COMPAQ
STORAGEWORKS

Quick Setup Guide

RAID Array 8000/ESA12000 Fibre Channel Storage Subsystem for Sun Solaris

AA–RFBNA–TE

387385-001

Before You Begin

In this Quick Setup Guide we tell you how to create an initial hardware configuration for both the *Compaq StorageWorks RAID Array 8000 Fibre Channel Storage Subsystem* and the *Compaq StorageWorks Enterprise Storage Array 12000 Fibre Channel Storage Subsystem* (the "RA8000/ESA12000 storage subsystem" or the "storage subsystem").

To create this configuration you will:

- Install Storage Building Blocks (SBBs) and Program Cards in the RA8000/ESA12000 storage subsystem cabinet;
- Install a fibre channel adapter in the server;
- Connect the fibre channel adapter to the storage subsystem HSG80 controller via a fibre channel hub;
- Turn on the ac power to the storage subsystem;
- Configure the storage subsystem and install the StorageWorks software on the Sun server;
- Install and launch the StorageWorks Command Console (SWCC) Client Graphical User Interface on a network–attached PC.
- Verify controller properties.
- Configure a Storageset and reboot the Sun server.

Unless otherwise noted the instructions for installing and connecting storage subsystem components are given for the SW370 pedestal, but apply equally to other Compaq cabinet options.

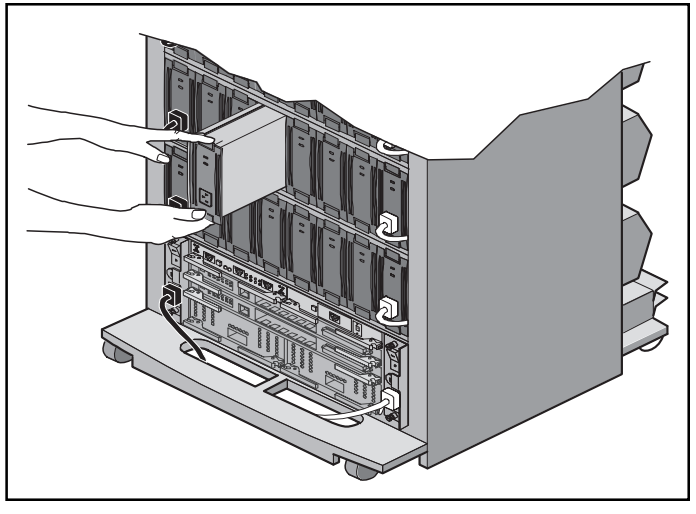
Before you start these steps follow the instructions on the shipping container to unpack the RA8000/ESA12000 storage subsystem.

Everything you need to create the initial hardware configuration is in the container, except for a flat-blade screwdriver and a #2 Phillips screwdriver.

NOTE

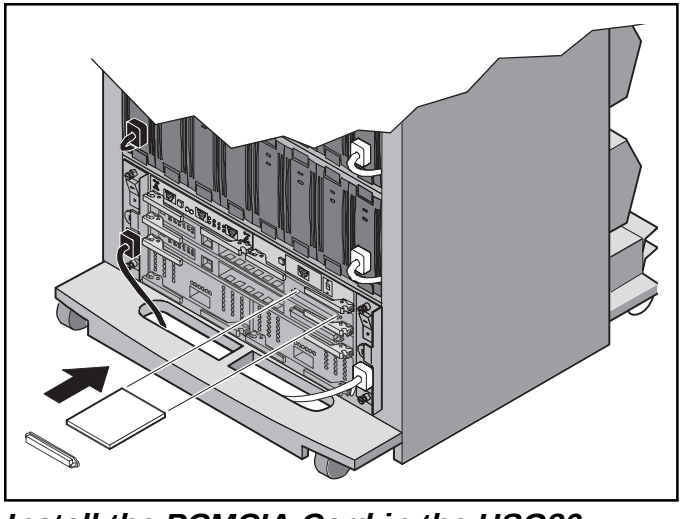
You can find complete instructions for unpacking and installing the RA8000/ESA12000 storage subsystem in the *RA8000/ESA12000 HSG80 Solution Software V8.3 for Sun Solaris Installation Reference Manual*, AA–RFAQA–TE (387384-001), and the *RA8000/ESA12000 Storage Subsystem User's Guide*, EK–SMCPR–UG. A01 (387404-001).

1 Install the SBBs and Program Cards



Install the SBBs in the RA8000/ESA12000 Storage Subsystem Cabinet

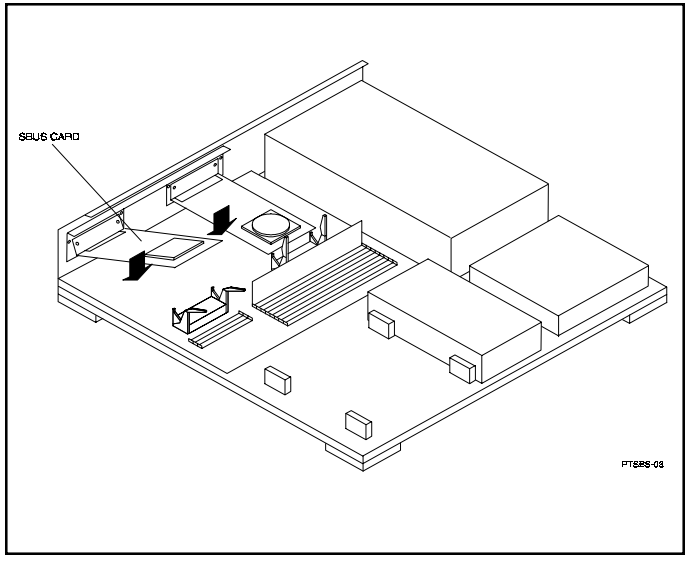
- Insert an SBB into the shelf guide slots and slide the SBB into the shelf until the mounting tabs snap into place.
- For optimum SCSI bus distribution, install the SBBs from left-to-right and from bottom-to-top.

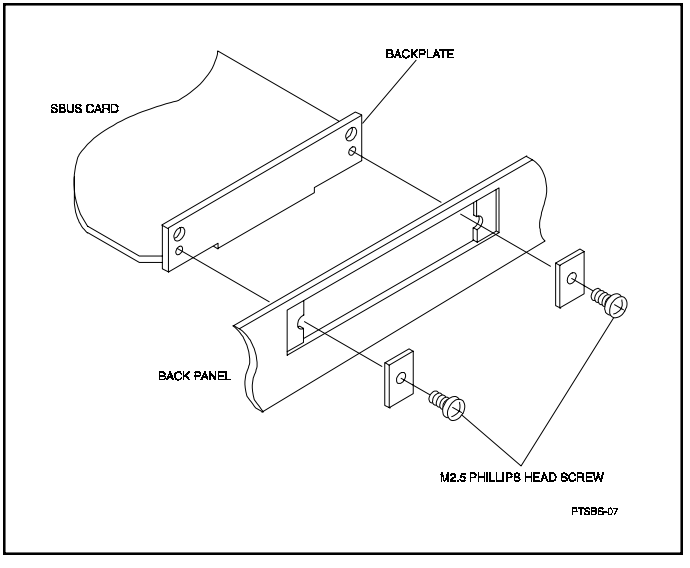


Install the PCMCIA Card in the HSG80 Controller

- Remove the ESD cover from the controller PCMCIA slot.
- Insert the PCMCIA card in the controller slot.
- Replace the ESD cover over the controller slot.
- Repeat the steps if you have two controllers.

2 Install the Fibre Channel Adapter





Turn Off the Server

- Shut down the operating system
- Turn off the power to the server and all attached peripherals.

Insert the Adapter in the Server

- Open the server to gain access to the expansion slots.
- Insert the adapter in an empty Sbus slot.
- Secure the adapter in the slot with the screws provided.

3 Connect the Fibre Channel Adapter to the Subsystem Controller

Connect the fibre channel adapter to the hub and the hub to the storage subsystem controller with the fiber-optic cables supplied.

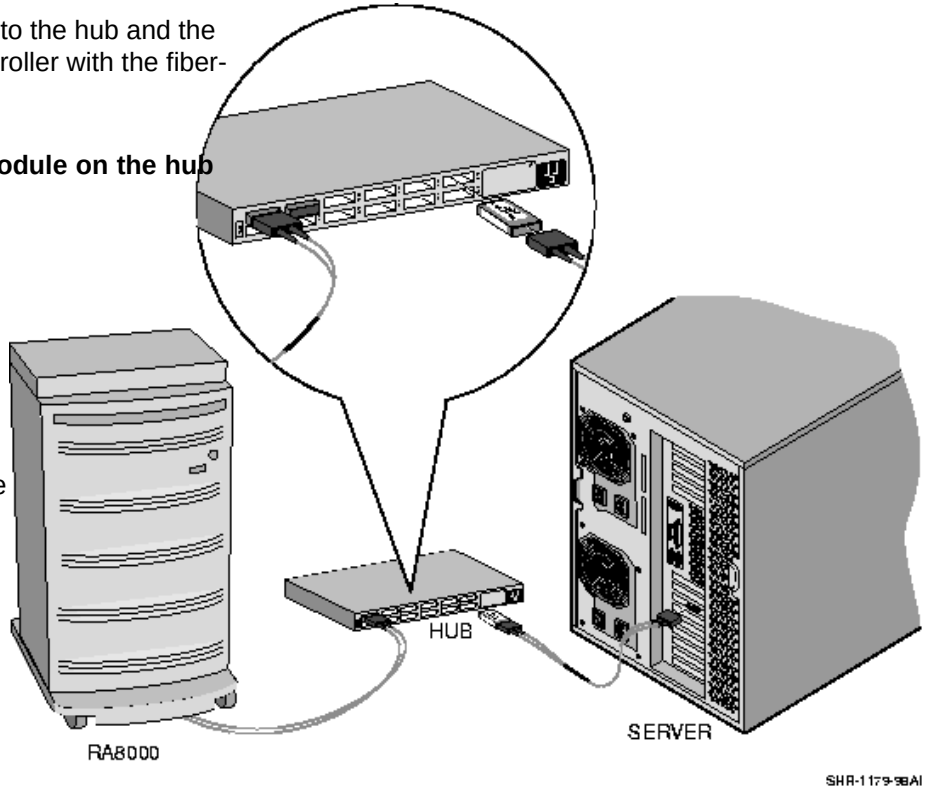
Be sure to install a GBIC–SW module on the hub end of each cable.

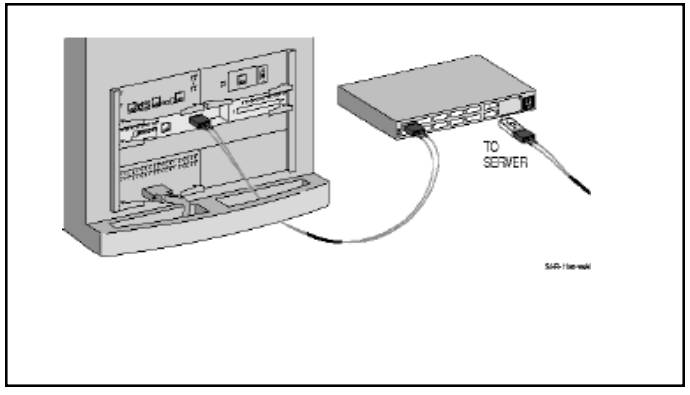
On the next page we show the adapter to controller connections for these two configurations:

- single controller, one server
- dual controller, one server

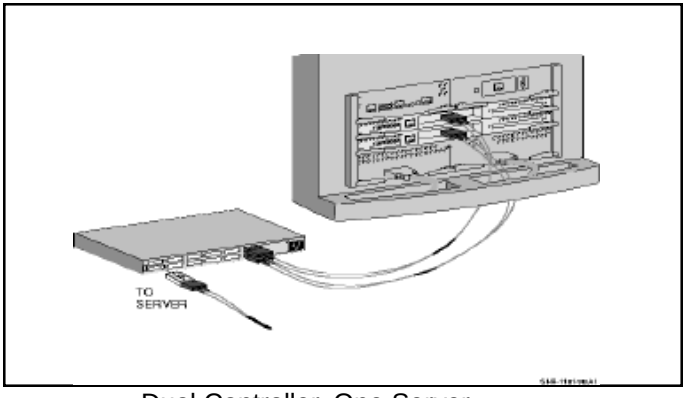
We also show on the next page the configurations that pertain if you are running FirstWatch:

- single controller, two servers
- dual controller, two servers

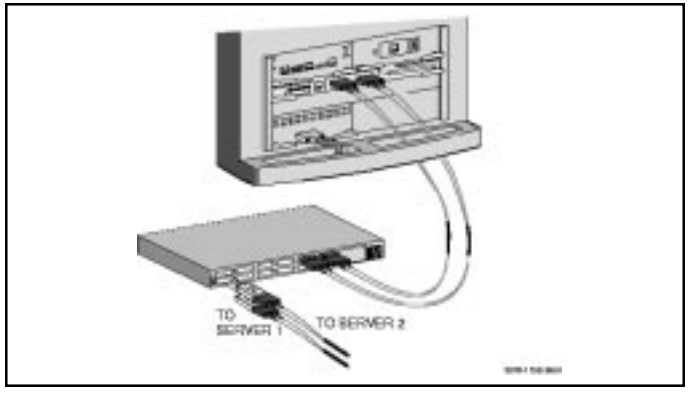




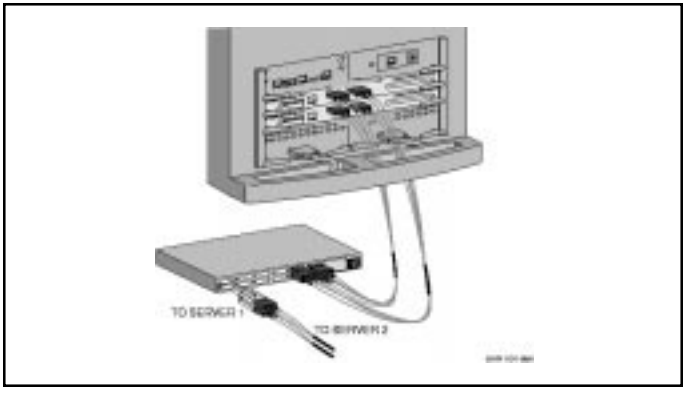
Single Controller, One Server



Dual Controller, One Server



FirstWatch Configuration
Single Controller, Two Servers



FirstWatch Configuration
Dual controller, Two Servers

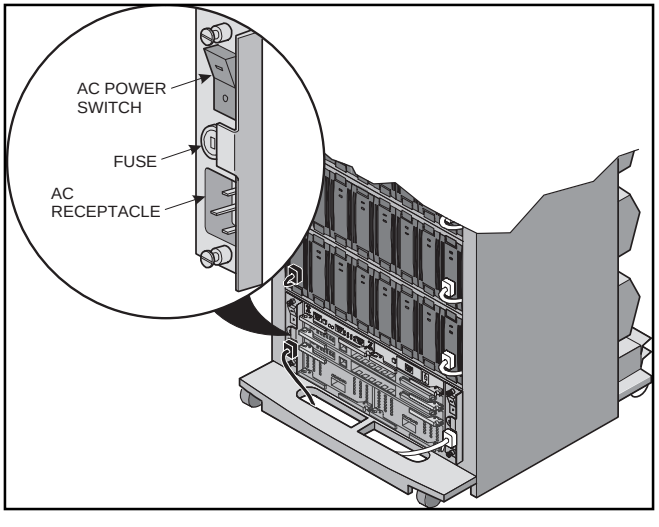
4 Turn on the Subsystem Power

Connect the Hub to an AC Power Outlet

- Connect one end of the hub ac power cord to the hub.
- Connect the other end of the ac power cord to an ac outlet.

Turn on the Storage Subsystem Power

- Connect one end of the storage subsystem cabinet ac power cord to the cabinet ac receptacle.
- Connect the other end of the power cord to an ac outlet.
- Push in the “1” side of the cabinet ac power switch.
- When the RESET LED on the HSG80 controller blinks at a rate of once per second the storage subsystem is ready to operate.



Turn on the Server and Boot Solaris

5 Configure Your Subsystem and Install the StorageWorks Software

Configure Your Storage Subsystem

There are two ways to configure your storage subsystem:

- Using the Command Line Interpreter via an RS–232 connection. Refer to Chapter 3 of the *RA8000/ ESA12000 HSG80 Solution Software V8.3 for Sun Solaris Installation Reference Manual* for instructions on RS–232 configuration.
- Using the StorageWorks Command Console (SWCC) Client/Agent software via a TCP/IP connection. This requires a PC connected via TCP/IP Ethernet LAN to your Sun server. SWCC configuration is outlined in this guide.

Install the StorageWorks Software

- Insert the StorageWorks software CD–ROM in the CD–ROM drive of the Sun server.
- The *Volume Management* daemon mounts the CD–ROM and starts the file manager.
- Use the file manager to select the directory

  ```
  /cdrom/hsg80_v83_sun/agents/solaris
  ```

- Double click on the *install_stgwks* icon to run the *Installation Manager.*
- Follow the on–screen instructions to:
  – Install the fibre channel adapter driver, CPQfca
  – Install the Storageworks RAID Manager Software, CPQhsg80.
  – Configure the SWCC Agent with the *install.sh* program.

NOTE

If you need more information, refer to Chapter 1 of the RA8000/ESA12000 HSG80 Solution Software V8.3 for Sun Solaris Intallation Reference Manual.

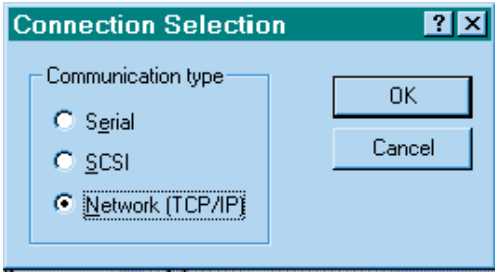
6 Install and Launch StorageWorksCommand Console (SWCC) Client

Install the SWCC Client

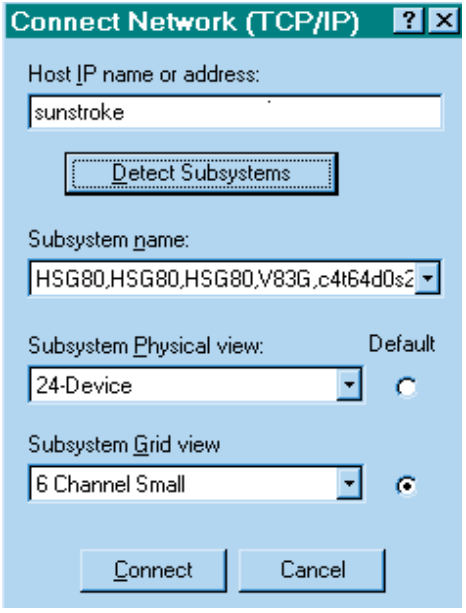
- Insert the StorageWorks software CD–ROM in the CD–ROM drive of the PC.
- Run *File Manager* or Windows *Explorer*.
- Navigate to the folder
  drive_letter:\swcc\client\intel
- Double–click on *Setup.exe.*
- When the setup wizard appears, follow the instructions to complete the installation.
- When installation is complete, restart the system by answering *YES* to the restart question.

Launch the Client

- Click on the windows taskbar *Start* button.
- Move the pointer to *Programs –> Command Console –> HSG80 Storage Window*; click on *HSG80 Storage Window* to display the *Connection Selection* dialog box.



- Click on the *Network (TCP/IP)* button and *OK* to display the Connect Network (TCP/IP) dialog box.

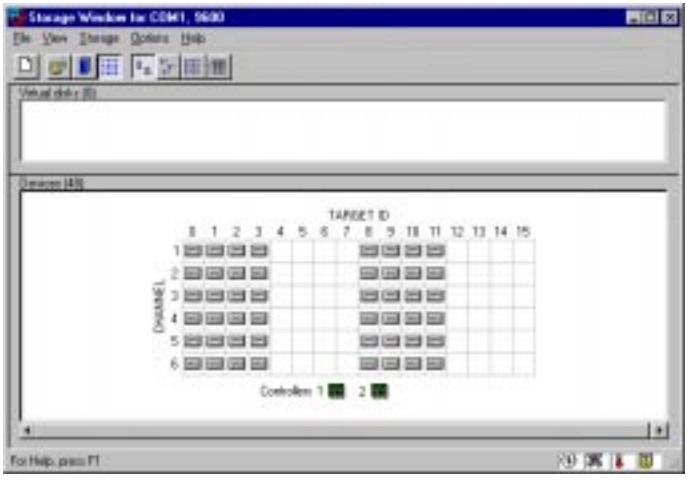


- Enter the Sun host name; then click *Detect Subsystems*. Client searches and finds the storage subsystems connected to your Sun host and displays them in the *Subsystem Name* text box.
- Select a storage subsystem and click the *Connect* button; after two to three minutes the Storage Window is displayed.

7 Verify Controller Properties

Display SCSI Devices in the Devices Windowpane

- Click on *Storage* in the *Storage Window* menu line.
- Move the pointer to *Device –> Add*; click on *Add*. SWCC finds installed drives and displays them in a grid by CHANNEL and SCSI TARGET ID number.



Verify Properties

- Double-click on a controller icon in the *Storage Window*; the *Controller Properties* screen is displayed.
- Click on the tabs of the *Controller Properties* screen successively and confirm that the following values are set:

General tab	Allocation class: 0 SCSI version: SCSI–2
Host Ports tab	
Host Port 1	Requested Topology: LOOP_HARD Requested Port Address: 71
Host Port 2	Requested Topology: LOOP_HARD Requested Port Address: 72
Cache tab	Cache flush time (seconds): 10 Respond to internal cache battery condition: selected Enable mirrored cache: selected
Battery tab	Confirm that the battery is fully charged
Communications LUN tab	Enabled, Fixed
Connection tab	Operating System: SUN Unit Offset: 0 for Port 1

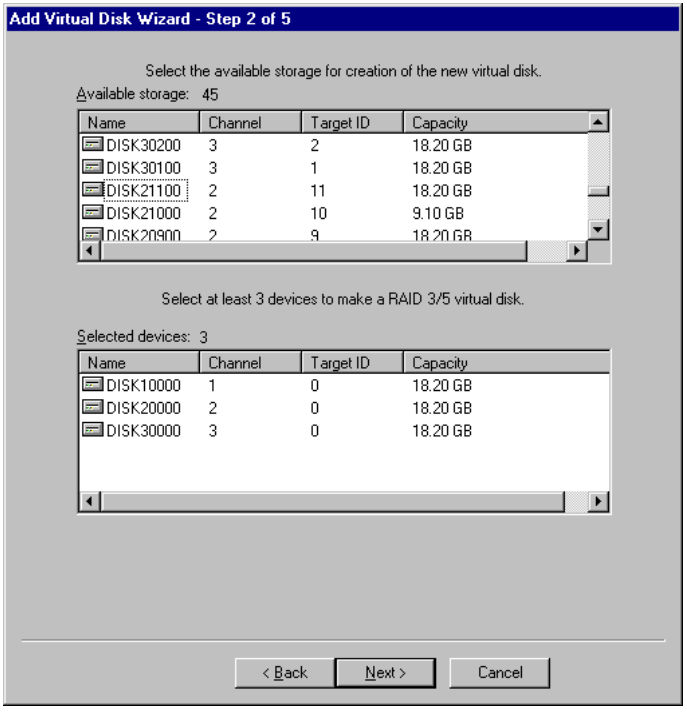
8 Configure a Storageset

- Click on *Storage* in the *Storage Window* menu selection line and select *Add Virtual Disk* to begin Step 1 of the *Add Virtual Disk Wizard*.

- Click the *Striped parity device group (RAID 3/5)* radio button; click *Next>* for Step 2.

- Select the devices you want to include in the virtual disk by clicking on the disks listed in the *Available storage* windowpane; as you select a disk it is added in the *Selected devices* windowpane.

- Click *Next>* for Step 3.



8 Configure a Storageset (Cont'd)

- Select the capacity for the virtual disk. You can select the maximum capacity or create partitions by selecting only a portion of the available maximum. If you create partitions, complete all steps for this partition; then access the Wizard again, make the same choices and create another partition.

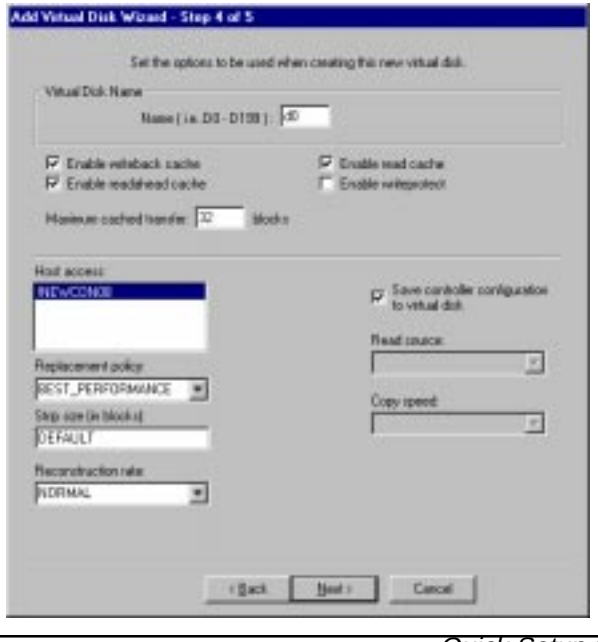
• Click *Next>* for Step 4.

- Enter the *Virtual Disk Name*; D0 through D99 are accessed through controller Port 1, while D100 through D199 are accessed through controller Port 2.

NOTE

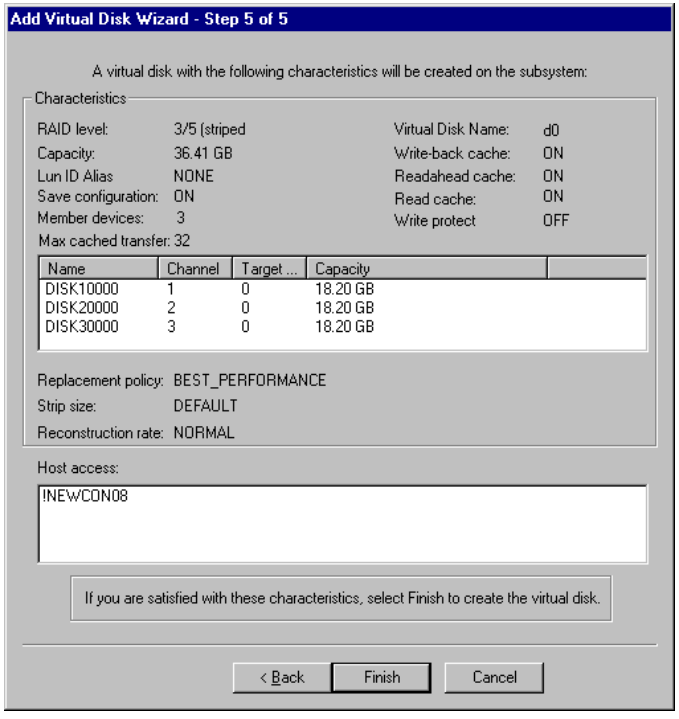
Refer to the release notes for more information on the number of units your system can support.

- Click on the box *Save controller configuration to virtual disk.*
- Click *Next>* for Step 5.

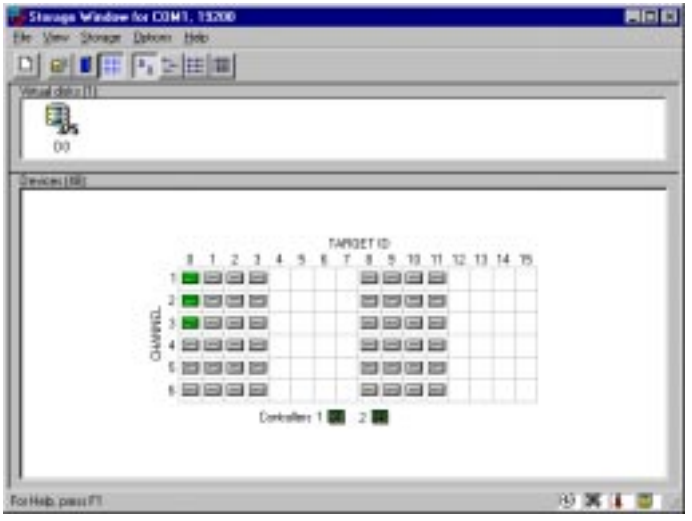


8 Configure a Storageset (Cont'd)

- Step 5 recaps your choices; if you are not satisfied, you can return to the applicable Wizard step using the *Back* button. When you are satisfied with your choices click *Finish*.



- When you return to the Storage Window you see the virtual disk you created illustrated in the *Virtual disks* windowpane. The hourglass on the disk icon indicates the Storageset is being initialized. The drives you used to create the RAIDset are highlighted in the *Devices* windowpane.



NOTE

You must shut down and `reboot -r` your Sun server before it recognizes the Storageset you have created.

Congratulations!

You have now completed all the steps required to create an initial hardware configuration for your controller. COMPAQ recommends that you verify and record your configuration for future reference.

If you will be using FirstWatch, refer to Section 1.3.2 of the RA8000/ESA12000 HSG80 Solution Software V8.3 for Sun Solaris Installation Reference Manual.

Copyright © Compaq Computer Corporation, 1998
All Rights Reserved
StorageWorks is a trademark of Compaq Computer Corporation
Windows is a registered trademark of Microsoft Corporation
All other trademarks and registered trademarks are the property of their respective holders.

AA–RFBNA–TE PRINTED IN USA 387385–001