

# HP StorageWorks 4000/6000/8000 Enterprise Virtual Array connectivity 6.1A for OpenVMS release notes

Part number: 5697-6567  
First edition: April 2007



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## Description

This document describes Open VMS operating system connectivity support for HP StorageWorks 4000/6000/8000 Enterprise Virtual Array (EVA4000/6000/8000) controller software.

A complete library of EVA4000/6000/8000 documentation is available on the HP support website:

<http://www.hp.com/support/manuals>

Under storage, click **Disk Storage Systems**, and then select **HP StorageWorks 4000/6000/8000 Enterprise Virtual Arrays** under EVA Disk Arrays.

Update recommendation Routine

Supersedes 6.000

## Product models

EVA4000/6000/8000

## Operating systems

**Table 1 Operating system specifications**

OpenVMS version	Fibre Channel SCSI ECO kit
OpenVMS 7.3-2	VMS732_FIBRE_SCSI_V1000
OpenVMS 8.2	VMS82A_FIBRE_SCSI_V0200
OpenVMS 8.2-1 IA64	VMS821I_FIBRE_SCSI_V0300
OpenVMS 8.3	VMS83A_FIBRE_SCSI_V0300
OpenVMS 8.3 IA64	VMS83I_FIBRE_SCSI_V0300

## Enhancements

This release includes the following enhancements:

- Support for EVA4000/6000/8000 controller software 6.100
- Improved replication performance
- Improved usability

## Prerequisites

For the current Fibre Channel SCSI patch kit for OpenVMS, see the HP IT Resource Center website:

<http://www.itrc.hp.com>.

## Single-path support

An OpenVMS server will provide single-path support through a single Fibre Channel adapter (FCA). This server requires a single FCA to support single-path mode.

# Compatibility/interoperability

## EVA coexistence

This release provides full support for all previous EVA controller software used in an existing SAN configuration.

## Switch support

This release supports the Fibre Channel (FC) switches and firmware versions listed in the *HP StorageWorks SAN design reference guide*, available for download on the HP support website: <http://www.hp.com/support/manuals>.

Under storage, click **Storage Networking**, and then select **HP StorageWorks SAN** under HP StorageWorks SAN Solutions.

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 **NOTE:**

HP recommends that you *not* mix switch firmware versions in a SAN. It is a best practice to uniformly upgrade all switches in the SAN.

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## Failover/failback

Failback preference settings for the HSV controllers are specific to the operating system. For operating system failback information, see the *HP StorageWorks 4000/6000/8000 Enterprise Virtual Array user guide*.

## FCA support

Table 2 lists the supported FCAs and the required firmware versions.

**Table 2 FCA support**

<b>FCA</b>	<b>Driver</b>	<b>Adapter firmware/EFI (minimum)</b>	<b>Supported servers</b>
HP StorageWorks FCA2354 2 Gb, 64-bit/66MHz PCI PN DS-KGPSA-DA	Native	FW: 3.93a0	Alpha
HP StorageWorks FCA2384 2 Gb, 64-bit/133MHz PCI-X PN DS-KGPSA-EA	Native	FW: 1.91x6	Alpha
HP StorageWorks FCA2684 2 Gb, 64-bit/133MHz PCI-X PN DS-A5132-AA	Native	FW: 1.91x6	Alpha
HP StorageWorks FCA2684DC 2 Gb, 64-bit/133MHz PCI-X Dual Channel PN DS-A5134-AA	Native	FW: 1.91x6	Alpha
HP PCI-X Dual Channel 2 Gb Fibre Channel Adapter (A6826A)	Native	EFI: 1.47	Integrity
HP 1000-SX and 2 Gb Fibre Channel PCI-X Combo Card (A9782A)	Native	EFI: 1.47	Integrity
HP PCI-X 2 Gb Fibre Channel/1000 Base-T HBA (A9784A)	Native	EFI: 1.47	Integrity
HP PCI-X 2 Gb Fibre Channel/1 Gb Ethernet Multifunction Adapter (AB465A)	Native	EFI: 1.47	Integrity
PCI-X 2.0 Single-port 4GB FC Adapter (AB378A)	Native	EFI: 1.5	Integrity
PCI-X 2.0 Dual-port 4GB FC Adapter (AB379A)	Native	EFI: 1.5	Integrity
PCIe Dual-port 4GB FC Adapter (AD300A)	Native	EFI: 1.5	Integrity

## AlphaServer support

Table 3 lists the EVA-compatible AlphaServers.

**Table 3 EVA-compatible AlphaServers**

AlphaServer	DS-KGPSA-DA support	DS-KGPSA-EA support	DS-A5132-AA support	DS-A5134-AA support
DS10	Yes	Yes	No	No
DS15	Yes	Yes	Yes	Yes
DS20E	Yes	Yes	Yes	No
DS25	Yes	Yes	Yes	Yes
ES40	Yes	Yes	Yes	No
ES45	Yes	Yes	Yes	Yes
ES47	Yes	Yes	Yes	Yes
ES80	Yes	Yes	Yes	Yes
GS80	Yes	Yes	Yes	No
GS160	Yes	Yes	Yes	No
GS320	Yes	Yes	Yes	No
GS1280	Yes	Yes	Yes	Yes

**NOTE:**

In order for the AlphaServer console to recognize all eight boot paths to the EVA8000 storage system, you must upgrade the console firmware to release 7.0 or later.

## Integrity server support

Table 4 lists the Integrity servers that are compatible with EVA4000/6000/8000 and the supported FCAs.

**Table 4 Integrity servers and FCAs**

Integrity servers	FCAs
rx1600	A6826A
rx1620	A9782A
rx2600	A9784A
rx2620	AB378A
rx3600	AB379A
rx4640	AB465A
rx6600	AD300A
rx7620	
rx7640	
rx8620	
rx8640	
Superdome	

## HP StorageWorks Storage System Scripting Utility

The latest version of the HP Storage System Scripting Utility (SSSU) is available on the software downloads website: <http://www.hp.com/support/downloads>.

Under storage, click **Storage software**, and then select **HP StorageWorks Command View EVA Software** under Storage Device Management Software. Select the version of HP StorageWorks Command View EVA Media Kit you want to download.

## Important notes

### EVA configuration best practices

Although the EVA4000/6000/8000 is designed to work in a wide range of configurations, some of the configuration options can influence performance, capacity, or availability. If you have the necessary information, you can manage the configuration to optimize its attributes for a specific application. The configuration options include:

- Number of disk groups
- Type of disk group
- Type and number of disks in a disk group
- Vraid levels (0, 1, and 5)
- Disk failure protection level (none, single, and double)
- Cache settings

For more information on the configuration options, see the *HP StorageWorks 4000/6000/8000 Enterprise Virtual Array configuration best practices white paper*, available on the following website:

<http://h71028.www7.hp.com/ERC/downloads/4AA0-2787ENW.pdf>