

HP StorageWorks 3000/5000 Enterprise Virtual Array connectivity 4.1A for OpenVMS release notes

Part number: 5697-7034
First edition: October 2007



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Description

This document describes OpenVMS operating system connectivity support for HP StorageWorks 3000/5000 Enterprise Virtual Array (EVA3000/5000) controller software.

A complete library of EVA3000/5000 documentation is available on the HP support website: <http://www.hp.com/support/manuals>.

Under **storage**, click **Disk Storage Systems**, and then select either **HP StorageWorks 3000 Enterprise Virtual Array** or **HP StorageWorks 5000 Enterprise Virtual Array** under **EVA Disk Arrays**.

[Update recommendation](#) Routine

[Supersedes](#) 4.007

Product models

EVA3000/5000

Devices supported

This version supports the operating system specifications listed in [Table 1](#) through [Table 3](#).

Table 1 Operating system specifications

OpenVMS version	Fibre SCSI ECO kit (minimum recommended)
OpenVMS 8.3 IA64	FIBRE_SCSI_V0500
OpenVMS 8.3	FIBRE_SCSI_V0200
OpenVMS 8.2	FIBRE_SCSI_V0400
OpenVMS 8.2-1 IA64	FIBRE_SCSI_V0500
OpenVMS 7.3-2	FIBRE_SCSI_V1200

Table 2 FCA support for OpenVMS

OpenVMS version	FCA	Driver	Adapter firmware version (minimum)	EFI driver version	Server support
7.3-2, 8.2, 8.3	HP StorageWorks DS-KGPSA-CA 1Gb, 64-bit/33MHz PCI	Native	3.82a1	N/A	Alpha
	HP StorageWorks FCA2354 2Gb, 64-bit/66MHz PCI PN DS-KGPSA-DA		3.92a2		
	HP StorageWorks FCA2384 2Gb, 64-bit/133MHz PCI-X PN DS-KGPSA-EA		1.91x1		
	HP StorageWorks FCA2684 2Gb, 64-bit/133MHz PCI-X PN DS-A5132-AA		1.91a1		
	HP StorageWorks FCA2684DC 2Gb, 64-bit/133MHz PCI-X Dual PN DS-A5134-AA		1.91a1		
8.2-1 IA64, 8.3 IA64	HP StorageWorks A6826A 2Gb, 64-bit/133MHz PCI-X Dual (supported only on Integrity servers)	Native	n/a (loaded by the driver)	1.50	Integrity
	HP StorageWorks A9782A PCI-X 2Gb FC, and 1Gb Ethernet (supported only on Integrity servers)				
	HP StorageWorks A9784A PCI-X 2Gb FC, and 1Gb Ethernet (supported only on Integrity servers)				
	HP StorageWorks AB465A PCI-X 2Gb FC, and 1Gb Ethernet (supported only on Integrity servers)				

Table 3 FCA support for OpenVMS (continued)

OpenVMS version	FCA	Driver	Adapter firmware version (minimum)	EFI driver version	Server support
8.3 IA64 (only)	HP StorageWorks AB378A PCI-X 4Gb (supported only on Integrity servers)	Native	n/a (loaded by the driver)	1.09	Integrity
	HP StorageWorks AB379A PCI-X 4Gb (supported only on Integrity servers)				
	HP StorageWorks AB378B PCI-X 4Gb (supported only on Integrity servers)				
	HP StorageWorks AB379B PCI-X 4Gb (supported only on Integrity servers)				
	HP StorageWorks AD300A PCI-X 4Gb (supported only on Integrity servers)				
	HP StorageWorks AD193A PCI-X 4Gb (supported only on Integrity servers)				
	HP StorageWorks AD194A PCI-X 4Gb (supported only on Integrity servers)				
	403619-B21 4Gb FC Mezzanine for BL860c				

The Fibre SCSI ECO kit for your version of OpenVMS is available on the HP IT Resource Center website:

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

You can download the latest HBA drivers for storage arrays from the HP storage website:

<http://h18006.www1.hp.com/storage/saninfrastructure.html>

Enhancements

This release includes the following new features:

- This release includes support for EVA3000/5000 controller software VCS 4.100. For details about VCS 4.100, see *HP StorageWorks 3000/5000 Enterprise Virtual Array release notes (VCS 4.100)*.

 **NOTE:**

You must have VCS 3.028 installed before upgrading to VCS 4.00x or later. HP recommends that you do a full system backup before an HP service representative performs the migrating procedure.

Prerequisites

Multiple-path support

OpenVMS operating software includes multipath support. No additional software is required to achieve high-availability, multipath capability.

For more information about multipath options, see the HP multipath website:

<http://h18006.www1.hp.com/products/sanworks/multipathoptions/index.html>

Single-path support

OpenVMS servers require a single FCA to support single-path mode.

 **NOTE:**

Do not use single-path mode in mission-critical environments.

VCS 3.028 to VCS 4.100 migration

The Active/Active failover feature in VCS 4.00x impacts host configurations. Contact your HP service representative to configure your system and perform the migration procedure.

EVA storage system

These release notes contain the latest product information for operating the EVA3000/5000 on an OpenVMS system.

EVA best practices

The EVA3000/5000 is designed to work in a wide range of configurations; however, some of the configuration options can influence performance, capacity, or availability. With the necessary information about EVA configuration options, you can manage the configuration to optimize its attributes for a specific application. These 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 Enterprise Virtual Array configuration best practices - white paper* on the HP support website:

<http://h20000.www2.hp.com/bc/docs/support/SupportManual/lpg29448/lpg29448.pdf>

Compatibility/interoperability

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 your storage area network (SAN). It is a best practice to uniformly upgrade all switches in the SAN.

Alpha server support

Table 4 lists the EVA-compatible Alpha servers.

Table 4 EVA-compatible Alpha servers

Alpha server	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
DS10L	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
GS60	Yes	No	No	No	No
GS160	Yes	Yes	Yes	Yes	No
GS320	Yes	Yes	Yes	Yes	No
GS1280	No	Yes	Yes	Yes	Yes

Integrity server support

The following Integrity servers are EVA compatible:

- rx16x0
- rx26x0
- rx3600
- rx4640

- rx6600
- rx76x0
- rx86x0
- Superdome/SX1000
- Superdome/SX2000
- BL860c



NOTE:

OpenVMS does not support MAD9-based rx7640, rx8640, and Superdome/SX2000 servers.

Operating constraints

You can find information about operating constraints specific to the EVA firmware and HP StorageWorks Command View EVA in their respective release notes.

HP StorageWorks Storage System Scripting Utility

The latest version of the Storage System Scripting Utility (SSSU) is available on the software downloads HP website:

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

Under **storage**, click **Storage Software**, and then select **HP StorageWorks Command View EVA** under **Storage Device Management Software**. Select the version of the HP StorageWorks Command View EVA.

Codeload usage

HP recommends that you always perform VCS upgrades at an off-peak time.