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About This Software

Sun StorEdge™ Configuration Service @@version@@

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Help in Adobe Acrobat PDF Format

[Click to launch this help in Adobe Acrobat PDF format.](#)

Using This Help

Note – Do not configure the Sun StorEdge 6000 Family arrays by using the array Telnet interface and this web browser user interface at the same time. Use the Telnet interface **or** web browser user interface.

This help describes the Sun StorEdge Configuration Service software for the Sun StorEdge 6000 Family of storage arrays and systems. Depending on your Sun StorEdge product, some differences might exist in the web-browser user interface. Where the interfaces differ is noted in the help.

- Accessible Help

This help includes the default Javascript-based version and a simple HTML Accessible version. The Javascript version launches when you click Help in the user interface and includes Content, Index, and Search links in the navigation pane.

To use the Accessible version, click the Accessible Help link in the Contents pane. The Accessible help launches in a separate browser window. This version includes navigation icons and a link to an index in each content pane.

- Print and Navigation Icons

The default help includes print and navigation icons on each content page (in addition to the Back, Forward, and Print buttons available from your web browser). You can print the Accessible help using your browser's Print button or dialog box.

Note – In the Javascript version of the help, click the folder icon to expand and show all subfolders. Click a top-level folder icon to read text associated with the folder and subfolders.

Getting Started

Note – The software has an activity timeout value of 30 minutes. If you log in to the software and do not perform an activity within 30 minutes, the software logs you out when you try to access a feature.

After you log in to the Sun StorEdge Configuration Service software, you can perform several procedures, including, but not limited to the following:

Caution – Changing these values might disable access to the software.

1. Configure [passwords](#) (Sun StorEdge 6300) or [access](#) (Sun StorEdge 6100) for users.
2. [Configure the network and firewall interfaces for the system.](#)
3. [Configure array hardware and software settings:](#)
 - [Create storage pools](#) and add disk drives to each pool
 - [Configure the array cache settings](#)
4. [Configure storage pools, storage volumes, and initiators.](#)
5. [Configure volumes groups, initiator groups, and LUN masking.](#)

Search for Components

The user interface enables you to search for storage components such as:

- Arrays
- Trays
- Pools
- Volumes
- Volume Groups
- Initiators
- Initiator Groups

1. Click Search in the right corner of the interface.

The Search page is displayed.

2. Select the Item Type to search on.

3. Select the search criteria from the submenu, depending on the component:

- Name
- Description
- Profile Name
- World Wide Name

4. Type a search text string and choose “Exact match” or “contains.”

5. Click Search.

The Search Results page displays any information found in a summary table. The table might include links to view device details.

Administering Your System

The Administration page enables you to configure various settings for the Sun StorEdge 6100 arrays and 6300 systems:

- Sun StorEdge 6100 array
 - [User Access and Roles \(Sun StorEdge 6100\)](#)
 - [Power Management \(Sun StorEdge 6100\)](#)
 - [Array Details and Tray Reconfiguration](#)
 - [Network Settings](#)
 - [System Time](#)
 - [Email Event Notifications](#)
 - [System Logs](#) of events and alarms
 - [System Report](#) of arrays, storage pools, and so on
- Sun StorEdge 6300 system
 - [Power Management \(Sun StorEdge 6300\)](#) and General system settings
 - [Array Details and Tray Reconfiguration](#)
 - [Network Settings](#)
 - [System Time](#)
 - [User Names and Passwords \(Sun StorEdge 6300\)](#) for the admin, storage, and guest users
 - [Firewall Port Filtering \(Sun StorEdge 6300\)](#)
 - [Email Event Notifications](#)
 - [System Logs](#) of events and alarms
 - [System Report](#) of arrays, storage pools, and so on

See also [Understanding User Accounts and Roles](#).

Power Management (Sun StorEdge 6300)

The General link on the Administration tab enables the admin user to power down the system or the array. This page enables the admin user to power down the entire storage system, all arrays, or individual arrays. The individual array power down is useful when adding trays or other components to an array.

- [To Power Down the System \(Full Shutdown\)](#)
- [To Power Down All Arrays \(Partial Shutdown\)](#)
- [To Restart All Arrays \(from Partial Shutdown\)](#) (See [Note](#))
- [To Power Down Individual Arrays](#)
- [To Restart the Array](#)

Note – To power on the system or arrays after you have remotely powered them off, you must manually power them on at the cabinet.

However, if you perform a partial shutdown on arrays in the Sun StorEdge 6300 system, a Restart button is available from the General link at the Administration tab the next time you display this page.

The Partial Shutdown button is enabled only if you or Sun Service personnel have installed a USB cable between the remote power relay and the Storage Service Processor.

▼ To Power Down the System (Full Shutdown)

1. Click **General** at the **Administration** tab.
2. Click the **Full Shutdown** button to power down the Sun StorEdge 6300 storage system Storage Service Processor and all arrays.

▼ To Power Down All Arrays (Partial Shutdown)

Note – These partial shutdown steps apply to the Sun StorEdge 6300 storage system. The Partial Shutdown button is enabled only if you or Sun Service personnel have installed a USB cable between the remote power relay and the Storage Service Processor. If you perform a partial shutdown on arrays in the Sun StorEdge 6300 system, a Restart button is available from the General link at the Administration Page the next time you display this page.

1. Click **General** at the **Administration** tab.
2. Click the **Partial Shutdown** button.

When you click the Partial Shutdown button, the Storage Service Processor and accessory tray remain powered on and accessible. The arrays are powered down.

▼ To Restart All Arrays (from Partial Shutdown)

Note – You can restart arrays in the Sun StorEdge 6300 storage system if you or Sun Service personnel have installed a USB cable between the remote power relay and the Storage Service Processor and you have performed a [partial shutdown](#). If you perform a partial shutdown on arrays in the Sun StorEdge 6300 system, a Restart button is available from the General link at the Administration tab the next time you display this page.

1. Click **General** at the **Administration** tab.
2. Click the **Restart** button to reset and power on the arrays.

▼ To Power Down Individual Arrays

1. Click **General** at the **Administration** tab.
2. Select one or more arrays in the table under the **Array Power Management and Array Reconfiguration** section.

Note – The **Array Name** link in the table, when clicked, enables you to view array details and change tray settings as described in [Array Details and Tray Reconfiguration](#).

3. Click the **Shutdown** button.
To power on the array, you must manually power them on at the array cabinet.
4. Confirm the power down action.

▼ To Restart the Array

1. Click **General** at the **Administration** tab.
2. Select one or more arrays in the table under the **Array Power Management and array Reconfiguration** section.
3. Click the **Restart** button.
4. Confirm the restart action.

Power Management (Sun StorEdge 6100)

The General link on the Administration tab to enable the admin user to power down the system or the array. The individual array power down is useful when adding trays or other components to an array.

▼ To Power Down the Array

1. Click the **Array and Action Selection** at the **Administration** tab.
2. Select one (6100 only) array in the table under the **Array Power Management** section.

Note – The Array Name link in the table, when clicked, enables you to view array details and change tray settings as described in [Array Details and Tray Reconfiguration](#).

3. Click the **Shutdown** button.
To power on the array, you must manually power it on.
4. Confirm the **power down** action.
This button powers off the selected array. Repeat these steps to power down more than one array.

▼ To Restart the Array

1. Click the **Array and Action Selection** at the **Administration** tab.
2. Select an array.
3. Click the **Restart** button to reset and power on the selected array.
Repeat these steps to restart more than one array.

Array Details and Tray Reconfiguration

Caution – Before performing these reconfiguration procedures, ensure that you back up your data to tape or other media. See also [To Restore Array Defaults Information](#).

The array details page that is shown after clicking the Array Name link from the Administration page (see [To View Array Information](#)) enables the admin user to view brief array status and also add expansion units to or remove expansion units from an array.

A wizard guides you (in the admin user or role) through the expansion unit addition or removal. Before attempting these procedures, consider the following:

- The Sun StorEdge 6020 and 6100 Arrays System Manual contains more details about physically adding and removing expansion units and other array configuration changes. **Please read the array configuration chapter in this manual before attempting this procedure.** Note that the Sun StorEdge 6300 system does not allow access by telnet. The wizards described in this help perform the underlying commands needed to add or remove expansion units.
- Perform all reconfigurations while the system is offline and prevented from accepting I/O operations from the host system (that is, I/O operations have been quiesced).
- System reconfigurations involve power cycling of storage arrays.
- Evacuate any data stored on the arrays before removing trays. If you are adding trays, you might want to back up your existing data on the arrays.

Note – Depending on the current state of the selected array, the Add Expansion or Remove Expansion buttons might be disabled. For example, you cannot remove trays in a 2x2 configuration.

See the following:

- [To View Array Information](#)
- [To Add an Expansion Unit to an Array](#)
- [To Remove an Expansion Unit from an Array](#)
- [Restore Array Defaults Button \(Clear Array Information\)](#)

▼ To View Array Information

1. Click **General** at the **Administration** tab (6300 series). For the 6100 series, click the **Array and Action Selection** at the **Administration** tab.
2. Click the array Name link in the table in the **Array Power Management and Array Reconfiguration** section (6300 series). For the 6100 series, click the array Name link in the table under the **Array Selection** section.

The Array Details page is displayed. A table shows a summary of details, such as name, description, firmware version, and array health. For more tray details, see [To View Tray Details](#).

▼ To Add an Expansion Unit to an Array

Note – Depending on the current state of the selected array, the Add Expansion or Remove Expansion buttons might be disabled. For example, you cannot add more trays in a 2x6 configuration.

1. **Click General at the Administration tab (6300 series). For the 6100 series, click the Array and Action Selection at the Administration tab.**
2. **Click the array Name link in the table in the Array Power Management and Array Reconfiguration section (6300 series). For the 6100 series, click the array Name link in the table under the Array Selection section.**

The Array Details and Reconfiguration page is displayed.

3. **Click the Add Expansion button.**

The Add Expansion Unit wizard window is displayed.

- The wizard detects if any active jobs are running.
- If active jobs are running, wait until the jobs are completed before you click the Next button.

Caution – You cannot cancel this operation if you click the Next button in this wizard window. Click Cancel to cancel the procedure.

4. **Click the Next button.**

This step begins the array “unconfiguration” procedure. The wizard shows the following operations being performed:

- Place any existing storage pools in the offline state
- Disable the tray alternate master controller and unconfigure the controller (if necessary; this step is skipped if the controller is already disabled or if the controller is the only controller, as in a 1x1 configuration)
- Shut down the array

When the operations are completed, the wizard instructs you to click Next to view a summary of instructions to physically add the expansion units.

Note – The Sun StorEdge 6020 and 6100 Arrays System Manual contains more details about physically adding and removing expansion units and other array configuration changes. **Please read the array configuration chapter in this manual before attempting this procedure.** Note that the Sun StorEdge 6300 system does not allow access by telnet. The wizards described in this help perform the underlying software commands needed to add or remove expansion units.

The instructions shown in the wizard are as follows:

- Turn off power by pressing the power rocker switches on each array power and cooling unit (PCU)
- Remove all power cords from all enclosures in the original configuration
- Verify all LEDs are off before proceeding
- Disconnect loop card cables
- Add the new expansion units
- Move the controller board from the former alternate master enclosure to the enclosure above it.
- If the new configuration is 2x4, the controller board should be on the first and third enclosure from the bottom. If the new configuration is 2x6, the controller board should be on the first and fourth enclosure from the bottom. Do not move the tray, move only the controller board.
- Connect the loop card, Ethernet, and host cables
- Connect power cords to all enclosures
- Power on the array
- Once the array is powered on and all LEDs are lighted, click the Next button to perform verification of the new configuration

5. Click the Next button when the array is powered on and all LEDs are lighted.

The wizard window refreshes as the array is detected. This process might take up to 20 minutes or more, depending on the physical configuration of the array. If the wizard times out, re-check the array installation.

When the software detects the array, the wizard window displays a confirmation message that the array is available and shows a link to the Storage Automated Diagnostic Environment software (if installed).

6. (Optional) Select the Online Existing Pools to place the existing storage pools online.

7. Click the Finish Wizard button.

Note – You can use the Storage Automated Diagnostic Environment software (if installed) to perform an array test such as `6120volverify` after adding expansion units. See the `6120volverify(1M)` man page for command information.

8. If desired, configure the array.

You might want to create storage pools, volumes, permissions, and other features. See the following:

- [Configuring An Array](#)
- [Array Configuration](#)

▼ To Remove an Expansion Unit from an Array

Caution – All data is lost when performing this procedure. Before performing these reconfiguration procedures, ensure that you back up your data to tape or other media. You might also wish to record your storage pool and volume configuration information.

Note – Depending on the current state of the selected array, the Add Expansion or Remove Expansion buttons might be disabled. For example, you cannot remove trays in a 2x2 configuration.

1. Click **General** at the **Administration** page (6300 series). For the 6100 series, click the **Array and Action Selection** at the **Administration** page.
2. Click the array **Name** link in the table in the **Array Power Management and Array Reconfiguration** section (6300 series). For the 6100 series, click the array **Name** link in the table under the **Array Selection** section.

The Array Details and Reconfiguration page is displayed.

3. Click the **Remove Expansion** button.

The Remove Expansion Unit wizard window is displayed.

- For a Sun StorEdge 6300 system, the wizard verifies the Reverse Address Resolution Protocol (RARP) service configuration and that the entry for the RARP service exists. It also shows the associated controller's media access control (MAC) address
- For a Sun StorEdge 6100 system, the wizard displays a message asking you to ensure that the RARP and controller MAC information is correct for your configuration

4. Click the **Next** button if the RARP information is correct.

Note – This step is no longer required for arrays which have been upgraded to controller firmware Version 3.1.

- The wizard detects if any active jobs are running.
- If active jobs are running, wait until the jobs are completed before you click the **Next** button.

Caution – You cannot cancel this operation if you click the **Next** button in this wizard window. Click **Cancel** to cancel the procedure.

5. Click the Next button.

This step begins the array “unconfiguration” procedure. The wizard shows the following operations being performed:

- Place any existing storage pools in the offline state
- Disable the tray alternate master controller and unconfigure the controller (if necessary; this step is skipped if the controller is already disabled or if the controller is the only controller, as in a 1x1 configuration)
- Reset labels (this action might take a few minutes; see also [Restore Array Defaults Button \(Clear Array Information\)](#))
- Shut down the array

When the operations are completed, the wizard instructs you to click Next to view a summary of instructions to physically remove the expansion units.

Note – The Sun StorEdge 6020 and 6100 Arrays System Manual contains more details about physically adding and removing expansion units and other array configuration changes. **Please read the array configuration chapter in this manual before attempting this procedure.** Note that the Sun StorEdge 6300 system does not allow access by telnet. The wizards described in this help perform the underlying software commands needed to add or remove expansion units.

Also, always remove expansion units in pairs. An array configuration should always contain two, four, or six expansion units.

The instructions shown in the wizard are as follows:

- Turn off power by pressing the power rocker switches on each array power and cooling unit (PCU)
- Remove all power cords from all enclosures in the original configuration
- Verify all LEDs are off before proceeding
- Disconnect loop card cables
- Move the controller board down to the next tray. For example, if the resulting configuration is 2x4, the boards should be in the first and third enclosure from the bottom.
- Remove the expansion unit.
- Connect the loop card, Ethernet, and host cables
- Connect power cords to all enclosures
- Power on the array
- Once the array is powered on and all LEDs are lighted, click the Next button to perform verification of the new configuration

6. Click the Next button when the array is powered on and all LEDs are lighted.

The wizard window refreshes as the array is detected. This process might take up to 20 minutes. If the wizard times out, re-check the array installation.

When the software detects the array, the wizard window displays a confirmation message that the array is available and shows a link to the Storage Automated Diagnostic Environment (6300 series only) software (if installed).

7. Click the Close Wizard button.

8. If desired, configure the array.

You might want to recreate storage pools, volumes, permissions, and other features. See the following:

- [Configuring An Array](#)
- [Array Configuration](#)

Restore Array Defaults Button (Clear Array Information)

The Restore Array Defaults button on the Administration>General page clears all system labels, configuration settings, and volume information for the selected array (6300 only).

You typically use this button if you want to return your arrays to their initial default state. You must then reconfigure the array when the Restore Array Defaults operation is complete.

Consider the following:

- Perform all reconfigurations while the system is offline and prevented from accepting I/O operations from the host system (that is, I/O operations have been quiesced).
- System reconfigurations involve power cycling of storage arrays.
- Evacuate any data stored on the arrays before removing trays. If you are adding trays, you might want to back up your existing data on the arrays.

▼ To Restore Array Defaults Information

Caution – Performing this procedure results in unrecoverable data loss. Data stored on the arrays will need to be evacuated before any reconfiguration procedures start. This procedure might take up to 15 minutes to complete. This procedure reboots the selected array.

1. **Click General at the Administration page (6300 series). For the 6100 series, click the Array and Action Selection at the Administration page.**
2. **Select one (6100 series) or more (6300 series) arrays in the array table.**
3. **Click Restore Array Defaults.**

A confirmation page is displayed. Ensure that the information displayed on this page is correct (selected arrays, MAC address, and so on).

4. **Perform one of the following:**
 - Click Cancel if the page shows any active jobs or users on the array
 - Click Restore Array Defaults if you are sure you want to clear the array

When the procedure is completed, the Administration>General page is displayed.

5. If desired, configure the array.

See the following:

- [Configuring An Array](#)
- [Array Configuration](#)

Network Settings

Note – See also [Firewall Port Filtering \(Sun StorEdge 6300\)](#).

The Network page displays the current network IP address and other settings for the system. Typically, these values are set at the factory or by Sun service engineers or authorized service personnel.

Caution – Changing these settings might disable access temporarily, and require the user to re-log in. If invalid network settings are supplied, it may disable access to the application.

▼ To Change Network Settings (Sun StorEdge 6300)

1. Click **Network** at the **Administration** tab.
2. Click **DHCP** if your system obtains its network settings from a **Dynamic Host Configuration Protocol (DHCP)** server.

This choice is the default setting for the system.

3. Click **Fixed** to manually configure network settings.
4. To manually configure the network settings, type the following entries:

IP Address: type the Storage Service Processor or array IP address

Gateway IP: type the gateway IP address

Netmask: type the subnet mask IP address

Name Server: type the domain name server (DNS) IP address.

Domain Name: type the domain name, if required for Sendmail to function properly in your network.

5. Click **Save** to save the new settings.

▼ To Change Network Settings (Sun StorEdge 6100)

1. Click **Array and Action Selection** at the **Administration** tab.
2. Check the box next to the array that you want to configure, and click **Network Settings**.
3. Click **RARP** if you want your array to obtain an IP address from a RARP server on the same subnet.

Caution – You must use a known IP address when you register the array with the management software. If the IP address changes, the management software will be unable to manage the array due to an unknown IP address.

4. Click **Fixed** to manually configure network settings.
5. To manually configure the network settings, type the following entries:
IP Address: type the Storage Service Processor or array IP address
Gateway IP: type the gateway IP address
Netmask: type the subnet mask IP address
6. Click **Save** to save the new settings.

System Time

The System Time page enables you to automatically get the system time from a Network Time Protocol (NTP) server on your network or to manually set the time.

Note – Changing the time on the system may log off any active users and require them to log in to the application again.

▼ To Change the Current Time Zone

1. For Sun StorEdge 6300 Systems, click System Time at the Administration tab. For 6100 systems, click on Array and Action Selection. Select an array, then press Array System Time. (This will change the time on the selected array.)
2. Click Change Time Zone.
3. Sun StorEdge 6300 Systems Only - Select the Greenwich Mean Time offset from the Time Zone Offset list. For 6100 systems, select the Greenwich Mean Time offset from the Filter list.

For example, select GMT-08 if your location is 8 hours or time zones behind the Greenwich Mean time zone.
4. Select your location's time zone from the Selection list.
5. Click Save.

▼ To Set the Time Automatically

1. For StorEdge 6300 Systems, click System Time at the Administration tab. For 6100 systems, click on Array and Action Selection. Select an array, then press Array System Time. (This will change the time on the selected array.)
2. Select NTP and type the NTP IP address in the NTP Server Address Field.
3. Select the Greenwich Mean Time offset from the Time Zone Offset List.

▼ To Set the Time Manually

1. For StorEdge 6300 Systems, click System Time at the Administration tab. For 6100 systems, click on Array and Action Selection. Select an array, then press Array System Time. (This will change the time on the selected array.)
2. Select Manual.
3. Type the month, day, and year in the text fields.
4. Click Save.

Firewall Port Filtering (Sun StorEdge 6300)

This page enables you to open or close ports to enable or disable access to the Storage Service Processor, system, or the Sun StorEdge Configuration Service software. See [To Enable or Disable Port Access \(Sun StorEdge 6300\)](#).

You can open or close the following ports:

Port	Port Number	Description
Array Management HTTP, non-secure	9080	Enables access to the Sun StorEdge Configuration Service Login page or command-line interface sscs. A non-secure connection.
Array Management HTTPS	9443	Enables secure access to the Sun StorEdge Configuration Service Login page or command-line interface sscs. This port uses the Secure Socket Layer (SSL) protocol. Log in using this port if you are concerned about password security.
Storage Automated Diagnostic Environment software, non-secure HTTP	7654	Enables access to the Storage Automated Diagnostic software. The software is installed by default on the Storage Service processor. You can optionally install the software on a Solaris host if you are using Sun StorEdge 6120 arrays.
Storage Automated Diagnostic Environment software, secure HTTPS	7443	Enables access to the Storage Automated Diagnostic software. The software is installed by default on the Storage Service processor. You can optionally install the software on a Solaris host if you are using Sun StorEdge 6120 arrays.
SNMP	161	Enables the simple network management protocol port for third-party device management application access.
CIM HTTP	5988	Enables the Common Information Model port for CIM-compatible web-based management application access.
NTP	123	Enables the system to request the current time from a network time protocol server.
PatchPro	443	Enables access to the Sun PatchPro web page to provide updates for firmware and software updates.

▼ To Enable or Disable Port Access (Sun StorEdge 6300)

1. Click the **Port Filtering** link at the **Administration** page.

This page displays the current port configuration. A selected check box indicates that the related port is open; an unselected check box indicates that the port is closed or not accessible.

2. Select the ports you wish to open or unselect the ports you wish to close.

3. Click **Save**.

Understanding User Accounts and Roles

The Sun StorEdge 6300 System is configured with three *user accounts* as shown in the table. The software enables the `admin` user to set passwords for the accounts. Each account uses the software with the role of the same name.

The Sun StorEdge 6100 System is configured with three *user roles* as shown in the table. The software enables the `admin` role to authorize users to access the system and the software. By default, the system is pre-configured with the `root` user assigned access to the `admin` role.

User Account or Role	Description
admin	6300 Systems - An <code>admin</code> user has all administration privileges. The <code>admin</code> user can modify system attributes on the Administration page and set passwords for the accounts. 6100 Systems - An <code>admin</code> user is, by default, the root user. The root (<code>admin</code>) user can add, modify, and delete users and modify system attributes on the Administrator page.
storage	A <code>storage</code> user or role can use most of the software features related to storage device configuration. The Administration page is available to this user as read-only; this user cannot modify admin settings. This user can use the features available from the Array Management and Storage Access pages.
guest	A <code>guest</code> user or role has read-only privileges and can view the information. This user cannot modify any settings or feature.

Note – Only the `admin` user or role can change the passwords.

User Access and Roles (Sun StorEdge 6100)

The Administration page enables you to add or remove users who can access the Sun StorEdge Configuration Service web interface. The first task to perform after you log in to the interface is to assign roles to users. The users then log in to the interface, using their normal usernames and passwords.

Note – For the Sun StorEdge 6120 storage arrays, valid user names are existing or newly-created Solaris or other operating environment user accounts with assigned user roles. The system administrator first logs in as `root` and assigns the user role (admin, storage, or guest) to the valid user account. Once user roles are assigned, users can log in using their user name and password - the user role defines array access. See also [Array Root Password \(Sun StorEdge 6100\)](#).

- [To Add an Admin User Role \(First-Time Log In\)](#)
- [To Add Users and Related Roles](#)
- [To Remove a User's Role](#)

▼ To Add an Admin User Role (First-Time Log In)

1. **Log in to the Sun StorEdge Configuration Service software as the root user.**

The password should be the password for the root user on the Solaris host on which the management software was installed. This is not the password for any of the arrays in the system.

2. **Click the Administration tab.**

3. **Click the Users link.**

The Manage Users page is displayed. The default view of the page shows all users. To show users according to their roles, select Storage, Admin, or Guest from the Filter menu.

4. **Click Add.**

5. **Type the user name of a user who has an existing account on the machine where the software is installed.**

This user will be assigned a role of admin in the following steps.

6. **Select Admin from the Role menu.**

A user with an admin role can add or delete users and has access to the features on the Administration page

7. **Click Save.**

8. **Click Log Out.**

▼ To Add Users and Related Roles

Note – For the Sun StorEdge 6120 storage arrays, valid user names are existing or newly-created Solaris or other operating environment user accounts with assigned user roles. The system administrator first logs in as `root` and assigns the user role admin to the valid user account. After the admin user logs in and assigns user roles as described here, users can log in using their user name and password - the user role defines array access.

1. **Log in to the Sun StorEdge Configuration Service software as a user that is in the admin role.**

2. **Click the Administration tab.**

3. **Click the Users link.**

The Manage Users page is displayed. The default view of the page shows all users. To show users according to their roles, select Storage, Admin, or Guest from the Filter menu.

4. **Click Add.**

5. **Type the user name of a user who has an existing account on the machine where the software is installed.**

6. Select a role from the Role menu.

admin - A user with an admin role can add or delete users and has access to the features on the Administration page

storage - A user with a storage role can use the features available from the Array Management and Storage Access pages

guest - A user with a guest role can view each page in the interface, but cannot modify or change any editable attributes. Access to the software is read-only.

7. Click Save.

▼ To Remove a User's Role

1. Log in to the Sun StorEdge Configuration Service software as a user that is in the admin role.

2. Click the Administration tab.

3. Click the Users link.

The Manage Users page is displayed. The default view of the page shows all users. To show users according to their roles, select Storage, Admin, or Guest from the Filter menu.

4. Select a user in the table.

5. Click Remove.

6. Confirm the removal of this user's role.

User Names and Passwords (Sun StorEdge 6300)

The Administration page enables you to set passwords for the three user accounts that are allowed to access the Sun StorEdge Configuration Service web or command-line interface. As the admin user, you can change the default user passwords. The user account (or name) determines user privileges. The user accounts are as follows:

User Name	Default Password	Description
admin	!admin	An admin user has all administration privileges. The admin user can add, modify, and delete users and modify system attributes on the Administration page.
storage	!storage	A storage user can use most of the software features related to storage device configuration. The Administration page is available to this user as read-only; this user cannot modify admin settings. This user can use the features available from the Array Management and Storage Access pages.
guest	!guest	A guest user has read-only privileges and can view the information. This user cannot modify any settings or feature.

▼ To Enter a New User Password

1. Click the **Passwords** link at the **Administration** tab.
2. Type a new password in the **Enter New Password** and **Confirm New Password** fields for the desired user type.
3. Click **Save**.

Email Event Notifications

The Notifications page displays a table summarizing the categories of events that can occur in the system, including the number of events and subscribers. You can display details about the events in an event category by clicking a link in the Event Category column.

This page also enables you to manage the email notification list. The system sends event information such as when volumes have been deleted, when storage pools are created, and so on, to users whose email address you enter.

Email Event subscribers can receive “All” events, events from an individual category, or just a single event.

▼ To View Event Details

1. **Click Notifications at the Administration tab.**

The Event Categories table is displayed.

2. **Click an Event Category link in the table.**

The Event Category Detail page is displayed.

3. **Click a link in the Name column of the Events table.**

The Event Detail table displays information about the event. This page also shows the subscribed users that will receive email notification about this event.

▼ To Add an Email Address to the Notification Subscription List

1. **Click Notifications at the Administration tab.**

You can add “All” category subscribers here in the New Subscription section. Type email addresses, separating each address you type with a comma character (,).

2. **Click an Event Category link in the table.**

You can add individual category subscribers here in the New Subscription section. Type email addresses, separating each address you type with a comma character (,).

3. **Click an Event Name in the Event Category Detail section.**

You can add single event category subscribers here in the New Subscription section. Type email addresses, separating each address you type with a comma character (,).

4. **Click Add.**

▼ To Delete an Email Address from the Notification Subscription List

1. **Click Notifications at the Administration tab.**

2. **Click an Event link in the table.**

3. **Scroll down to the Subscribed Users region.**

4. **Click the check box next to the email address to select that address.**

5. **Click Remove.**

System Logs

The software enables you to view logs of events (also known as alarms) that have occurred. You view all events or you can sort the events or alarms by category.

▼ To View Logs

1. Click the **Administration** tab.
2. Click **Logs**.
3. Click **Next** to see more logs if more than one page of system logs exists.

System Report

This page displays detailed information about each storage array, tray, volume, and disk drive in the system. Scroll down the page to view more report information.

▼ To View a Report

1. Click the **Administration** tab.
2. Click **Reports**.
3. Scroll down to see system reports for all components in the system.

Array Configuration and Management

Caution – Do not configure the Sun StorEdge 6000 Family arrays by using the array Telnet interface and this web browser user interface at the same time. Use the Telnet interface **or** web browser user interface.

Do not use more than one instance of the software at a time to access or configure the same storage arrays or systems. For example, two storage users using the software from two different machines cannot add the same volumes to a volume group each user is creating or modifying.

The Array Selection main menu is the default page that is displayed after you log into the software. The Array Selection is on the right-hand pane, and a Tree menu is located in the left-hand pane.

This page enables you to check detailed system and device health status by launching the Storage Automated Diagnostic Environment application. (This application is installed by default on the Sun StorEdge 6300 Storage Service Processor. It must be installed on the local Solaris host for the Sun StorEdge 6100 arrays to be able to launch it from this page.)

See also [Array Details and Tray Reconfiguration](#).

From this page you can configure and manage your array. See the following sections:

- [Viewing the Graphic Array Overview](#)
- [Managing Storage Pools](#)
- [Array Registration \(Sun StorEdge 6100\)](#)
- [Array Configuration](#)
- [Duplicating Array Settings](#)
- [Managing Profiles](#)

- [Managing Volumes](#)
- [Managing Volume Groups](#)
- [Managing Initiators](#)
- [Managing Initiator Groups](#)
- [Viewing the Access Matrix](#)

Configuring An Array

Caution – Do not configure the Sun StorEdge 6000 Family arrays by using the array telnet command-line interface and this web browser user interface at the same time. Use the command-line interface `sscs(1M)` **or** web browser user interface.

Do not use more than one instance of the software at a time to access or configure the same storage arrays or systems. For example, two storage users using the software from two different machines cannot add the same volumes to their unique volume groups.

See the following to configure an array and its volumes:

- [Viewing the Graphic Array Overview](#) - create and manage storage pools
- [Managing Storage Pools](#) - create and manage storage pools
- [Array Registration \(Sun StorEdge 6100\)](#) - add or remove an array
- [Array Configuration](#) - configure array settings
- [Managing Profiles](#) - create, delete and view storage profiles
- [Managing Volumes](#) - create, delete, and view storage volumes

See also [Managing Volume Groups](#).

Note – Do not use spaces, commas, colon (:), or special characters `?,*,!,@,%,` or `&` as a character in any name you specify (for example, volumes, volume groups, initiators, initiator groups and so on).

Viewing the Graphic Array Overview

From the Configuration > Array Selection page, press the Show Overview button, or click on the name of the array in the Tree pane. An array overview in graphic form is displayed. The page shows a table of icons representing all trays and disks in the specified array.

Clicking on a disk image displays disk details such as the following example:

- Disk: t0d3
- Capacity: 33.92GB
- Pool: pool_1
- Role: data disk
- Status: OK
- State: enabled

If the disk is assigned to a pool, you can click on the pool name to open the Pool Details menu to perform modify the pool.

Clicking on the Controller icon displays information such as the following example:

- Tray Type: Controller
- Role: Master
- State: Enabled
- Status: Ready
- Diagnostics

You can also create pools from the graphic by clicking on a disk and then selecting the Pool Name link. This starts the Create New Pool Wizard.

Click on Diagnostics to open the Storage Automated Diagnostic Environment software.

The page also shows an icon on each disk. Refer to the legend on the page to identify icons representing:

- Online disk that is not in a pool
- Online disk member of a pool
- Offline disk
- Disk substituted with a hot spare
- Array hot spare disk shared by all pools on the array
- Dedicated hot spare disk
- Hot spare disk shared by pools on the tray

Managing Storage Pools

The Manage Pools page enables you to create and delete storage pools, place the storage in the pools online or offline, and refresh the storage pool status. The Create New Pool wizard enables you to create one storage pool per tray at a time.

This page also shows a summary of currently-available storage pools. See [To View Storage Pool Information](#).

Note – To create a volume and add it to a storage pool, see [To Create a Volume](#).

See Also [To View Storage Volume Details](#).

To manage storage pools, see the following topics:

- [To Create a Storage Pool](#)
- [To Delete a Storage Pool](#)
- [To Place a Storage Pool Online or Offline](#)
- [To Initialize a Storage Pool](#)
- [To View Storage Pool Information](#)
- [To View Storage Pool Details](#)
- [To View Storage Volume Details](#)
- [To Apply a Different Profile to a Storage Pool](#)
- [Viewing the Graphic Array Overview](#)

▼ To Create a Storage Pool

Note – To create a volume and add it to a storage pool, see [To Create a Volume](#).

1. Select the **Configuration/Array** selection tab.
2. Select a storage array in the table and click **Configure**.
3. Ensure that **Pools** are listed in the **Sub-reports** view menu.
4. Click **Create**.
The Create New Pool wizard is displayed.
5. Select the following in the wizard:
 - Select the first tray where you will create the storage pool and click **Next**.
 - Select a profile from the profile list, or alternately, you can create a new profile. Click **Next** to continue.
 - Name the pool and select the number of disk drives to use in the construction of the storage pool. Click **Next** to continue.
6. Click **Confirm**.

▼ To Delete a Storage Pool

1. Select the **Configuration/Array** selection tab.
2. Select a storage array in the table and click **Configure**.
3. Ensure that **Pools** are listed in the **Sub-reports** view menu.
4. Select one or more pools in the table to delete.
5. Click **Delete**.

▼ To Place a Storage Pool Online or Offline

1. Select the **Configuration/Array** selection tab.
2. Select a storage array in the table and click **Configure**.

3. Ensure that Pools are listed in the Sub-reports view menu.
4. Select one or more pools in the table.
5. Click one of the following buttons:
 - Click Online to place the storage pool volumes online, making the storage available
 - Click Offline to place the storage pool volumes offline. Note - you can initialize a pool that is offline.
6. Click Refresh to update the storage pool status in the table.

▼ To Initialize a Storage Pool

1. Select the Configuration/Array selection tab.
2. Select a storage array in the table and click Configure.
3. Ensure that Pools are listed in the Sub-reports view menu.
4. Select one or more pools in the table to initialize.
5. Click Initialize.

▼ To View Storage Pool Information

1. **Select the Configuration/Array selection tab.**
2. **Select a storage array in the table and click Configure.**
3. **Ensure that Pools are listed in the Sub-reports view menu.**

The storage pool summary table is displayed. The table displays the following information:

- Pool name - name of an existing pool
- RAID - RAID level of the pool volumes; levels are 0, 1, or 5
- Profile Name - the name of the profile containing the storage pool configuration settings
- Available - the available storage capacity for new volumes you might create and add to this pool.

With no volumes created, the Available column shows the total storage capacity available to the pool.

The maximum size for a new volume is limited by the size of the pool. With one or more volumes created, the Available column shows the maximum allowed size for the next new volume you create and add to this pool, or the actual amount of storage available to a new volume.

- Total - the total storage capacity of the pool. Once you create a storage pool, this number remains constant
- Status - shows the pool status, online and available or offline and unavailable. See [To Place a Storage Pool Online or Offline](#)
- State - shows the current state of the pool

You can also access storage pool summary information by clicking on Pools in the Tree pane or by selecting Array Selection and Manage Pools.

See also [To View Storage Pool Details](#) and [To View Storage Volume Details](#).

▼ To View Storage Pool Details

1. **Select the Configuration/Array selection tab.**
2. **Select a storage array in the table and click Configure.**
3. **Ensure that Pools are listed in the Sub-reports view menu.**
4. **Click the Pool Name link to display the storage pool details.**

The volumes assigned to a storage pool are displayed in the Volumes Associated table. Each volume name is a link that, when clicked, shows volume details.

You can also access storage pool details by clicking on the pool name in the Tree pane or by selecting Array Selection, Manage Pools, then the Pool name.

▼ To View Storage Volume Details

You navigate to the summary table link as follows:

- Click Array Selection from the Configuration page.
- Select a pool and click the Configure button.
- Ensure that Volumes are listed in the Sub-reports view menu by selecting Volumes from the drop-down menu.

1. Select Volumes from the Sub-reports view drop-down menu.

The volume summary table is displayed, showing the volume name, pool, profile, LUN, capacity, and online status.

2. Click the Volume Name link to display volume details.

The Storage Volume Details page is displayed.

Optional: You can change the volume access permissions, or add the volume to an existing volume group.

- To change the volume access permissions, perform the following:

a. Select one of following permission types from the Permissions menu:

- None; this setting is the default, specifying no access
- Read-only; specifies read access only for this volume
- Read/Write; specifies full access (read and write) for this volume

b. Click Save

- To add the volume to an existing volume group, perform the following:

a. Click Add to Group.

b. Select a volume group in the Volume Groups table.

c. Click Save

You can also access storage volume details by clicking in the Tree pane or by selecting Array Selection, Manage Volumes.

You can delete the volume from a volume group from this page. Also see [To Remove a Volume from a Volume Group](#).

▼ To Apply a Different Profile to a Storage Pool

1. Perform the steps in [To View Storage Pool Details](#) to get to the desired storage pool.

2. Click **Apply Different Profile**.

The Apply Different Profile page displays profiles that can be applied without affecting the pool.

You can perform the addition or removal of a spare for a pool by changing the profile. If you have a spare, and change to a profile that does not have a spare, the spare will be removed (if using array firmware Version 3.1). Similarly, a spare can be added if available.

3. Select a profile to apply from the profile table.

Only profiles that can be applied to the pool will be displayed.

4. Click **Save**.

Array Root Password (Sun StorEdge 6100)

Sun StorEdge 6120 arrays are shipped from the factory with no password set for the array's root user. Logging into the web browser with a blank password will grant you access to manage arrays.

▼ To Assign a Root Password for an Array

1. Telnet to the Sun StorEdge 6120 array using the array's IP address.

```
% telnet array_IP_address
Trying array_IP_address ...
Connected to array_IP_address
Escape character is '^]'.
Unauthorized access is prohibited.
```

2. Log in as root. Do not type a password.

```
Login: root
Password:
6120 Release 3.0.3 Mon Mar 10 15:47:42 PST 2003 (10.4.36.137)
Copyright (C) 1997-2003 Sun Microsystems, Inc.
All Rights Reserved.
```

3. Issue the `passwd` command. Do not type a password for the OLD password.

```
prompt> passwd
OLD password:
NEW password: new_password
NEW password (confirm): new_password
prompt>
```

4. Log out of the telnet session.

Array Registration (Sun StorEdge 6100)

This page enables you to register new Sun StorEdge 6120 storage arrays or remove currently registered storage arrays.

- [Array Root Password \(Sun StorEdge 6100\)](#)
- [To Register a New Array](#)
- [To Edit the Array Registration](#)
- [To Remove an Array](#)

▼ To Register a New Array

1. **Select Manage Array Registrations in the drop-down menu on the Configuration Tab/Array Selection page.**

2. **Click Register New Array.**

The New Array Registration page is displayed.

3. **Type the following information in the text fields:**

- IP Address of the array
- Root Password for array access
- Root password in the Verify field

4. **Select Persist Password if you want to have the password stored in an encrypted manner on the disk.**

If you do not choose the Persist Password option, the system will store the password in memory and prompt you for the password when the system's memory does not have the password.

5. **Click Save.**

▼ To Edit the Array Registration

1. **Select Manage Array Registrations in the drop-down menu on the Configuration Tab/Array Selection page.**
2. **Click the array IP address link.**

You have the option of:

- **Save** - click to save changes made to the Persist Password. (This indicates whether or not the password is stored (encrypted form) on disk.
- **Cancel** - click to cancel the edit.
- **Change Password** - click to change the password. A new pages displays where you must type in the Old Password, the Root Password, and Verify Password. Click Change Password.

3. **Click Save.**

▼ To Remove an Array

1. **Click the Array and Action Selection on the Administration page and click on the array Name link in the table under the Array Selection section.**
2. **Click Array Registration.**
3. **Select an array.**
4. **Click Remove.**
5. **Click Remove Registration to confirm the removal.**

Array Configuration

The [Configure](#) button from the Array Selection page displays array configuration setting options. When you choose to configure an individual array, you can:

- Create and manage storage volumes
- Create and manage storage pools
- Manage array hot spares
- View array health and firmware version
- Duplicate storage tray settings from one tray to another
- Create and manage array cache settings, including cache mode, segment size, and LUN failover mode and reconstruction rate

Caution – Data is deleted only if you are changing the array segment size. All other properties are non-destructive.

See the following for more detail:

- [To Configure an Array](#)
- [To Configure Fibre Channel Port Settings](#)
- [To Create New Storage Pools](#)
- [To Duplicate Tray Settings to Another Tray](#)
- [To View Tray Details](#)
- [To View Storage Pools for Individual Trays](#)

▼ To Configure an Array

Caution – Before you reconfigure an existing array, note that any information you enter and save at this page overwrites the existing information for the array.

1. **Select the Configuration/Array selection tab.**
2. **Select a storage array in the table and click Configure.**
You can also configure a Fibre Channel array settings from this page. See [To Configure Fibre Channel Port Settings](#).
3. **Type a description of the array in the Description text field.**
The maximum number of characters allowed is 39.
4. **Select or enable the following:**

Note – You may need to click on the [More...>>] button in the Array Properties table to view more configuration options.

- **Segment Size**

You can choose a LUN segment size of 4 Kbytes, 8 Kbytes, 16 Kbytes, 32 Kbytes, or 64 Kbytes. In a RAID-5 configuration, the segment size is the size of the data striped across volumes.

- **Read Ahead cache mode**

Select On to enable it or select Off to disable it.

- **Disk Scrubbing (firmware Version 3.1 only)**

Select enabled or disabled.

- **Disk Reconstruction Rate**

Selecting high might impact system I/O performance; selecting low might increase system I/O performance.

- **Failover Mode**

Select Explicit LUN Failover or Implicit LUN Failover.

- **Cache Mode**

off - disable the cache mode.

auto - use write-behind or write-through caching depending on I/O characteristics.

writebehind - write all read and write operations to cache.

writethrough - write data to cache and then to disk.

- Number of Array Hot Spares (Firmware 3.1)

Select the number of available hotspare drives in the array.

5. Click Save.

▼ To Configure Fibre Channel Port Settings

This page displays when you click the FC Configuration button from the Configuration page. After you set the FC port configuration settings, the array will attempt to maintain those settings, but may revert to previous settings.

1. Select the port speed from the Set Speed menu.

You can set the speed to 1 gigabits per second, 2 gigabits per seconds, or auto.

2. Select the Fibre Channel topology for the array.

You can set the topology as follows:

- **auto** - automatically sense the topology type
- **loop** - loop
- **fabric loop** - arbitrated loop
- **fabric point-to-point** - point to point
- **no connection**

3. Click Save.

▼ To Create New Storage Pools

Note – Before you reconfigure an existing array, note that any information you enter here overwrites the existing information for the array.

Note – You can create a single storage pool by selecting Pools from the View drop-down menu and clicking on Create.

1. Select the Configuration/Array selection tab.

2. Select an array in the Array Selection table and click Configure.

The Configuration page displays showing array details. You can update the array description and the settings in the Array Properties table.

3. Click Apply Profile to Configure Storage.

The Configure Storage Profiles Wizard displays, showing a list of profiles applicable for the new pools on this array on the first page. If there are no pools on this array, the only restriction for the profiles may be a fixed number of drives or “Array Type.” If there are pools on the array, an additional limiting factor is the segment size. Only profiles with the same segment size are selectable.

4. Select a profile from the Profile List.

When you select a profile, its details are displayed.

Note – If you don’t want to use the profile, you can also create a new profile by selecting <Create New Profile> and entering the parameters for the profile.

5. Click next.

6. Select one or more trays from the table.

You can create a pool using a profile.

7. Select the number of pools (one or two) that you want to assign to this tray from the drop-down menu.

8. Click next.

The default pools names are displayed. You can enter custom pool names.

9. Click next.

The Confirm Selection page appears with a list of the affected volumes and trays that will be affected by a changed profile.

10. Click Confirm to initiate the operation.

▼ To Duplicate Tray Settings to Another Tray

Note – These procedures will duplicate array settings and all associated objects, including pools, volumes, volume groups, initiators, initiator groups, and all premissions.

1. **Select the Configuration/Array selection tab.**
2. **Select an array in the Array Selection table and click Configure.**
3. **Select Trays from the Sub-reports view drop-down menu.**

The trays in the array table displays the tray type, role (Master or Alternate Master), State (Enabled or Disabled), Status, Number of Driver, and Array Hot Spares (AHS - firmware Version 3.1 only). For arrays that are not a controller, the Role, State, and Status Columns shows the dash (-) character.

4. **Click Duplicate Tray.**

The Duplicate Tray wizard is displayed.

5. **Select the following in the wizard:**
 - The source tray that has the settings to duplicate
 - The destination trays

Note – If the destination tray has pools with volumes, you will receive a notification of what will be deleted in order to duplicate the configuration of the source tray.

6. **Click Confirm.**

▼ To View Tray Details

1. Select the Configuration/Array selection tab.
2. Select an array in the Array Selection table and click Configure.
3. Select Trays from the Sub-reports view drop-down menu.

The trays in the array table displays the tray type, role (Master or Alternate Master), State (Enabled or Disabled), Status, Number of Drives, and Array Hot Spares (AHS). For arrays that are not a controller, the Role, State, and Status Columns shows the dash (-) character.

4. Click the Tray ID link.

The Tray Details page is displayed. To view existing storage pools for this tray, see [To View Storage Pools for Individual Trays](#).

▼ To View Storage Pools for Individual Trays

1. Perform the steps in [To View Tray Details](#).

This page shows the Tray Details. You can select either pools or disks from the Sub-reports drop-down menu.

2. Select Pools from the Sub-reports view drop-down menu.

The pools on tray table displays the Pool Name, RAID type, Profile, Available disk space, Total disk space, Hot Spare, Status (online, offline, initializing), and State (idle or verifying).

3. Click the Pool Name link to display the storage pool details.

The volumes assigned to a storage pool are displayed in the Volumes Associated With Pool table. Each volume name is a link that, when clicked, shows volume details.

Note – If you click the Name link in the table, you can change the volume access permissions on this page as described in [To Change Volume Access Permissions](#).

Duplicating Array Settings

You can duplicate array settings by copying one array's settings to another array. In this case, you must have already configured one array as described in [Array Configuration](#).

▼ To Duplicate Array Settings

- 1. Select the Configuration/Array selection tab.**

To be a candidate for array duplication, the source tray must not have any shared spare disks, the source and destination must have the same number of trays, the same number of disks, and the disks must be the same capacity, slot for slot.

- 2. Select the source array from the Array Selection table and select Duplicate Array from the drop-down menu.**

The Array Duplication page displays possible targets to be configured as the source array.

- 3. Select one or more arrays in the array table and click Configure as Source.**

Managing Profiles

Clicking the Configuration -> Profiles tab displays the Profile Management page. You can choose a pre-configured profile or create a new one. Filter the profiles to display with the following information:

- Name - The profile name
- Raid - RAID levels 0, 1, or 5
- Segment size- A segment size of 4 Kbytes, 8 Kbytes, 16 Kbytes, 32 Kbytes, or 64 Kbytes. In a RAID-5 configuration, the segment size is the size of the data striped across volumes.
- Readahead - The read-ahead cache.status (on/off)
- Array Type - Determines the specific array type to use:
 - 1) Exact Match – IOPS (1x2, 2x4 array)
 - 2) Exact Match – Bandwidth (1x1, 2x2 array)
 - 3) Exact Match – Capacity (1x3, 2x6 array)
 - 4) Best Available Match – IOPS
 - 5) Best Available Match – Bandwidth
 - 6) Best Available Match - Capacity

Types 1 to 3 match only one array configuration (1x1, 1x2, 1x3, 2x2, 2x4, 2x6). If a profile has one of these three parameter settings and the specific array is not available, then the profile cannot be applied.

Types 4 to 6 attempt to match the best available array based on the environment (Oops, Bandwidth, Capacity). For example, Best Available Match should be applied to 2x6 but can be applied to 2x4 or 2x2 as well. The system does not determine the best match, but the user selects an array and uses a profile to create pools.

The following rules apply to the three Best Available Match settings:

- (SE6120: MR-1) IOPS: 1x2 - 1x1 - 1x3
- (SE6120: MR-1) Bandwidth: 1x1 - x2- 1x3
- (SE6120: MR-1) Capacity: 1x3 - 1x2 - 1x1
- (SE6120: MR-2, SE6320) IOPS: 2x4 - 2x2 - 2x6
- (SE6120: MR-2, SE6320) Bandwidth: 2x2 - 2x4 - 2x6
- (SE6120: MR-2, SE6320) Capacity: 2x6 - 2x4 - 2x2

Note: For the last three choices, the array or system does not determine the best available match.

See the following for more detail:

- [To Create a New Profile](#)
- [To Delete a Profile](#)
- [To Import a Profile](#)
- [To Export a Profile](#)
- [To View and Modify Profile Details](#)

Also see [To Create New Storage Pools](#).

▼ To Create a New Profile

1. Select the **Configuration/Profiles** selection tab.

2. Click **Create**.

The Create New Profile page is displayed.

3. Select the following in the **New profile properties** table:

- Type a name for the new profile
- Type a description for the profile
- Select the RAID level
- Select a segment size
- Select the readahead status
- Select the number of drives
- Select the array type
- Select the dedicated hot spare status

4. Click **Save**.

Note – If your profile has the same storage settings as an existing profile, a confirmation page displays asking you if you want to create the profile. Click “Cancel” to end the profile creation, or select “Create” to continue.

▼ To Delete a Profile

1. Select the **Configuration/Profiles** selection tab.
2. Select one or more profiles to delete from the **Profiles** table.
3. Click **Delete**.

The Confirm Profile Delete page is displayed.

Note – Profiles that are “In Use” cannot be deleted. Profiles that are in use are listed in the Profiles in Use table.

To view the affected (profiles to be deleted) profiles details page, click the Profile Name link in the Affected Profiles table.

4. Click **Delete Profiles**.

▼ To Import a Profile

1. Select the **Configuration/Profiles** selection tab.

2. Select **Import**.

The Import Profiles: File Selection page is displayed.

3. Select **“Find Client File...”** and type in the location of a file containing storage profile data.

Note – Do not enter a name of an existing directory on your system, as this may cause an “ERROR 500” to occur in some browsers.

4. Click **Load**.

The Confirm Import Profiles page is displayed.

5. Select profiles to import.

Note – If a profile has an import status of “Conflicting Setting,” importing it will overwrite the existing profile.

6. Click **Import**.

▼ To Export a Profile

1. **Select the Configuration/Profiles selection tab.**
2. **Select one or more profiles from the Profile Management page to export.**

3. **Click Export.**

A dialog box is displayed. Enter a file name or accept the default file name and select the directory.

4. **Click Ok on the Save as... dialog box to export the profile.**

The selected profiles will be exported to the local file system in the selected file.

See [To Import a Profile](#) if you need to import the saved profile.

▼ To View and Modify Profile Details

1. Select the Configuration/Profiles selection tab.

The Profile Management page displays a Profiles table containing all profiles configured on the array. The profile name, RAID type, segment size, read-ahead status and array type are displayed.

You can select an option from the Filter drop-down menu. You can display:

- All profiles
- Profiles in use
- Profiles not in use

2. Select a Name link for an individual profile you want to view.

The Profile Details page displays the Name, Description, RAID level, Segment size, Read Ahead status, Number of drives, Array type, the Dedicated hot spare status.

3. Select one or more profile settings to modify.

You can only modify the name and description of a profile that has storage configured to it.

Note – You can create a new profile with similar settings by clicking the “Save As...” button.

4. Click Save.

Managing Volumes

The software enables you to manage volumes through the Configuration/Array selection tab. The Create New Volume wizard enables you to:

- Configure the volume size
- Set volume access permissions
- Select the LUN for the volume
- Add the volume to an existing volume group

You can also view volume details, change access permissions, and add a volume to a volume group.

See the following:

- [To Create a Volume](#)
- [To Delete a Volume](#)
- [To Change Volume Access Permissions](#)
- [To Add a Volume to a Volume Group](#)
- [To Remove a Volume from a Volume Group](#)

▼ To Create a Volume

Note – You cannot change a volume’s name after creating and naming it.

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and select Manage Volumes from the drop-down menu. Alternately, you can click “Configure” and select “Volumes” view from the sub-reports section of the page.**

The Manage Volumes page displays a current list of volumes on the selected array. The Volume table displays the Name, Pool, Profile name, LUN, Capacity, and Status of currently-configured volumes.

3. **Click Create.**

The Create New Volume wizard is displayed in a new window.

4. Select or type the following in the wizard:

- Volume name; the name can contain only 9 characters (a-z or A-Z)
- Storage pool to which you add the volume
- Volume size - The minimum size for the new volume is 10MB; the maximum size for a new volume is 2 TB (the maximum size of the pool).
- Permissions: None, Read-Write, Read-Only
- Default logical unit number (LUN)
- Volume group to which you add the volume

5. Click Confirm.

▼ To Delete a Volume

1. Select the Configuration/Array selection tab.

2. Select an array from the Array Selection table and select Manage Volumes from the drop-down menu. Alternately, you can click “Configure” and select “Volumes” view from the sub-reports section of the page.

The Manage Volumes page is displayed. This page displays a table showing details about currently-configured volumes.

3. Select one or more volumes to delete.

The Confirm Volume Delete Operation page is displayed, showing initiators that will be impacted by the volume deletion. If you don't want to impact the volume/initiator configuration, click Cancel to end the deletion process.

4. Click Delete Volume(s)

▼ To Change Volume Access Permissions

1. Select the Configuration/Array selection tab.

2. Select an array from the Array Selection table and select Manage Volumes from the drop-down menu.

The Manage Volumes page is displayed. This page displays a table showing details about currently-configured volumes.

3. Click a Name link in the Volumes table.

The Volume Details page is displayed.

4. Select a permission type from the Permissions menu:

- None; this setting is the default, specifying no access
- Read-only; specifies read access only for this volume
- Read/Write; specifies full access (read and write) for this volume

5. Click Save.

Optional: You can also add this volume to an existing volume group:

a. Click Add to Group.

b. Select a volume group in the Volume Groups table.

c. Click Save.

▼ To Add a Volume to a Volume Group

Note – To add a volume from an existing volume group to another volume group, remove the volume from its existing volume group first. See [To Remove a Volume from a Volume Group](#).

1. Select the Configuration/Array selection tab.

2. Select an array from the Array Selection table and select Manage Volumes from the drop-down menu.

The Manage Volumes page is displayed. This page displays a table showing details about currently-configured volumes.

3. Click a Name link in the Volumes table.

4. Click Add to Group

5. Select a volume group in the Volume Groups table.

6. Click Add.

▼ To Remove a Volume from a Volume Group

Note – See also [To Remove One or More Volumes from a Volume Group](#).

1. **Select the Configuration/Array selection tab.**
2. **Select a source array from the Array Selection table and select Manage Volumes from the drop-down menu.**

The Manage Volumes page is displayed. This page displays a table showing details about currently-configured volumes.
3. **Click a Name link in the Volumes table.**
4. **Click Remove from Group.**

Storage Access

Note – Do not configure the Sun StorEdge 6000 Family arrays by using the array Telnet interface and this web browser user interface at the same time. Use the Telnet interface **or** web browser user interface.

The default view when you click the Configuration tab is the Array Selection page. This page shows a table of existing storage arrays that you can select to manage. From the drop-down menu, you can select:

- Volume groups
 - [Managing Volume Groups](#)
- Initiators and initiator groups
 - [Managing Initiators](#) and [Managing Initiator Groups](#)
- Array initiator groups, where you can import initiator groups from one array to another
 - [Managing Multiple Array Access](#)
- The access matrix lists the permissions of initiators for each volume.
 - [Viewing the Access Matrix](#)

Note – Do not use spaces, commas, colon (:), or special characters ?, *, !, @, %, or & as a character in any name you specify (for example, volumes, volume groups, initiators, initiator groups and so on).

Managing Volume Groups

Note – Do not configure the Sun StorEdge 6000 Family arrays by using the array Telnet interface and this web browser user interface at the same time. Use the Telnet interface **or** web browser user interface.

The software enables you to manage volume groups in each storage array. The Manage Volume Groups page shows a table with links to details about each existing volume group and its associated initiators.

See the following sections for more information:

- [To View Volume Group Details](#)
- [To Create a Volume Group](#)
- [To Delete a Volume Group](#)
- [To Add Volumes to a Volume Group](#)
- [To Remove One or More Volumes from a Volume Group](#)

▼ To View Volume Group Details

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Volume Groups from the drop-down menu.**

The Manage Volume Groups page is displayed. This page displays a table showing existing volume groups and initiators as links. When you click a link, a page is displayed showing details about that volume group or associated initiator groups.

3. **Click a volume group name link in the table.**

The details include the volume group name, a View List link to associated initiator groups, and a table showing each volume in the group.
4. **Click the initiator group or volume name link to see details about that selection.**

▼ To Create a Volume Group

Note – To add a volume from an existing volume group to another volume group, remove the volume from its existing volume group first. See [To Remove One or More Volumes from a Volume Group](#).

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Volume Groups from the drop-down menu.**

The Manage Volume Groups page is displayed. This page displays a table showing links to details about currently-configured volume groups and associated initiator groups.

3. **Click Create.**

The Create New Volume wizard is displayed in a new window.

4. **Select or type the following in the wizard:**

- Volume group name; the name can be up to 16 characters.
- Volumes to add to the group, if any. You can only add volumes if they are not a member of a volume group.
- Initiator groups to associate with this volume group and association permissions

5. **Click Confirm.**

▼ To Delete a Volume Group

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Volume Groups from the drop-down menu.**
3. **Click Manage Volume Groups.**

The Manage Volume Groups page is displayed. This page displays a table showing links to details about currently-configured volume groups and associated initiator groups.
4. **Select one or more volume groups in the table.**

You must first remove all volumes from the selected volume group before deleting the volume group.
5. **Click Delete.**
6. **Click Confirm.**

▼ To Add Volumes to a Volume Group

Note – To add a volume from an existing volume group to another volume group, remove the volume from its existing volume group first. See [To Remove One or More Volumes from a Volume Group](#).

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Volume Groups from the drop-down menu.**

The Manage Volume Groups page is displayed. This page displays a table showing links to details about currently configured volume groups and associated initiator groups.

3. **Click a volume group Name link to select a volume group.**
4. **Click Add.**
5. **Select volumes from the volume table.**

You can only add volumes that are not a member of a group.

6. **Click Add Selected.**

▼ To Remove One or More Volumes from a Volume Group

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Volume Groups from the drop-down menu.**

The Manage Volume Groups page is displayed. This page displays a table showing existing volume groups and initiators as links. When you click a link, a page is displayed showing details about that volume group or associated initiator groups.

3. **Click a volume group name link in the table.**
The Volume Group details page is displayed.
4. **Select one or more volumes from the Members table.**
5. **Click Remove.**
6. **Remove from Group.**

Managing Initiators

The software enables you to manage initiators in each storage array. This Manage Initiators page shows a table with links to each initiator by World Wide Name (WWN).

See the following sections for more information:

- [To View Initiator Details](#)
- [To Create an Initiator](#)
- [To Delete One or More Initiators](#)
- [Managing Initiator Groups](#)

▼ To View Initiator Details

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table and click Manage Initiators from the drop-down menu.**
3. **Click a WWN link to see details about the initiator.**

The Initiator Details page is displayed. The details shown include the WWN and the Description. Initiator groups and related volume groups to which the initiator belongs are also included in the Initiator Memberships section.
4. **Click an Initiator Group or Volume Group link to display details about those groups.**

▼ To Create an Initiator

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table to create an initiator.
3. Click Manage Initiators from the drop-down menu.

The Manage Initiators page is displayed. This page displays a table showing existing initiators as links. When you click a link, a page is displayed showing details about that initiator.

4. Click Create.
5. Type the following:
 - World Wide Name (WWN) has to be exactly 16 hex characters. Valid characters are 0-9, and A-F.
 - Text description of up to 64 characters
6. (Optional) Select one or more initiator groups in which to add the initiator.
7. Click Save.

▼ To Delete One or More Initiators

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table to delete an initiator.
3. Click Manage Initiators from the drop-down menu.
4. Select one or more initiators.
5. Click Delete.
6. Click Confirm.

Managing Initiator Groups

The software enables you to manage initiator groups in each storage array. This Manage Initiator Groups page shows a table with links to each initiator group and its associated volume groups.

See the following sections for more information:

- [To View Initiator Details](#)
- [To Create an Initiator Group](#)
- [To Duplicate Initiator Groups](#)
- [To Add Initiators to an Initiator Group](#)
- [To Delete an Initiator Group](#)
- [To Remove One or More Initiators from an Initiator Group](#)
- [To Add a Volume Group to an Initiator Group](#)
- [To Add an Initiator Group to a Volume Group](#)
- [To Remove an Association Between a Volume Group and an Initiator Group](#)
- [Managing Initiators](#)

▼ To View Initiator Group Details

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table and click Manage Initiator Groups from the drop-down menu.
3. Click an Initiator Group Name link to see details about the initiator group.

The Initiator Group Details page is displayed. The details shown include a “view list” hyperlink to any related volume groups to which the initiator group belongs.
4. Click a Volume Group or an Initiator link WWN to display details about those items.

▼ To Create an Initiator Group

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table to create an initiator group.**
3. **Click Manage Initiator Groups from the drop-down menu.**

The Manage Initiator Groups page is displayed. This page displays a table showing existing initiator groups as links. When you click a link, a page is displayed showing details about that group.

4. **Click Create.**
5. **Enter an initiator group Name in the Value field.**
The name can be up to 15 characters.
6. **Select one or more initiators in the table.**
7. **Click Create.**

▼ To Duplicate Initiator Groups

1. **Select the Configuration/Array selection tab.**
2. **Select an array from the Array Selection table.**
3. **Click Duplicate Initiators from the drop-down menu.**

The Initiator Group Section page is displayed. Select initiator groups that you want to import.

4. **Click Select Targets.**
Select one or more arrays that you want to import the initiator group(s) to. If you want to cancel the operation, click Cancel.
5. **Click Import to Selected Arrays.**

▼ To Add Initiators to an Initiator Group

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table to add an initiator group.
3. Click Manage Initiator Groups from the drop-down menu.
4. Click the initiator group Name link.
5. Click Add.
6. Select one or more initiators.
7. Click Add Selected.

▼ To Delete an Initiator Group

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table to delete an initiator group.
3. Click Manage Initiator Groups from the drop-down menu.
4. Select one or more initiator groups.
5. Click Delete
6. Click Delete Initiator Group(s).

▼ To Remove One or More Initiators from an Initiator Group

This page also enables you to add initiators to an initiator group. See [To Add Initiators to an Initiator Group](#).

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table and click Manage Initiator Groups from the drop-down menu.
3. Select a Name link to view the Initiator Group Details page.
4. Select one or more members of the initiator group.
5. Click Remove.
6. Click Confirm.

▼ To Add a Volume Group to an Initiator Group

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table and click Manage Initiator Groups from the drop-down menu.
3. Click the `show` link in the Volume Groups column.
4. Click Add.

Setting access permissions between initiator and volume groups sets access permissions for all initiators in the selected initiator group to all volumes in the selected volume group.

- a. Select one or more initiator groups in the table.
- b. Select the access from the menu: Read/Write or Read-Only.
- c. Add Selected.

▼ To Add an Initiator Group to a Volume Group

1. Select the **Configuration/Array** selection tab.
2. Select an array from the **Array Selection** table and click **Manage Volume Groups** from the drop-down menu.
3. Click the **show** link in the **Initiator Groups** column.

The current initiator groups associated with the volume are displayed. From this page, you can click on the **Name** link to view initiator group details, or change the current Access permissions for the initiator group.
4. Click **Add**.
5. Select an initiator group to add to the volume group.
6. Click **Add Selected**.

▼ To Remove an Association Between a Volume Group and an Initiator Group

1. Select the **Configuration/Array** selection tab.
2. Select an array from the **Array Selection** table and click **Manage Initiator Groups** from the drop-down menu.
3. Click the **show** link in the **Volume Groups** column.
4. Select one or more volume groups.
5. Click **Remove**.

Managing Multiple Array Access

The Array Selection page enables you to export initiator groups from one array and import them to another array. The following section describes this procedure.

▼ To Export Initiator Groups to Other Arrays

1. Select the Configuration/Array selection tab.
2. Select an array from the Array Selection table and click Duplicate Initiator Groups from the drop-down menu.
3. Select initiator groups to export.
4. Click Select Targets.
5. Select one or more target arrays.
6. Click Import to Selected Arrays.

Viewing the Access Matrix

The Configuration -> Array Selection -> Access Matrix (drop-down menu) page, lists the read/write permissions for each initiator by volume with the following fields:

- Volume Name.
- LUN - The logical unit number of the volume. The default LUN is the first one available.
- Group - The volume group name. A volume can only belong to one volume group.
- Initiator WWN - The World Wide Name (wwn) of the initiator. For example, 210000e08b047212.
- Group - The initiator group name.
- Permissions Default - Default read/write/none permissions on the volume. The permissions apply to all initiators unless mapped otherwise.
- Group - Group permissions between the volume group and this initiator group.
- Effective - Actual permission that the initiator has on the volume.

Jobs

The Jobs page displays jobs that the software is currently performing such as:

- Creating storage pools
- Creating volumes
- Duplicating tray characteristics

and so on.

Managing Jobs

The follow sections describe how to manage jobs:

- [To View Job Status](#)
- [To Cancel One or More Jobs](#)
- [To Delete Jobs](#)

▼ To View Job Status

1. **Click the Jobs tab.**

The Jobs page is displayed. This page shows a summary of all current or outstanding jobs.

2. **Perform one of the following steps:**

- - Select All Jobs from the menu to view current and completed jobs.
- - Select Outstanding Jobs from the menu to view current jobs.

3. **Click Refresh List to update the page.**

You can also set the Autorefresh from the drop-down menu. You can choose 30 second or 60 second refreshes.

▼ To Cancel One or More Jobs

1. **Click the Jobs tab.**

2. **Select Outstanding Jobs from the menu.**

3. **Select one or more jobs in the Jobs Summary table.**

If the job state is "Running," it cannot be canceled unless it is a "CREATE POOL" job. A job can be canceled while it is being queued for execution.

4. **Click Cancel Job.**

5. **Click Confirm.**

6. **Click Refresh to update the page.**

▼ To Delete Jobs

1. **Click the Jobs tab.**

2. **Select All Jobs or Outstanding Jobs from the menu.**

3. **Select one or more jobs in the Jobs Summary table.**

Only completed jobs can be deleted.

4. **Click Delete Jobs from List.**

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