

HP StorageWorks

4000/6000/8000 Enterprise Virtual Array connectivity 5.0D for OpenVMS release notes

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4000/6000/8000 Enterprise Virtual Array connectivity 5.0D for OpenVMS

About this document

This section describes the content reflected in this document, including:

- [Release notes information](#)
- [Intended audience](#)
- [Accessing future product updates](#)

Release notes information

These release notes cover the following topics:

- [New features](#)
- [EVA storage system](#)
- [EVA compatability](#)
- [Operating constraints](#)
- [Storage System Scripting Utility for EVA](#)
- [Avoiding problem situations](#)

Intended audience

This document is intended for use by:

- Customers who purchased the HP StorageWorks 4000/6000/8000 Enterprise Virtual Array (EVA4000/6000/8000) to use with the OpenVMS operating system
- HP customer service personnel responsible for installing and maintaining devices connected to the EVA storage system

Accessing future product updates

HP strongly recommends that customers sign up online using the Subscriber's choice web site: <http://www.hp.com/go/e-updates>.

- Subscribing to this service provides you with e-mail updates on the latest product enhancements, newest versions of drivers, and firmware documentation updates as well as instant access to numerous other product resources.
- After signing up, you can quickly locate your products by selecting **Business support** and then **Storage** under Product Category.

New features

This release includes support for the EVA4000/6000/8000 controller software 5.031.



NOTE:

EVA4000/6000/8000 controller software 5.031 replaces EVA4000/6000/8000 controller software 5.030.

EVA storage system

EVA documentation

For a complete library of EVA and related documentation, see the following web sites:

<http://www.hp.com/go/eva4000>

<http://www.hp.com/go/eva6000>

<http://www.hp.com/go/eva8000>

Supported configurations

Supported configurations are described in the Enterprise Virtual Array QuickSpecs, available at the following web site:

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

The extended interoperability of the heterogeneous SAN allows you to mix several types of HP StorageWorks storage systems. The *HP StorageWorks SAN design reference guide* is a detailed guide for SAN configurations and is available at the following web site:

<http://h18004.www1.hp.com/products/storageworks/san/documentation.html>

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, usable capacity, or availability. If you have the necessary configuration information, you can manage the configuration to optimize its attributes for a specific application. The configuration choices 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 choices, see the *HP StorageWorks Enterprise Virtual Array configuration best practices — white paper*:

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

EVA compatibility

Operating system support

Table 1 lists the operating system specifications.



NOTE:

Table 1 contains current minimum-level operating system specifications at the time of this release. Some component versions may change due to revision. For the latest information, see the following web site:
<http://h18006.www1.hp.com/storage/index.html>

Table 1 Operating system specifications

OpenVMS version	Fibre SCSI ECO kit
OpenVMS 7.3-2	DEC-AXPVMS_VMS732_FIBRE _SCSI_V0400
OpenVMS 8.2	N/A
OpenVMS 8.2 IA64	N/A
OpenVMS 8.2-1 IA64	N/A

For the current Fibre SCSI ECO kit for OpenVMS, see the following HP IT Resource Center web site:

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

FCA support

Table 2 lists the supported Fibre Channel Adapters (FCAs) and the required firmware versions.

Table 2 FCA (HBA) support

FCA (HBA)	Driver	Adapter firmware (minimum)
HP StorageWorks DS-KGPSA-CA 1Gb, 64-bit/33MHz PCI	Native	3.92a2
HP StorageWorks DS-KGPSA-DA 2Gb, 64-bit/66MHz PCI	Native	3.92a2
HP StorageWorks DS-KGPSA-EA 2Gb, 64-bit/133MHz PCI-X	Native	1.90a4
HP StorageWorks DS-A5132-AA 2Gb, 64-bit/133MHz PCI-X	Native	1.90a4
HP StorageWorks DS-A5134-AA 2Gb, 64-bit/133MHz PCI-X Dual	Native	1.90a4
HP StorageWorks A6826A 2Gb, 64-bit/133MHz PCI-X Dual (Only supported on Integrity servers)	Native	N/A (Loaded by the driver)
HP StorageWorks A9782A 2Gb, 64-bit/133MHz PCI-X 1000Base SX (Only supported on Integrity servers)	Native	N/A (Loaded by the driver)
HP StorageWorks A9784A 2Gb, 64-bit/133MHz PCI-X 1000Base T (Only supported on Integrity servers)	Native	N/A (Loaded by the driver)

Switch support

This release supports the Fibre Channel switches and firmware versions listed in the *HP StorageWorks SAN design reference guide* which can be downloaded from the following web site:

<http://h18004.www1.hp.com/products/storageworks/san/documentation.html>

NOTE:

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

Alpha servers support

Table 3 lists the EVA-compatible Alpha servers.

Table 3 EVA-compatible Alpha servers

Alpha server	DS-KGPSA-CA support	DS-KGPSA-DA support	DS-KGPSA-EA support	DS-A51321-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

Integrity server support

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

Table 4 Integrity server and FCA support

Integrity servers	FCA support
rx1600	A6826A
rx1620	A9782A
rx2600	A9784A
rx2620	
rx4640	
rx7620	
rx8620	
Superdome	

Multiple-path support

Multiple-path capability is integrated into the OpenVMS operating system. No additional software is required to achieve high-availability, multipathing capability.

Single-path support

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



NOTE:

Single-path mode should not be used in mission-critical environments.

Operating constraints

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



NOTE:

The AlphaServer console firmware recognizes only four of the eight available boot paths to the EVA8000 storage system. This issue is addressed in the 7.0 AlphaServer console release. The operating system, once booted, recognizes all available paths.

Failover/failback

Failback preference settings for the Hierarchical Storage Virtual (HSV) controllers are specific to the operating system. See the HP StorageWorks OS connectivity for the Enterprise Virtual Array installation and reference guide for more information.

Storage System Scripting Utility for EVA

The latest version of the Storage System Scripting Utility (SSSU) can be accessed at the following HP web site:

<http://h18006.www1.hp.com/products/storage/software/cmdvieweva/index.html>

Avoiding problem situations

You can find information about problems specific to the EVA and Command View EVA in their respective release notes.