

Quick Setup Guide

RAID Array 8000/ESA12000 UltraSCSI Storage Subsystem for OpenVMS

AA-RFADA-TE

388732-001

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 UltraSCSI Storage Subsystem and the Compaq StorageWorks Enterprise Storage Array12000 UltraSCSI 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;
- Connect the UltraSCSI adapter to the storage subsystem HSZ80 controller;
- Connect a PC to the HSZ80 controller to act as a maintenance terminal;
- Turn on the ac power to the storage subsystem;
- Install the StorageWorks Command Console (SWCC) Client Graphical User Interface on the PC;
- And configure a Storageset.

Before you start these steps follow the instructions on the shipping container to unpack the RA8000/ESA12000 storage subsystem. Then move the storage subsystem to the operating location you have selected. Refer to the *RA8000/ESA12000 Storage subsystem User's Guide*, EK–SMCPR–UG. A01 (387404–001) for information about selecting a location.

The instructions for installing and connecting storage subsystem components are given for the SW370 pedestal, but apply equally to other Compaq cabinet options. Depending on the storage subsystem you have ordered, you might have to install the storage subsystem in a cabinet and connect the cache module to a cache battery. Refer to the *User's Guide* for more information.

NOTE

You can find complete instructions for unpacking and installing the storage subsystem in the User's Guide and in the RA8000/ESA12000 HSZ80 Solution Software V8.3 for OpenVMS Installation Reference Manual, AA–RFAFA–TE (387401-001).

Install the SBBs and a Program Card



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 HSZ80 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 procedure for a second controller.

Connect the OpenVMS Host to the Storage Subsystem Controller

Connect the Host UltraSCSI Adapter to the HSZ80 Controller

- Connect one end of the SCSI cable to the SCSI I/O host port 1 on the HSZ80 controller.
- Connect the other end of the cable to the UltraSCSI adapter in the OpenVMS host.

Connect the PC Communication Port to the HSZ80 Controller



- Connect the RJ12 connector on the communications cable to the maintenance port on the HSZ80 controller.
- Connect the 9-pin serial connector on the communications cable to either the COM1 or COM2 port on the PC.

NOTE

Make a note of the serial port you use; you need to know it when you set up your communication program and configure the controller.



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 HSZ80 controller blinks at a rate of once per second the storage subsystem is ready to operate.



Install StorageWorksCommand Console (SWCC) Client on the PC

Install the SWCC Client

- Insert the storage subsystem CD–ROM in the CD–ROM drive.
- Run File Manager or Windows Explorer.
- Navigate to the folder *drive_letter:\SWCC\Client*.
- Choose Intel client; then double-click on Setup.
- When the setup wizard appears, follow the instructions to complete the installation.

HSZ80 Controller Setup

- Click on the Windows taskbar Start button.
- Move the pointer to Programs -> Command Console
 -> CLI Window; click on CLI Window to display the
 Connection Selection dialog box.



• Click on the *Serial* button and *OK* to display the *Connect Serial* dialog box.



- Select the COM port that the HSZ80 controller is connected to (COM1 or COM2).
- Select a baud rate of 9600.
- Click Connect to display the CLI Window.

ELI Window for atlants, subsys1 (Sin: Your: Bab	
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joet this noccommend, console, lan	3
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• Type:

set this_controller SCSI_version=SCSI_2

• Type:

set this_controller host_function=B

• Type: set this controller Command Console lun Install the StorageWorks Software on the OpenVMS Host Machine

Install the StorageWorks Software

- Insert the storage subsystem CD–ROM in the CD–ROM drive.
- Mount the CD-ROM with the command mount/over=id (name of CD-ROM drive)
- Type

dir (name of CD-ROM drive):[000000.VMS] and look for the directory *VMSdir.*

• Type

dir (name of CD-ROM drive):[000000.VMS] and look for the *AXPVMS.txt* text file.

• Type

 $\texttt{typ} \ (\texttt{name of CD-ROM drive}) \texttt{:} \texttt{[000000.VMS]} \texttt{AXPVMS.txt}$ The system responds with the VMS install file name

DEC-AXPVMS-SWCC-VOZO1-133-1.PCSI

- Create a directory in which the file can be loaded. create/dir \$1\$DKDZ:[000000]SWCC_VMS_install_sw.dir
- Copy to that directory.

copy (name of CD-ROM drive):[000000.VMS]AXPVMS.
pcs \$1\$DKDZ:[SWCC_VMS_install_sw]DEC-AXPVMS-SWCCV0201-133-1.PCSI

• Set Default to that directory

set def \$1\$DKDZ:[SWCC_VMS_install_sw]

• Type

product install /source=[]SWCC

StorageWorks and Command Console Agent Installation and Configuration Menu

StorageWorks Options:

- 1) Install StorageWorks software
- 2) StorageWorks Maintenance

Agent Options:

- 3) Install Agent
- 4) Agent Maintenance

Q) Quit

- Choose option 1 in the *Installation* menu to install the StorageWorks software.
- Choose option 3 in the *Installation* menu to install the Command Console Agent. Follow the text-based prompts and enter appropriate information using Table 2–2, Section 2.1.3 of the *RA8000/ESA12000 HSZ80* Solution Software V8.3 for OpenVMS Installation Reference Manual.

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Launch the Client

- Click on the Windows taskbar Start button.
- Move the pointer to Programs -> Command Console

 -> HSZ80 Storage Window, click on HSZ80 Storage
 Window to display the Connection Selection dialog box.

Connection Selection	? ×
Communication type Serial SCSI Network (TCP/IP)	OK Cancel

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

Connect Network (TCP/IP)
Host JP name or address:
garcia.cxo.dec.com
Etect Subsystems
Subsystem name:
hsz80,HSZ80,HSZ80CCL,U018,hdisk2 💽
Subsystem Physical view: Default
24-Device 💽 🖸
Subsystem <u>G</u> rid view
6 Channel Small 🔄 📀
<u>Connect</u> Cancel

- Enter the OpenVMS host IP name; then click *Detect Subsystems*. Client searches and finds the storage subsystems connected to your OpenVMS 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.

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.

Storage Window Io: COH1, 9600		
Die New Tarata Optima Heb		
Vetual disks #1		
A CONTRACTOR OF A CONTRACTOR OFTA CONT		
I		
Devices (Hill)		
	TARGET ID	
812345	6 7 8 9 18 11 12 13 14 15	
1 (2) (2) (2)		
28888	8888	
2 : 20 (21 (21 (21 (21 (21 (21 (21 (21 (21 (21		
2+8888	8888	
·	8888	
	8888	
Controllers	1 888 2 888	
1		1.1
For Help, press FT	2	- W IL 00

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:

<i>General</i> tab	Allocation class: 0 SCSI version: SCSI–2
<i>Host Ports</i> tab	Confirm that <i>Mode</i> is set to <i>B</i> for all target IDs
<i>Cache</i> tab	Cache flush time (seconds): 10 Respond to internal cache battery condition: selected
<i>Communications</i> LUN tab	Confirm that the SWCC virtual LUN is enabled.

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.

Add Vistual Disk Wizard - Step 1 of 5	Add Virtual Disk Wizard - Step 2 of 5
Select the R4D level for the new virtual dids.	Select the available storage for creation of the new virtual disk.
	Available storage: 45
RAD level	Name Channel Target ID Capacity
C griped device group (RAID 0)	DISK30200 3 2 18.20 GB DISK30100 3 1 18.20 GB
C Minared device group (PAID 1)	DISK21100 2 11 18.20 GB
C Striped parced device group (BAID 0+1)	DISK21000 2 10 9.10 GB
	I DISK20900 2 9 18 20 GB
(* Sabet belix gence group (HAID 3/0)	
 Individual device (JBDD) 	Select at least 3 devices to make a RAID 3/5 virtual disk.
	Selected devices: 3
1	Name Channel Target ID Capacity
Creater a high capacity virtual disk with high availability.	DISK10000 1 0 18.20 GB
	🖃 DISK20000 2 0 18.20 GB
	DISK30000 3 0 18.20 GB
(Fork Best) Carcel	<u> </u>

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

•Click Next> for Step 4.

Add Virtual Disk Wizard - Step 3 of 5	Add Virtual Disk Wizard - Step 4 of 5		
Set the capacity for the new visual disk.	Set the options to be used when creating this new virtual disk.		
renewards were to annear the annear	Host target ID and logical unit number [LUN]		
Board on the RAID level and devices you have selected, the capacity available to the new virtual dat is disaliged below.	Target D: F C C 2 C 3 F 勝 C 5 C C C C C C C 11 C 12 C 13 C 14 C 5		
Selected RMD level: 3/5 (staped party device)			
Set what disk capacity Specify a capacity within this range	 ✓ Finable willetask cache ✓ Finable wille read cache ✓ Enable wille protect 		
Minimum capacity: 1 MB Maximum capacity: 3840374 MB	Host access ID: Maximum cached Itensfer [32] blocks ALL Save controller contr		
Expectly for visitual claik. 36-400 74 MB	Replacement poloy: Read source: BEST_PERFORMANCE		
	Strp size (in blocks): Copy speed: DEFAULT		
	Reconstruction rate: Eiror Mode:		
<@ack Carcel	< <u>East</u> Lancel		

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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.

Add Virtual Disk Wizard - Step 5 of 5 A virtual disk with the following characteristics will be created on the subsystem: **Characteristics FAD** level 3/5 (imped party device) Host SESI target ID: 4.21.68 Logical unit number Capacity Host access ID. ALL Write back cache: ON Save configuration: OFF Max cached transfer 22 Read cache: ON Wille protect: OFF Readatead cache: ON Member devices: 3 Name Channel Especity Target ID DISK50000 210 68 DISK20100 210 GB DISK10200 210 68 Replacement policy: BEST_PERFORMANCE. DEFAULT Stip size Reconstruction rate: NORMAL If you are satisfied with these characteristics, select Finish to create the virtual disk. < Back Finish Cancel



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Congratulations!

You have now completed all the steps required to create an initial hardware configuration for your controller. For more information about using the SWCC software on the OpenVMS host refer to the *RA8000/ESA12000 HSZ80 Solution Software V8.3 for OpenVMS Installation Reference Manual.* For more information about using the SWCC software on the Windows host refer to the *CommandConsole User's Guide.*

COMPAQ recommends that you verify and record your configuration for future reference.

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