HP StorageWorks

4000/6000/8000 Enterprise Virtual Array connectivity 5.0C for Windows release notes

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Legal and notice information

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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 major topics:

- New features
- EVA storage system
- EVA compatibility
- Operating constraints
- Storage System Scripting Utility for EVA
- Avoiding problem situations
- Host considerations
- Windows 2000 dynamic disk snapshots and snapclones

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 Windows® operating system
- HP customer service personnel responsible for installing and maintaining devices connected to the EVA4000/6000/8000 storage system

Accessing future product updates

HP strongly recommends that customers sign up online using the Subscriber's choice web site at 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

The following are major enhancements included in this release:

- Support is provided for EVA4000/6000/8000 controller software 5.030.
- Support is provided for multipathing I/O (MPIO).
- Support is provided for Native Active-Active Device Specific Module (AA DSM).
- Different types of multipathing software are able to coexist on the same server.

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

Product support information

This document contains the current product information at the release of controller software 5.030.

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

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

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://h18000.www1.hp.com/products/storageworks/san/documentation.html

EVA compatibility

Operating system support

Table 1 lists the operating system specifications when using Microsoft Cluster Server (MSCS) clustering.

NOTE:

Table 1 through Table 4 contain 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 for the Windows 2000 platform

OS version	FCA (HBA)	Adapter firmware/ Boot BIOS version (minimum)	Adapter driver version (minimum)
5.0 SP 3, SP 4	KGPSA-CB 176479-B21	3.92a2/1.70a1	5-5.10a11
	FCA2101 245299-B21	3.92a2/1.70a1	5-5.10a11
	FCA2355 308540-B21	3.92a2/1.70a1	5-5.10a11
	FCA2404 305573-B21	1.90a4/1.70a1	5-5.10a11
	FCA2404DC 323264-B21	1.90a4/1.70a1	5-5.10a11
	FCA2408 343073-B21	1.90a4/1.70a1	5-5.10a11
	FC Mezzanine Card for BL20P	1.34	9.0.0.13
	FC Mezzanine Card for BL25P	1.48	9.0.0.13
	FCA2214 281541-B21	1.34	9.0.0.13
	FCA2214DC 321835-B21	1.34	9.0.0.13
	A7387A	1.81a3/1.70a1	5–5.10a9
	A7388A	1.90a4/1.70a1	5-5.10a11

Table 2 Operating system specifications for the Windows Server 2003 platform

OS version	FCA (HBA)	Adapter firmware/ Boot BIOS version (minimum)	Adapter driver version (minimum)
5.2 SP1	KGPSA-CB 176479-B21	3.92a2/1.70a1	5-5.10a11 Storport 5-1.02a7
	FCA2101 245299-B21	3.92a2/1.70a1	5-5.10a11 Storport 5-1.02a7
	FCA2355 308540-B21	3.92a2/1.70a1	5-5.10a11 Storport 5-1.02a7
	FCA2404 305573-B21	1.90a4/1.70a1	5-5.10a11 Storport 5-1.02a7
	FCA2404DC 323264-B21	1.90a4/1.70a1	5-5.10a11 Storport 5-1.02a7
	FCA2408 343073-B21	1.90a4/1.70a1	5-5.10a11 Storport 5-1.02a7
	FC Mezzanine Card for BL20P	1.45	9.0.0.13 Storport 9.0.2.16
	FCA2214 281541-B21	1.45	9.0.0.13 Storport 9.0.2.16
	FCA2214DC 321835-B21	1.45	9.0.0.13 Storport 9.0.2.16
	A7387A	1.81a3/1.70a1	5-5.10a11
		1.90a4/1.70a1	Storport 5-1.02a7
	A7388A	1.81a3/1.70a1	5-5.10a11
		1.90a4/1.70a1	Storport 9.0.2.16
	FC Mezzanine Card for BL25P and BL45P	1.48	Storport 9.0.2.16

Table 3 Operating system specifications for the Windows 2003 x64 Extended system platform

OS version	FCA (HBA)	Adapter firmware/ Boot BIOS version (minimum)	Adapter driver version (minimum)
5.2 SP1	A7387A	1.90a4/1.70a1	Storport 7-1.03a10
	A7388A	1.90a4/1.70a1	Storport 7-1.03a10
	FCA2404 305573-B21	1.90a4/1.70a1	Storport 7-1.03a10
	FCA2404DC 323264-B21	1.90a4/1.70a1	Storport 7-1.03a10
	A7560A	1.90a4/1.70a1	Storport 7-1.03a10
	FCA2408 343073-B21	1.90a4/1.70a1	Storport 7-1.03a10
	FCA2214 281541-B21	1.45	Storport 9.0.2.16
	FC Mezzanine Card for BL20P G3	1.45	Storport 9.0.2.16
	FC Mezzanine Card for BL35p	1.45	Storport 9.0.2.16
	FC Mezzanine Card for BL25p and BL45P	1.48	Storport 9.0.2.16

Table 4 Operating system specifications for the Windows Server 2003 for Itanium-based system platform

OS version	FCA (HBA)	Adapter firmware/ Boot BIOS version (minimum)	Adapter driver version (minimum)
5.2 SP1	A7298A	1.90a4/EFI 3.10a6.	6-5.10a11 Storport 6-1.03a10
	AB232A	1.90a4/EFI 3.10a6.	6-5.10a11 Storport 6-1.03a10
	AB466A	1.90a4/EFI 3.10a6.	6-5.10a11 Storport 6-1.03a10
	AB467A	1.90a4/EFI 3.10a6.	6-5.10a11 Storport 6-1.03a10

Switch support

This version supports the Fibre Channel (FC) switches and firmware versions listed in the *HP StorageWorks SAN design reference guide*, available at 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.

Multiple-path support

Windows with EVA storage requires the installation of HP StorageWorks multipathing software on each host to achieve high-availability, multiple-path capability.

Server support

Windows supports ProLiant servers, including Blade Servers and HP Integrity Servers.

Operating constraints

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

SAN boot procedures

Booting from the SAN is supported for Windows 2000 and Windows 2003 for multipathing configurations. SAN boot procedures are available on the following HP StorageWorks web site:

http://h18000.www1.hp.com/products/storageworks/san/documentation.html

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 Command View EVA software includes the Storage System Scripting Utility (SSSU). You can download the Command View EVA with SSSU from the following HP web site:

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

Avoiding problem situations

The following sections describe problems that may arise and their solutions.

Known problems

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

Codeload usage

When a maximally configured system is running at maximum load, multipathing timing constraints make codeload functionality ineffective. The system may experience a time-out condition before codeload is complete. Therefore, you should perform multipathing software upgrades at an off-peak time.

Disk Resource Pending Timeout for large configurations

To ensure continuous operation of disk resources across SAN perturbations with disk resource counts greater than eight, HP recommends that the Pending Timeout parameter for each disk resource be increased from 180 seconds to 360 seconds.

To view and set the Pending Timeout parameter:

1. Open the Microsoft Cluster Administrator.
2. Select a Disk Group resource in the left pane.
3. One at a time, right-click each Disk Resource in the right pane and select **Properties**.
4. Select the **Advanced** tab from the Properties menu.
5. Locate the Pending Timeout value and change it to **360**.
6. Click **OK**.

Host considerations

This section contains information and important reminders about the host servers.

Windows 2000 and Windows Server 2003 notes

Drive-letter remapping can occur in the following situations, and it can affect data access for programs you need to run.

- Replacing one server with another.
- Replacing an FC HBA in one of your systems.

  During such a system or adapter changeover, be sure to manually remap drives to drive letters using Disk Manager. This restores proper access to your data.

  When you replace an FC HBA in a server, you need to reinstall the HBA driver. Windows 2000 and Windows Server 2003 automatically reload the original driver for this adapter and reset many important registry settings. New connections are created on the HSV controller. Assign the new World Wide Names (WWNs) to the appropriate host.

Registry growth in Windows

The Windows plug-and-play architecture limits the number of plug-and-play devices that are added or removed from the registry. Whenever devices are added or removed, or snapshots are created or deleted, entries are added to the registry by the plug-and-play manager, potentially causing the registry to grow beyond the allowed capacity.

If more than 700 entries are in the registry, the next time the system reboots, the following error message occurs: `Failed to load Windows 2000 due to a file missing or corrupt in the \WINNT\SYSTEM32\CONFIG\SYSTEM directory.`

See the Microsoft Knowledge Base article (Q269075), for more information about the registry growth problem.

Known limitations for large LUNs for Windows 2000

In Windows 2000, if any Logical Unit Number (LUN) greater than 7 is removed and a subsequent disk scan is performed, the Found New Hardware wizard may ask you to finish the installation of the device that was removed. The Device Manager may show the device with a yellow warning icon on it. A reboot of the system removes the device.

Windows 2000 dynamic disk snapshots and snapclones

The use of snapshots and snapclones in HP SANs is not supported in a Windows 2000 environment if the snapshot or snapclone is presented to the same Windows 2000 host as the LUN from which the snapshot or snapclone was created. Snapshot and snapclone are features of the HSG80 and HSV controller-based HP storage systems. All dynamic disks on a system have information in their metadata about the other dynamic disks that exist on the system. When Windows is presented with two dynamic disks that have the same information on them, it cannot resolve the conflict.