

HP StorageWorks 4x00/6x00/8x00 Enterprise Virtual Array connectivity 6.2A OpenVMS release notes

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Description

This document describes OpenVMS operating system connectivity support for HP StorageWorks EVA4x00/6x00/8x00 controller software, which consists of both the HP StorageWorks 4000/6000/8000 Enterprise Virtual Array and the HP StorageWorks 4100/6100/8100.

A complete library of EVA4x00/6x00/8x00 documentation is available on the HP support website:

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

Under storage, click **Disk Storage Systems**, and then click **HP StorageWorks 4x00/6x00/8x00 Enterprise Virtual Arrays** under EVA Disk Arrays.

[Update recommendation](#) Routine

[Supersedes](#) 6.110

Product models

EVA4x00/6x00/8x00

Operating systems

Table 1 Operating system specifications

OpenVMS version	Fibre Channel SCSI ECO kit
OpenVMS 7.3-2 Alpha	VMS732_FIBRE_SCSI_V1400
OpenVMS 8.2 Alpha	VMS82A_FIBRE_SCSI_V0600
OpenVMS 8.2-1 IA64	VMS821I_FIBRE_SCSI_V0700
OpenVMS 8.3 Alpha	VMS83A_FIBRE_SCSI_V0400
OpenVMS 8.3 IA64	VMS83I_FIBRE_SCSI_V0700
OpenVMS 8.3-1H1 IA64	VMS831H1_FIBRE_SCSI_V0200

Enhancements

This release includes the following enhancements:

- Support for EVA4x00/6x00/8x00 controller software XCS 6.200
- Expanded map space to 300-TB to support 1-TB drives on EVA8100

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.

 **NOTE:**

HP recommends that you do *not* use single-path mode in a high-availability environment.

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.



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.

Failover/failback

Failback preference settings for the HSV controllers are specific to the operating system. For operating system failback information, see the *HP StorageWorks 4x00/6x00/8x00 Enterprise Virtual Array user guide*.

FCA support

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

Table 2 FCA support

FCA	Driver	OS version (minimum)	Supported servers
1-Gb, 64-bit/33MHz PCI, DS-KGPSA-CA	Native	OpenVMS 7.3-2 and higher, FW: 3.93a0	Alpha
HP StorageWorks FCA2354 2-Gb, 64-bit/66-MHz PCI PN DS-KGPSA-DA	Native	OpenVMS 7.3-2 and higher, FW: 3.93a0	Alpha
HP StorageWorks FCA2384 2-Gb, 64-bit/133-MHz PCI-X PN DS-KGPSA-EA	Native	OpenVMS 7.3-2 and higher, FW: 1.91x6	Alpha
HP StorageWorks FCA2684 2-Gb, 64-bit/133-MHz PCI-X PN DS-A5132-AA	Native	OpenVMS 7.3-2 and higher, FW: 1.91x6	Alpha
HP StorageWorks FCA2684DC 2-Gb, 64-bit/133-MHz PCI-X dual channel PN DS-A5134-AA	Native	OpenVMS 7.3-2 and higher, FW: 1.91x6	Alpha

FCA	Driver	OS version (minimum)	Supported servers
HP PCI-X dual channel 2-Gb Fibre Channel adapter (A6826A)	Native	OpenVMS 8.2-1 and higher, EFI: 1.50	Integrity
HP 1000-SX and 2-Gb Fibre Channel PCI-X combo card (A9782A)	Native	OpenVMS 8.2-1 and higher, EFI: 1.50	Integrity
HP PCI-X 2-Gb Fibre Channel/1000 Base-T HBA (A9784A)	Native	OpenVMS 8.2-1 and higher, EFI: 1.50	Integrity
HP PCI-X 2-Gb Fibre Channel/1 Gb Ethernet multifunction adapter (AB465A)	Native	OpenVMS 8.2-1 and higher, EFI: 1.50	Integrity
PCI-X 2.0 single-port 4-Gb FC adapter (AB378A)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
PCI-X 2.0 dual-port 4-Gb FC adapter (AB379A)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
PCI-X 2.0 single-port 4-Gb, 64-bit/166MHz (AB378B)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
PCI-X 2.0 dual-port 4-Gb 64-bit/166MHz (AB379B)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
PCIe dual-port 4 Gb FC adapter (AD300A)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
GBE PCI-X 1p, 4-Gb FC/1p (AD193A)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
GBE PCI-X 2p, 4-Gb FC/2p (AD194A)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
Fibre Channel Mezzanine 2p, 4-Gb, (403619-B21)	Native	OpenVMS 8.3 and higher EFI: 1.09	Integrity
FC PCI-e, 1p, 4-Gb, (AD299A)	Native	OpenVMS V8.3-1H1 or higher FW: 2.70x5 EFI: 3.21a3	Integrity
FC PCI-e, 1p, 4-Gb, (AD355A)	Native	OpenVMS V8.3-1H1 or higher FW: 2.70x5 EFI: 3.21a3	Integrity

AlphaServer support

Table 3 lists the EVA-compatible AlphaServers.

Table 3 EVA-compatible AlphaServers

AlphaServer	DS-KGPSA-CA support	DS-KGPSA-DA support	DS-KGPSA-EA support	DS-A5132-AA support	DS-A5134-AA support
DS10	Yes	Yes	Yes	No	No
DS15	No	Yes	Yes	Yes	Yes
DS20E	Yes	Yes	Yes	Yes	No
DS25	Yes	Yes	Yes	Yes	Yes
ES40	Yes	Yes	Yes	Yes	No
ES45	Yes	Yes	Yes	Yes	Yes
ES47	No	Yes	Yes	Yes	Yes
ES80	No	Yes	Yes	Yes	Yes
GS80	Yes	Yes	Yes	Yes	No
GS160	Yes	Yes	Yes	Yes	No
GS320	Yes	Yes	Yes	Yes	No
GS1280	No	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 EVA4x00/6x00/8x00 and the supported FCAs.

Table 4 Integrity servers and FCAs

Integrity servers	FCAs
rx1600	A6826A
rx1620	A9782A
rx2600	A9784A
rx2620	AB378A
rx2660	AB379A
rx3600	AD300A
rx4640	AB378B
rx6600	AB379B
rx7620	AD193A
rx7640	AS194A
rx8620	403619-B21
rx8640	AD299A
Superdome/sx1000	AD355A
Superdome/sx2000	
BL860c	
BL870c	

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 EVA4x00/6x00/8x00 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 level (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 4x00/6x00/8x00 Enterprise Virtual Array configuration best practices white paper*, available on the following website:

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