapses before a SRP request times out.
DynamicPathAffinity	Displays true if you enable the feature and false if you disable the feature.
DynamicGatewayPortLoadBalancing	Displays true if you enable the feature and false if you disable the feature.
DynamicGatewayPortFailover	Displays true if you enable the feature and false if you disable the feature.
VendorId	Vendor-assigned ID of the LUN.
ProductId	Vendor-assigned product ID of the LUN.
ProductRevision	Manufacturer-assigned product revision number.
PhysicalAccess	Fibre Channel gateway ports on your server switch that connect to the LU.
Targets	Target port that provides access to the LU.
Size	Displays the size of the LUN in bytes.

Editing LU Entries

To edit LU entries, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **LUs** tab.

Step 3   Identify the LU entry that you want to edit and locate the entry in the **LUs** table.

Step 4   (Optional) In the DeviceCategory column, click the cell and choose **random** or **sequential** from the drop-down menu.

Step 5   (Optional) Double-click the cell in the Description field, and edit the ASCII text description of the LU.

Step 6   (Optional) Double-click the cell in the HiMark field, and edit the high mark value of the LU.

Step 7   (Optional) In the MaxRetry field, double-click the cell, and edit the maximum retry value of the LU.

Step 8   (Optional) In the DynamicPathAffinity column, click the cell, and choose true or false from the drop-down menu.

Step 9   (Optional) In the DynamicGatewayPortLoadBalancing column, click the cell, and from the drop-down menu, choose true or false.

Step 10   (Optional) In the DynamicGatewayPortFailover column, click the cell, and from the drop-down menu, choose true or false.

Step 11   (Optional) In the Targets column, double-click the cell, and edit the targets entry.

> ✎
>
> **Note**   We strongly recommend that you do not edit the Targets field manually.

Step 12   Click **Apply**.

Manually Adding SRP LUs

To manually add SRP LUs, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **LUs** tab.

The LUs table appears.

Step 3   Click **Insert**.

The Insert SRP LUs window appears.

Step 4   In the LogicalId field, enter the LU ID of the LU.

Step 5   In the DeviceCategory field, click the **sequential** radio button for a tape device LU: otherwise, click the **random** radio button.

Step 6   In the Description field, enter a description.

Step 7   In the HiMark field, enter a high mark.

Step 8   In the MaxRetry field, enter a maximum retry value.

Step 9   In the MinIoTimeout field, enter a minimum timeout value.

Step 10   Check one of the following check boxes:

- DynamicPathAffinity
- DynamicGatewayPortLoadBalancing
- DynamicGatewayPortFailover

Step 11   In the Targets field, enter target WWPNs.

Step 12   Click **Insert**.

Step 13   Click **Apply**.

Viewing LUs with Storage Manager

To view LUs with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Logical Units** folder.

Table 13-14 describes the fields that appear.

Table 13-14   Logical Units Field Descriptions

Field	Description
Number of Active Logical Units	Number of active LUs that connect to the server switch.
Number of Inactive Logical Units	Number of inactive LUs that connect to the server switch.
Total Number of Logical Units	Number of LUs that connect to the server switch.
Logical Id	Logical ID of the LU.
Inquiry Data	Data received by the inquiry.
Physical Access	Fibre Channel gateway ports that connect the LUs to the server switch.

Editing LU Attributes with Storage Manager

To edit LU attributes with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **Logical Units** folder to display the LUs in the folder.

Step 3   Click a LU icon () under the **Logical Units** folder.

Step 4   Click the **General** tab.

Step 5   (Optional) In the Description field, edit the ASCII text description.

Step 6   (Optional) In the Hi Mark field, enter an integer value.

Step 7   (Optional) In the Max Retry field, enter an integer value.

Step 8   (Optional) In the Min IO Timeout field, enter an integer value.

Step 9   (Optional) Click the **Path Affinity** radio button.

Step 10   Click **Apply**.

Editing Initiator Access to a LU

To edit initiator access to a LU, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **Logical Units** folder to display the LUs in the folder.

Step 3   Click an LU icon ( ) under the **Logical Units** folder.

Step 4   Click the **Initiator Access** tab.

The Available Hosts and Accessible Hosts fields appear.

Step 5   Expand all plus-sign (+) icons to reveal all available and accessible hosts.

Step 6   Add or remove accessible hosts as follows:

 • In the Accessible Hosts field, select a host, and then click **Remove** to deny that host access to the LUN.

 • In the Available Hosts field, select a host, and then click **Add** to grant that host access to the LUN.

Step 7   Click **Apply**.

Viewing and Graphing Global SRP Statistics

These topics describe how to view and graph global SRP statistics:

Viewing Global SRP Statistics

To view global statistics, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **Global Stats** tab.

Table 13-15 describes the fields that appear in the tab.

Table 13-15   Global Stats Field Descriptions

Field	Description
LinkEvents	Number of link events (for example, link up, link down) processed by the Fibre Channel interface gateway(s).
SrpInitiatedIos	Number of I/O transactions requested by the SRP initiator.

Table 13-15   Global Stats Field Descriptions (continued)

Field	Description
SrpCmdsCompleted	Number of SRP commands completed on the Fibre Channel interface gateway(s).
SrpBytesRead	Number of I/O bytes read by the SRP initiator that connects to this chassis.
SrpBytesWritten	Number of I/O bytes written by the SRP initiator.
SrpConnections	Number of connections used by the SRP initiator.
SrpCmdsOutstanding	Number of unresolved SRP commands on the Fibre Channel interface gateway(s).
SrpErrors	Number of SRP errors encountered on the Fibre Channel interface gateway(s).
FcpInitiatedIos	Number of I/O responses by the Fibre Channel device to SRP initiator requests.
FcpCmdsCompleted	Number of FCP commands completed on the Fibre Channel interface gateway(s).
FcpBytesRead	Number of I/O bytes read by the target device.
FcpBytesWritten	Number of I/O bytes written by the target device.
FcpCmdsOutstanding	Number of unresolved FCP commands on the Fibre Channel interface gateway(s).
FcpErrors	Number of FCP errors encountered on the Fibre Channel interface gateway(s).

Viewing Global SRP Statistics with Storage Manager

To view global SRP statistics with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3   Click **Graph Global Statistics**.

The SRP Statistics window appears. Table 13-15 describes the fields in the rows of this window. Table 13-16 describes the fields in the columns of this window.

<table>
</table>

Note The elapsed time period appears in the bottom right of the SRP Statistics display.

Table 13-16   SRP Statistics Column Descriptions

Column	Description
AbsoluteValue	Cumulative value of the row since the server switch booted.
Cumulative	Cumulative value of the row over the elapsed time period.
Average	Average value of the row over the elapsed time period.
Minimum	Minimum value of the row over the elapsed time period.
Maximum	Maximum value of the row over the elapsed time period.
LastValue	Last change in the value of the row.

Step 4 (Optional) Click the drop-down menu at the bottom of the SRP Statistics window, and choose a refresh interval.

The data begins to refresh at the rate that you specify.

Graphing Global SRP Statistics with Storage Manager

To graph global SRP statistics, follow these steps:

Step 1 From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2 Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3 Click **Graph Global Statistics**.

The SRP Statistics window appears.

Step 4 Select the values that you want to include in the graph with one of the following methods:

 • Click and drag your cursor across the values that you want to graph.

 • Press the **Ctrl** key and select the values that you want to graph.

Step 5 Click the icon of the graph that you want to create. (See Figure 13-1.)

Figure 13-1 *Graphing Icons*

 Line Chart

 Area Chart

 Bar Chart

 Pie Chart

The graph appears. For different views of the data, see the "Swapping Chart Type, Layout, and Scale" section on page 13-25.

✎
Note With most charts, the display will reload with updated information based on the refresh rate. To configure the interval, see the "Configuring Refresh Rate" section on page 13-26.

Swapping Chart Type, Layout, and Scale

With the exception of pie charts, the chart display lets you do the following:

- Swap between charts.
- Increase or decrease the scale of the display.
- View the chart horizontally or vertically.

Table 13-17 describes the icons used to complete these functions.

Table 13-17 *Chart Icons*

Icon	Function
	The Stacked icon overlays the graphical output of each statistic.
	The Horizontal icon rotates the axis of the graph by 90 degrees.
	The Log Scale icon zooms in and out.

Table 13-17   Chart Icons (continued)

Icon	Function
	The Line Chart icon displays a line chart.
	The Area Chart icon displays an area chart.
	The Bar Chart icon displays a bar chart.

Configuring Refresh Rate

Element Manager refreshes all statistics displays at regular intervals. To configure the refresh rate interval, follow these steps:

Step 1   In the chassis display, click a port with a refresh rate that you want to change.

Step 2   From the Report menu, choose **Graph Port**.

A window opens that displays the type and number of the port.

Step 3   Click the drop-down menu that appears at the bottom of the window, and choose the interval at which you want the display to refresh.

Note   You do not need to click **Apply** or **OK**. The change takes place immediately.

Viewing and Graphing ITL Statistics

These topics describe how to view and graph ITL statistics:

Viewing ITL Statistics

To view ITL statistics, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **ITL Stats** tab.

Table 13-18 describes the fields that appear in the tab.

Table 13-18   ITL Stats Field Descriptions

Field	Description
Guid	GUID of the initiator.
Extension	GUID extension of the initiator.
TargetWwpn	WWPN of the target.
FcLunId	LUN ID of the LUN in the ITL.
SlotId	Slot on the server switch in which the Fibre Channel gateway resides.
SrpInitiatedIos	Number of SRP I/O requests.
SrpCmdsCompleted	Cumulative number of commands that one or all Fibre Channel gateways executed.
SrpBytesRead	Cumulative number of SRP bytes read by one or all Fibre Channel gateways.
SrpBytesWritten	Cumulative number of SRP bytes written by one or all Fibre Channel gateways.
SrpCmdsOutstanding	Cumulative number of outstanding Fibre Channel commands.
SrpErrors	Cumulative number of SRP errors.
FcpInitiatedIos	Number of Fibre Channel I/O requests.
FcpCmdsCompleted	Cumulative number of commands that one or all Fibre Channel gateways executed.
FcpBytesRead	Cumulative number of Fibre Channel bytes read by one or all Fibre Channel gateways.
FcpBytesWritten	Cumulative number of Fibre Channel bytes written by one or all Fibre Channel gateways.
FcpCmdsOutstanding	Cumulative number of outstanding Fibre Channel commands.
FcpErrors	Cumulative number of Fibre Channel errors on one or all gateways.

Viewing ITL Statistics with Storage Manager

To view ITL statistics with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3   From the Initiator drop-down menu, choose an initiator.

Step 4   From the Target drop-down menu, choose a target.

Step 5   From the LUN drop-down menu, choose a logical unit.

Step 6 From the Gateway drop-down menu, choose a Fibre Channel gateway.

Step 7 Click **Graph ITL Statistics**.

The ITL Statistics window opens. Table 13-18 describes the fields in this window. Table 13-19 describes the columns in this window.

Table 13-19   SRP Statistics Column Descriptions

Column	Description
AbsoluteValue	Cumulative value of the row since the server switch booted.
Cumulative	Cumulative value of the row over the elapsed time period.
Average	Average value of the row over the elapsed time period.
Minimum	Minimum value of the row over the elapsed time period.
Maximum	Maximum value of the row over the elapsed time period.
LastValue	Last change in the value of the row.

Graphing ITL Statistics with Storage Manager

To graph ITL statistics with Storage Manager, follow these steps:

Step 1 From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2 Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3 From the Initiator drop-down menu, choose an initiator.

Step 4 From the Target drop-down menu, choose a target.

Step 5 From the LUN drop-down menu, choose a logical unit.

Step 6 From the Gateway drop-down menu, choose a Fibre Channel gateway.

Step 7 Click **Graph ITL Statistics**.

The ITL Statistics window opens.

Step 8 Select the values that you want to include in the graph with one of the following methods:

   • Click and drag your cursor across the values that you want to graph.

   • Press the **Ctrl** key and select the values that you want to graph.

Step 9 Click the icon of the graph (see Figure 13-2) that you want to create.

Figure 13-2   Graphing Icons

	Line Chart
	Area Chart
	Bar Chart
	Pie Chart

The graph appears. For different views of the data, see the "Swapping Chart Type, Layout, and Scale" section on page 13-29.

Note   With most charts, the display will reload with updated information based on the refresh rate. To configure the interval, see the "Configuring Refresh Rate" section on page 13-26.

Swapping Chart Type, Layout, and Scale

With the exception of pie charts, the chart display lets you do the following:

- Swap between charts.
- Increase or decrease the scale of the display.
- View the chart horizontally or vertically.

Table 13-20 describes the icons used to complete these functions.

Table 13-20   Chart Icons

Icon	Function
	The Stacked icon overlays the graphical output of each statistic.
	The Horizontal icon rotates the axis of the graph by ninety degrees.
	The Log Scale icon zooms in and out.
	The Line Chart icon displays a line chart.

Table 13-20   Chart Icons (continued)

Icon	Function
	The Area Chart icon displays an area chart.
	The Bar Chart icon displays a bar chart.

Viewing and Graphing Gateway Statistics

These topics describe how to view and graph gateway statistics:

Viewing Gateway Statistics

To view Fibre Channel gateway statistics, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

Step 2   The SRP window opens.

Step 3   Click the **Gateway Stats** tab.

Table 13-21 describes the fields that appear in the tab.

Table 13-21   Gateway Stats Field Descriptions

Field	Description
SlotId	Slot in the server switch in which the Fibre Channel gateway resides.
LinkEvents	Number of link events (for example, link up, link down) processed by the Fibre Channel interface gateway(s).
SrpCmdsOutstanding	Number of incomplete SRP commands on the Fibre Channel interface gateway(s).
SrpCmdsCompleted	Number of SRP commands completed on the Fibre Channel interface gateway(s).
SrpErrors	Number of SRP errors encountered on the Fibre Channel interface gateway(s).
SrpInitiatedIos	Number of I/O transactions requested by the SRP initiator.
FcpCmdsOutstanding	Number of incomplete FCP commands on the Fibre Channel interface gateway(s).
FcpCmdsCompleted	Number of FCP commands completed on the Fibre Channel interface gateway(s).

Table 13-21   Gateway Stats Field Descriptions (continued)

Field	Description
FcpErrors	Number of FCP errors encountered on the Fibre Channel interface gateway(s).
FcpInitiatedIos	Number of I/O responses by the Fibre Channel device to SRP initiator requests.
SrpBytesRead	Number of I/O bytes read by the SRP initiator that connects to this chassis.
SrpBytesWritten	Number of I/O bytes written by the SRP initiator.
FcpBytesRead	Number of I/O bytes read by the target device.
FcpBytesWritten	Number of I/O bytes written by the target device.
SrpConnections	Number of connections used by the SRP initiator.

Viewing Gateway Statistics with Storage Manager

To view gateway statistics with Storage Manager, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3   In the Gateways field, select a gateway with statistics that you want to view.

Step 4   Click **Graph Gateway Statistics**.

Step 5   The SRP Statistics window appears.

Table 13-21 describes the fields in the rows of this window. Table 13-22 describes the fields in the columns of this window.

Note   The elapsed time period appears in the bottom right of the SRP Statistic**s** display.

Table 13-22   SRP Statistics Column Descriptions

Column	Description
AbsoluteValue	Cumulative value of the row since the server switch booted.
Cumulative	Cumulative value of the row over the elapsed time period.
Average	Average value of the row over the elapsed time period.
Minimum	Minimum value of the row over the elapsed time period.
Maximum	Maximum value of the row over the elapsed time period.
LastValue	Last change in the value of the row.

Step 6   (Optional) Click the drop-down menu at the bottom of the SRP Statistics window, and choose a refresh interval.

The data begins to refresh at the rate that you specify.

Graphing Gateway Statistics with Storage Manager

To graph gateway SRP statistics, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **Statistics** folder.

Statistics fields appear in the right pane of the display.

Step 3   In the Gateways field, select the gateway with statistics that you want to view.

Step 4   Click **Graph Gateway Statistics**.

The SRP Statistics window appears.

Step 5   Select the values that you want to include in the graph with one of the following methods:

- Click-and-drag your cursor across the values that you want to graph.
- Press the **Ctrl** key and select the values that you want to graph.

Step 6   Click the icon of the graph (see Figure 13-3) that you want to create.

Figure 13-3   Graphing Icons

Line Chart

Area Chart

Bar Chart

Pie Chart

The graph appears. For different views of the data, see the "Swapping Chart Type, Layout, and Scale" section on page 13-33.

Note   With most charts, the display will reload with updated information based on the refresh rate. To configure the interval, see the "Configuring Refresh Rate" section on page 13-26.

Swapping Chart Type, Layout, and Scale

With the exception of pie charts, the chart display lets you do the following:

- Swap between charts.
- Increase or decrease the scale of the display.
- View the chart horizontally or vertically.

Table 13-23 describes the icons used to complete these functions.

Table 13-23   Chart Icons

Icon	Function
	The Stacked icon overlays the graphical output of each statistic.
	The Horizontal icon rotates the axis of the graph by ninety degrees.
	The Log Scale icon zooms in and out.
	The Line Chart icon displays a line chart.
	The Area Chart icon displays an area chart.
	The Bar Chart icon displays a bar chart.

Viewing Recommended World-Wide Names

To view recommended WWNN and WWPN, follow these steps:

Step 1   From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2   Click the **WWN Allocator** tab.

Step 3   In the Guid field, enter the GUID of the initiator for which you want to procure a WWNN or WWPN.

Step 4   In the Extension field, enter the GUID extension of the initiator for which you want to procure a WWNN or WWPN.

Step 5   in the Port field, click the **...** button, and select a port for which you want to procure a WWPN.

Step 6 Click the **getRecommendedWwnn** radio button, and then click **Apply** to display the recommended WWNN in the RecommendedWwnn field.

Step 7 Click the **getRecommendedWwpn** radio button, and then click **Apply** to display the recommended WWPN in the RecommendedWwpn field.

Disconnecting ITLs on a Fibre Channel Gateway

To disconnect all ITLs through a particular Fibre Channel gateway, follow these steps:

Step 1 From the FibreChannel menu, choose **SRP**.

The SRP window opens.

Step 2 Click the **Action** tab.

Step 3 Click the **disconnectAllItls** radio button.

Step 4 In the SlotId field, enter the slot of the Fibre Channel gateway with ITLs that you want to disconnect.

Step 5 Click **Apply**.

Viewing Fibre Channel Gateways on the Server Switch

These topics describe how to view Fibre Channel gateways on the server switch:

- Viewing All Fibre Channel Gateways, page 13-34
- Viewing Individual Fibre Channel Gateways, page 13-35
- Redistributing Connections Over a Gateway, page 13-35

Viewing All Fibre Channel Gateways

To view the all Fibre Channel gateways on your server switch, follow these steps:

Step 1 From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2 Select the **Gateway Cards** folder.

The Gateway Cards display appears in the right pane of the window. Table 13-24 describes the fields in this pane.

Table 13-24   Gateway Cards Field Descriptions Pane

Field	Description
Gateway	Lists the gateways that reside in the server switch.
Initiator-Target Connections	Displays the number of IT connections that connect through the gateway.
ITLs	Displays the number of ITL connections that connect through the gateway.

Viewing Individual Fibre Channel Gateways

To view an individual Fibre Channel gateway, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

Step 2   The Storage Manager window opens.

Step 3   Expand the **Gateway Cards** folder.

Step 4   Select a gateway below the **Gateway Cards** folder.

The Active ITLs display appears.

Step 5   In the Active ITLs display, expand an initiator to list the targets available to the initiator.

Step 6   In the Active ITLs display, expand a target to list the LUs available to the initiator through that target.

Redistributing Connections Over a Gateway

To redistribute connections over a gateway, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

Step 2   The Storage Manager window opens.

Step 3   Expand the **Gateway Cards** folder.

Step 4   Select a gateway below the **Gateway Cards** folder.

Step 5   Click **Redistribute Connections**.

Viewing and Managing SRP Hosts

These topics describe how to view and manage SRP hosts:

- Viewing SRP Hosts, page 13-36
- Defining a New SRP Host, page 13-36
- Deleting SRP Hosts, page 13-37
- Granting or Denying SRP Host Target Access, page 13-37
- Editing SRP Hosts LUN Access, page 13-38

Viewing SRP Hosts

To view SRP hosts, follow these steps:

Step 1 From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2 Select the **SRP Hosts** folder.

Table 13-25 describes the fields that appear in the display.

Table 13-25   SRP Hosts Field Descriptions

Field	Description
Number of Active Hosts	Number of active hosts that connect to the server switch.
Number of Inactive Hosts	Number of inactive hosts that connect to the server switch.
Total Number of Hosts	Number of hosts that connect to the server switch.
Host	ASCII text name of the host.
WWNN	World-wide node name of the host.
Ports Registered With	Fibre Channel gateway ports that connect the hosts to storage.

Defining a New SRP Host

To define a new SRP host, follow these steps:

Step 1 From the FibreChannel menu, choose **Storage Manager**.

Step 2 The Storage Manager window opens.

Step 3 Select the **SRP Hosts** folder.

Step 4 Click **Define New**.

The Define New SRP Host window appears.

Step 5 Enter the GUID of your host in the Host GUID field, or choose it from the drop-down menu.

> ✎
>
> **Note**   If your host successfully connects to your server switch, the GUID appears in the drop-down menu. To create a SRP host entry for a host not yet connected, manually enter the digits of the GUID in the field. Element manager automatically enters colons (:) as you enter digits.

Step 6   (Optional) In the Description field, enter an ASCII text description of the host.

Step 7   Click **Next**.

The WWNN and WWPNs and VSAN IDs of the entry appear.

Step 8   Click **Finish**.

Deleting SRP Hosts

To delete an SRP host, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Select the **SRP Hosts** folder.

Step 3   Select the SRP host that you want to delete, and then click **Remove**.

Granting or Denying SRP Host Target Access

To grant or deny the initiator access to SRP host targets, follow these steps:

Step 1   From the FibreChannel menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

Step 3   Select the host with the target access that you want to edit.

Step 4   Click the **Targets** tab.

Step 5   Double-click the target entry to which you want to grant or deny the initiator access.

The IT Properties window opens.

Step 6   Click the **...** button next to the **Port Mask** field.

The Select Port(s) window opens.

Step 7   Check the check boxes of the ports through which you want to grant the initiator access to the target; uncheck the check boxes through which you want to deny the initiator access to the target.

The WWNN, WWPN (per initiator per gateway) and VSAN ID of the entry appear.

Step 8   Click **Ok**, and then click **Apply**.

Editing SRP Hosts LUN Access

To edit a a LUN access of an SRP host, follow these steps:

Step 1   From the **FibreChannel** menu, choose **Storage Manager**.

The Storage Manager window opens.

Step 2   Expand the **SRP Hosts** folder.

Step 3   Select the host with target access that you want to edit.

Step 4   Click the **LUN Access** tab.

Step 5   Add or remove accessible LUNs as follows:

- Select a host in the Accessible LUNs field, and then click **Remove** to deny that host access to the LUN.

- Select a host in the Available LUNs field, and then click **Add** to grant that host access to the LUN.