

HP StorageWorks

OpenVMS connectivity 4.0A for the 3000/5000 Enterprise Virtual Array release notes

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OpenVMS connectivity 4.0A for the 3000/5000 Enterprise Virtual Array release notes

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Release notes information

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Intended audience

This document is intended for:

- Customers who purchased the HP StorageWorks 3000/5000 Enterprise Virtual Array (EVA3000/5000) to use with the OpenVMS operating system
- HP customer service personnel responsible for installing and maintaining devices connected to the EVA3000/5000 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 the following new features:

- Support is provided for Virtual Controller Software (VCS) 4.001.

 **NOTE:**

You must have VCS 3.028 installed before upgrading to VCS 4.001. HP recommends that you do a full system backup before an HP service representative performs the migrating procedure.

- Support is provided for Active/Active failover.
- Support is provided for single-path mode.
- The same host bus adapter (HBA) can be used for Active/Passive and Active/Active configurations.

- The internal identification of the EVA3000 controller is HSV101, and the internal identification of the EVA5000 controller is HSV111. The HSV101 and HSV111 identification is internal to the VCS code only, the bezel indicates EVA3000 (HSV100) or EVA5000 (HSV110).

VCS 3.028 to VCS 4.001 migration

The Active/Active failover feature in VCS 4.001 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 documentation

A complete library of EVA and related documentation is available on the following HP web sites:

<http://www.hp.com/go/eva5000>

<http://www.hp.com/go/eva3000>

Product support information

The latest product support information and downloads for storage products are available on the HP storage web site:

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

Supported configurations

Supported configurations are described in the EVA QuickSpecs, available on the following HP web sites:

<http://h18006.www1.hp.com/products/storageworks/eva3000/specifications.html>

<http://h18006.www1.hp.com/products/storageworks/enterprise/index.html>

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 web site:

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

EVA compatibility

This section lists the minimum-level operating system specifications at the time of this release. Some component versions may change due to revision. The latest information is available on the HP storage web site: <http://h18006.www1.hp.com/storage/index.html>.

Operating system support

Table 1 lists the operating system specifications.

Table 1 Operating system specifications

| OpenVMS version | Fibre SCSI ECO kit |
|--------------------|-------------------------|
| OpenVMS 8.2 | VMS82A_FIBRE_SCSI-V0100 |
| OpenVMS 8.2 IA64 | VMS82I_FIBRE_SCSI-V0100 |
| OpenVMS 8.2-1 IA64 | n/a |
| OpenVMS 7.3-2 | VMS732_FIBRE_SCSI-V0700 |

The Fibre SCSI ECO kit for your version of OpenVMS is available on the 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 support

| FCA | Driver | Adapter firmware version (minimum) | Adapter firmware version (recommended) |
|---|--------|------------------------------------|--|
| HP StorageWorks DS-KGPSA-CA 1Gb, 64-bit/33MHz PCI | Native | 3.92a2 | 3.92a2 |
| HP StorageWorks FCA2354 2Gb, 64-bit/66MHz PCI PN DS-KGPSA-DA | Native | 3.92a2 | 3.92a2 |
| HP StorageWorks FCA2384 2Gb, 64-bit/133MHz PCI-X PN DS-KGPSA-EA | Native | 1.90a4 | 1.91x1 |
| HP StorageWorks FCA2684 2Gb, 64-bit/133MHz PCI-X PN DS-A5132-AA | Native | 1.90a4 | 1.91a1 |
| HP StorageWorks FCA2684DC 2Gb, 64-bit/133MHz PCI-X Dual PN DS-A5134-AA | Native | 1.90a4 | 1.91a1 |
| HP StorageWorks A6826A 2Gb, 64-bit/133MHz PCI-X Dual (supported only on Integrity servers) | Native | n/a (loaded by the driver) | |
| HP StorageWorks A9782A PCI-X 2Gb FC, and 1Gb Ethernet (supported only on Integrity servers) | Native | n/a (loaded by the driver) | |
| HP StorageWorks A9784A PCI-X 2Gb FC, and 1Gb Ethernet (supported only on Integrity servers) | Native | n/a (loaded by the driver) | |

Switch support

This release supports the Fibre Channel (FC) switches and firmware versions listed in the *HP StorageWorks SAN design reference guide*, which you can download from the HP StorageWorks web site:

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



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 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-A5132-AA support | DS-A5134-AA support |
|--------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| AS800 | Yes | No | No | No | No |
| AS1200 | Yes | No | No | No | No |
| AS4000 | Yes | No | No | No | No |
| AS4100 | Yes | No | No | No | No |
| AS8200 | Yes | No | No | No | No |
| AS8400 | Yes | No | No | No | No |
| DS10 | Yes | Yes | Yes | No | No |
| DS10L | Yes | Yes | Yes | No | No |
| DS15 | No | Yes | Yes | Yes | Yes |
| DS20 | Yes | No | No | No | No |
| 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 |
| GS60E | Yes | No | No | No | No |
| GS80 | Yes | Yes | Yes | Yes | No |
| GS140 | 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 and support the A6826A, A9782A, and A9784A FCAs:

- rx16x0
- rx26x0
- rx4640
- rx7620
- rx8620
- Superdome

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 multi-path web site:

<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.

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.

Storage System Scripting Utility for EVA

The latest version of the Storage System Scripting Utility (SSSU) is available on the following HP web site:

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

Codeload usage

When a maximally configured system is running at full load, codeload functionality is not effective. The system may time out before codeload is complete. HP recommends that you always perform VCS upgrades at an off-peak time.