

# HP StorageWorks Enterprise Virtual Array 3000/5000

impact assessment checklist for  
upgrading to VCS v4.001

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impact assessment checklist for upgrading to VCS v4.001

## About this document

VCS v4.001 uses an active/active I/O, rather than the active/passive I/O used on earlier VCS versions. The move to active/active will have an impact on most host configurations. The impact may involve replacing HBAs and drivers, installing new multi-pathing software, and re-establishing the correct paths to the storage system LUNs.

This document takes you through the process of assessing your current host configuration to determine what changes will be required to support active/active. The information you gather will be used when upgrading the EVA 3000/5000 to VCS v4.001.



### NOTE:

- You must be running VCS v3.028 to upgrade to VCS v4.001.
- You must perform this assessment on any host connected to the storage system you are considering upgrading to VCS v4.001. Any host connected to a storage system running VCS v4.001 must be configured to support active/active I/O.

## Intended audience

This document is intended for customers who are considering upgrading an HP StorageWorks Enterprise Virtual Array 3000/5000 to VCS v4.001.

## Downloading VCS v4.001 Supported Configuration Information

Before beginning the assessment, download the VCS v4.001 supported configuration information. This information is contained in a series of connectivity release notes—one for each supported operating system.

Download the connectivity release notes for each operating system you are using at the following web site:

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

Click **Technical documentation** under Support.

## Sample configuration spreadsheet

Attached to the end of this checklist is a sample configuration spreadsheet you can use when assessing your system requirements. This will facilitate the process of identifying what components you may need to upgrade on each host.

The configuration information in the sample spreadsheet was accurate at the time this checklist was published. However, the information may have changed. To ensure you have the latest configuration information, download the connectivity release notes.

## Understanding the performance characteristics of active/active operation

Before upgrading to VCS 4.001, you should understand the performance characteristics of a storage system using active/active I/O. The *Performance of Enterprise Virtual Arrays with Active-Active Operation* white paper provides detailed information active/active performance. This white paper can be downloaded from the following web site:

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

## HBAs and drivers

Gather information for each HBA currently used for accessing the storage system and enter it in the following table. Compare this against the supported HBA information in the appropriate connectivity release notes to determine if it will be necessary to replace the HBA and/or driver.

**Table 1 HBA and driver information**

HBA information	Supported on VCS v4.001?		Replacement
	Yes	No	
Model: Firmware: Driver:			Model: Firmware: Driver:
Model: Firmware: Driver:			Model: Firmware: Driver:
Model: Firmware: Driver:			Model: Firmware: Driver:
Model: Firmware: Driver:			Model: Firmware: Driver:
Model: Firmware: Driver:			Model: Firmware: Driver:
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Model: Firmware: Driver:			Model: Firmware: Driver:
Model: Firmware: Driver:			Model: Firmware: Driver:

## Management software

It may be necessary to upgrade the EVA3000/5000 management software applications to the required versions. Check the current software versions and enter them in the following table. If the versions are not correct, it will be necessary to update the software.

**Table 2 Required management software versions**

Software	Required version	Current version	Locating version information
HP Command View EVA	4.1		<ol style="list-style-type: none"> <li>1. Open Command View EVA</li> <li>2. Click <b>Help</b> in the Session pane. The Command View EVA Online Help window opens.</li> <li>3. Select <b>About HP StorageWorks Command View EVA</b> from the drop-down list.</li> <li>4. On the About HP StorageWorks Command View EVA page, click <b>Version and build information</b>.</li> </ol> <p><b>NOTE:</b> There is a 4.1.2 patch available for Command View EVA. It is strongly recommended that you install this patch to upgrade Command View EVA.</p>
HP Replication Solutions Manager	1.2		<ol style="list-style-type: none"> <li>1. Open or browse to HP StorageWorks Replication Solutions Manager</li> <li>2. Select <b>Help</b> in the menu bar.</li> <li>3. Select <b>About</b>. The version of HP Replication Solutions Manager server is displayed.</li> </ol>
HP Business Copy EVA	3.1		The correct version is included with VCS v4.001.
HP Continuous Access EVA	2.2		The correct version is included with VCS v4.001.
HP EVAperf	1.0.x		Execute the <code>evaperf</code> command without any parameters to display the version.
HP SSSU	4.1		The version is displayed when SSSU is run.
Storage Management Appliance (if used for management)	2.1		<ol style="list-style-type: none"> <li>1. From the SMA, click <b>Help</b> in the tool bar.</li> <li>2. Check the default page for the software version.</li> </ol>

## Multipathing software

To support active/active, it may be necessary to install new multipathing failover software. In most cases, this will involve moving from Secure Path to native multipathing or a third-party application.

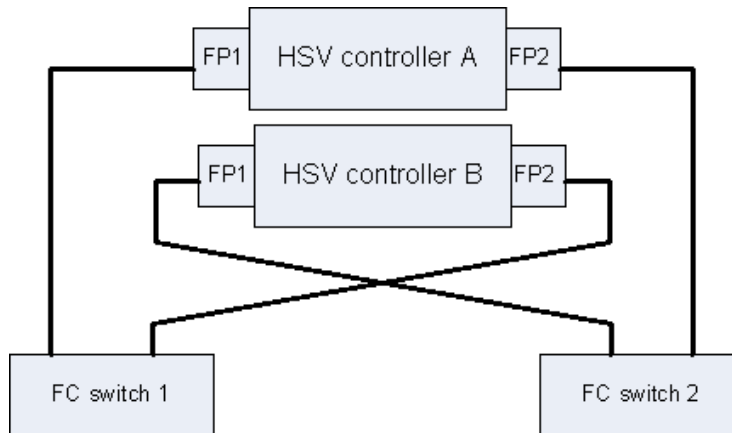
Enter the current multipathing software in the following table. Then refer to the connectivity release to determine what multipathing software is supported by VCS v4.001.

**Table 3 Multipathing software**

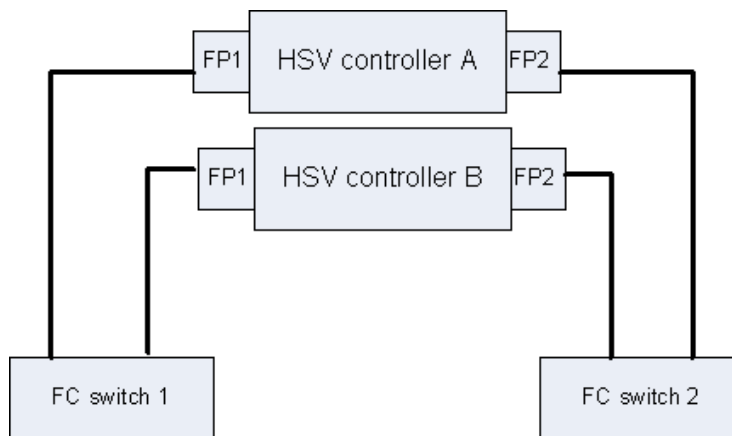
Host/OS version	Current multipathing software	Supported multipathing software

## Checking switch fabric cabling connections

If the storage system is operating in a dual-fabric environment, it will be necessary to change the cabling connections to the FC switches during the upgrade. Check the cabling to determine if the storage system is connected to the fabric using the cross-connection scheme shown in [Figure 1](#). If this configuration is being used, it will be necessary to change it during the upgrade to the straight-connection scheme shown in [Figure 2](#).



**Figure 1 Cross-connection switch fabric cabling configuration**



**Figure 2 Straight-connection switch fabric cabling configuration (required with VCS v4.001)**

## Delivering the information

Once you have completed this checklist, contact your HP-authorized sales or service representative who will use this information to prepare for the VCS v4.001 upgrade.

## VCS v4.001 upgrade task responsibilities

The following table provides an overview of the major tasks involved in upgrading the storage system to VCS v4.001 and identifies who typically performs each task. Many of the tasks can be performed prior to the arrival of HP services to perform the VCS v4.001 upgrade. Completing these tasks in advance will reduce the amount of time required to upgrade the storage system.

Task	Responsibility
<b>1. Complete the VCS v4.001 upgrade assessment checklist.</b> This ensures that you have recorded the changes that must be made to your environment.	Customer performs prior to the upgrade. <sup>1</sup>
<b>2. Purchase and install any new HBAs and drivers that may be required.</b> Contact your HP sales representative for assistance in ordering new HBAs.	Customer performs prior to the upgrade. <sup>1</sup>
<b>3. Install new multi-path and/or driver software required.</b> This software will be used to connect to the storage system following the VCS upgrade. Many operating systems support the coexistence of active/passive (VCS 3.0xx) and active/active (VCS 4.001) storage systems on the same host. It may be necessary to use separate HBAs and fabric rezoning to implement coexistence on the host. See <a href="#">Table 4</a> .	Customer performs prior to the upgrade. <sup>1</sup>
<b>4. Backup all data on the storage system.</b> Although the VCS v4.001 upgrade does not require the restoration of data following the upgrade, it is still recommended that a complete backup be performed.	Customer performs prior to the upgrade.
<b>5. Upgrade to VCS v4.001</b>	HP service representative
<b>6. Recreate all I/O paths to the storage system Vdisks.</b>	Customer performs following the upgrade. <sup>1</sup>

<sup>1</sup>This service can be performed by HP for an additional fee. Contact HP services for more information.

**Table 4 Support for coexistence of active/active (AA) and active/passive (AP) failover**

Operating system	Coexistence of AA and AP supported on the same host?	Coexistence supported on the same HBA?
HP-UX	Yes	Yes
Windows	Yes	Yes
Linux	No	No
OpenVMS	Yes	Yes
Tru64 Unix	Yes	Yes
IBM AIX	Yes	No
Sun Solaris	Yes	No
NetWare	Yes	Yes
VMware	No	No



Existing Configuration With v3.028						Required Configuration With v4.001					
O/S	O/S Version	HBA	HBA Version	Multipath Software	Multipath Version	O/S Version	Number of HBAs	HBA Part Number	HBA Version	Multipath Software (1)	Multipath Version
AIX	v5.1	DS-SWIA1-PD A7539A	1.5.25.3	Secure Path	2.0C	v5.3		FC5716	Included in OS maintenance	Native MPIO	1.0.0.3
		DS-SWIA1-PD A7539A	1.5.25.3	Secure Path	2.0D SP2			FC6239			
		DS-SWIA1-PD A7539A	1.5.25.3	Secure Path	2.0C			FC6228			
		DS-SWIA1-PD A7539A	1.5.25.3	Secure Path	2.0D SP2						
AIX	v5.2	FC5716	In O/S	Antemeta	2.1.2.0			FC5716	Included in OS maintenance	Native MPIO	1.0.0.3
		FC6239	In O/S	Antemeta	2.1.2.0		FC6239				
		FC6228	In O/S	Antemeta	2.1.2.0		FC6228				
		FC5716					FC5716				
AIX	v5.3	FC6239	Included in OS maintenance	Antemeta	2.2.2.0			FC6239	Included in OS maintenance	Native MPIO	1.0.0.3
HP-UX	v11.00			Secure Path	v3.05F			FC6228			
HP-UX	v11.11			Secure Path	v3.05F						
HP-UX	v11.23 PARISC			Secure Path	v3.05F						
HP-UX	v11.23 IA64			Secure Path	v3.05F						
		Refer to your configuration guide for a full listing of all HBAs and drivers that are supported with your Server.						Refer to your configuration guide for a full listing of all HBAs and drivers that are supported with your Server.			
Linux-32	AS/ES 2.1 RH SUSE ES 8	FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	7.05.00p8 8.00.02p11					FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.
Linux-32	AS/ES/WS 4 RH SUSE ES 9	FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	7.05.00p8 8.00.02p11					FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.
Linux-64	AS/ES 2.1 RH SUSE ES 8	A6826A	7.05.00p8 8.00.02p11						7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.
Linux-64	AS/ES/WS 4 RH SUSE ES 9	A6826A	7.05.00p8 8.00.02p11						7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.
Linux AMD64_EM64T	AS/ES/WS 3 RH SUSE ES 8	FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	7.05.00p8 8.00.02p11						7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.

Linux AMD64_EM64T	AS/ES/WS 4 RH SUSE ES 9 v5.1 SP7 v5.1 SP8 v6.5 SP2 v6.5 SP3 v6.5 SP4	FCA2214 DC (QLA2342) FCA2214 (QLA 2340) FCA2210 FCA2214 FCA2214DC FC Mezzanine for BL20p	7.05.00p8 8.00.02p11 6.80f	Qlogic	Secure Path Secure Path	Check with HBA configuration guide for exact parameter settings. v3.0C SP2.1 v3.0c SP2.1	7.05.00p8 8.00.02p11	Qlogic	Check with HBA configuration guide for exact parameter settings.
Netware OpenVMS									Netware MPIO Basic
Sun Solaris	SPARC 8	FCA2257C FCA2257S FCS2257P QLA2310F FCA2257C FCA2257S FCS2257P	4.13.01 4.13.01 4.13.01 4.13.01 4.13.01 4.13.01 4.13.01/4.20	Secure Path	v3.0D SP1		FCS2257P 4.20 QLA2310F 4.20	MPxIO Veritas DMP	v4.0
Sun Solaris	SPARC 9	QLA2310F FCS2257P	4.13.01/4.20 4.20	Secure Path	v3.0D SP1		FCS2257P 4.20 QLA2310F 4.20	MPxIO Veritas DMP	v4.0
Sun Solaris Tru64 UNIX	SPARC 10	QLA2310F	4.20	Secure Path	v3.0D SP1		FCS2257P 4.20 QLA2310F 4.20	MPxIO	
Vmware ESX Vmware GSX & Workstations	2.1 2.5.x	FCA2214 DC (QLA2342) FCA2214 (QLA 2340)	6.04 VMware supplied	VMware MPIO		Check with HBA configuration guide for exact parameter settings.	FCA2214 DC (QLA2342) 6.04 FCA2214 (QLA 2340) VMware supplied	6.04 VMware supplied	VMware MPIO
Windows	Windows2000			Secure Path Secure Path MPIO Basic F/O MPIO Basic F/O	v4.0c SP1 v4.0c SP2-1 v1.0*3 a, b v1.01*3 a, b, c			Secure Path Full Featured DSM for GL-AA	v1.00.00
Windows - 32 bit	Windows2003	Too many to list, refer to your configuration guide for a full listing of all HBAs and drivers that are supported with your Server.		Secure Path Secure Path MPIO Basic F/O MPIO Basic F/O	v4.0c SP1 v4.0c SP2-1 v1.0*3 a, b v1.01*3 a, b, c		Too many to list, refer to your configuration guide for a full listing of all HBAs and drivers that are supported with your Server.	Secure Path Full Featured DSM for GL-AA	v1.00.00
Windows - Ext Systems 64 bit	Windows2003			Secure Path Secure Path MPIO Basic F/O MPIO Basic F/O	v4.0c SP1 v4.0c SP2-1 v1.0*3 a, b v1.01*3 a, b, c			Secure Path Full Featured DSM for GL-AA	v1.00.00
Windows IA64	Windows2003			Secure Path Secure Path MPIO Basic F/O MPIO Basic F/O	v4.0c SP1 v4.0c SP2-1 v1.0*3 a, b v1.01*3 a, b, c			Secure Path Full Featured DSM for GL-AA	v1.00.00

(1) Refer to compatibility matrices for co-existence information.