HP StorageWorks Command View EVA 4.1 EVA device management deployment models white paper

Abstract

HP recognizes the need to provide storage administrators with flexibility in the deployment of array management software. The deployment models that are described in this paper allow storage administrators to select the HP StorageWorks Command View Enterprise Virtual Array (EVA) 4.1 software deployment model that best fits their environment. This paper is intended for readers who are familiar with previous Command View EVA implementations.

Before attempting the configurations described in this paper, the reader should review the documentation provided in the HP StorageWorks Command View EVA 4.1 solution. See the "For more information" section in this paper for the location of Command View EVA documentation.

HP StorageWorks Command View EVA 4.1 management deployment options

HP StorageWorks Command View EVA 4.1 allows deployment in the following models (Microsoft® Windows®):

- HP ProLiant storage servers (NAS)
- General purpose server
- Management server
- HP OpenView Storage Management Appliance

Command View EVA 4.1 software provides centralized storage area network (SAN) storage configuration, monitoring, and management for HP StorageWorks 8000 Enterprise Virtual Array (EVA8000), HP StorageWorks 6000 Enterprise Virtual Array (EVA6000), HP StorageWorks 4000 Enterprise Virtual Array (EVA4000) and HP StorageWorks Enterprise Virtual Array 5000 (EVA5000) and HP StorageWorks Enterprise Virtual Array 3000 (EVA3000).
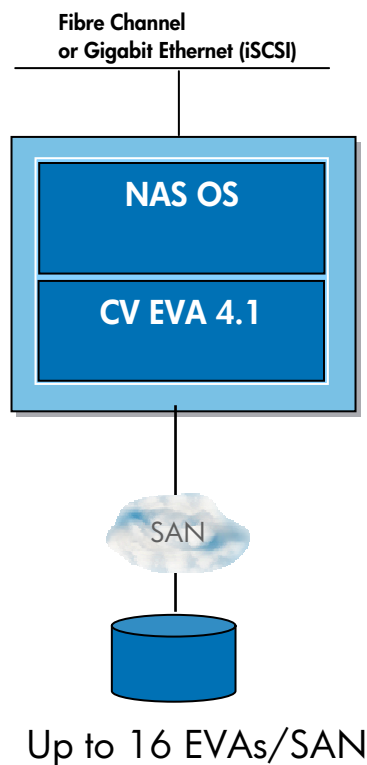
The next four sections describe these options. The table located on page 7 lists supported software for each HP StorageWorks EVA management deployment model.

HP ProLiant storage servers (NAS)

In the first deployment model, HP StorageWorks Command View EVA 4.1 can be installed on the following HP ProLiant storage servers—the HP ProLiant DL380 G4 Storage Server (SAN storage model), formerly the HP StorageWorks NAS 4000, or the HP ProLiant DL580 G2 Storage Server, which is now replaced by the HP ProLiant DL585 Dual Core Storage Server, formerly the HP StorageWorks NAS 9000 (see Figure 1). HP ProLiant servers are built on two industry-leading business platforms—HP ProLiant servers and Microsoft Windows Storage Server 2003 operating system. EVA management deployment software support is similar to deployment on a general purpose server so the same number of EVAs supported in a single SAN is 16 (see Table 1).

Note: HP StorageWorks Business Copy EVA jobs should be run during a period of lower server resource utilization to ensure maximum performance of the Business Copy jobs.

Figure 1. HP ProLiant storage servers
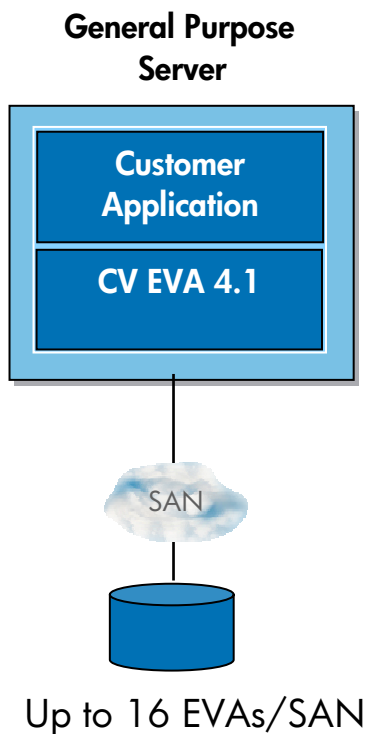

Up to 16 EVAs/SAN

General purpose server

In the second deployment model, HP StorageWorks Command View EVA 4.1 can be installed on a general purpose server. A general purpose server is a server, not an HP OpenView Storage Management Appliance, that runs customer applications, such as file and print services, along with Command View EVA and, if licensed, HP StorageWorks Business Copy for EVA and/or HP StorageWorks Continuous Access EVA. This option offers ease of deployment in a low-cost solution for first-time SAN implementations (see Figure 2). Command View EVA 4.1 supports general purpose servers running Microsoft Windows Server 2003 Enterprise Server, Standard Server and Microsoft Windows 2000 Server, Advanced Server (SP3, SP4) (32-bit). For additional hardware and software specifications, refer to the *HP StorageWorks Command View EVA Installation and Configuration Guide for Windows Server 2003*. The information within this guide can be used when installing Command View EVA 4.1 on a general purpose server running any of the preceding operating systems.

Note: HP StorageWorks Business Copy EVA jobs should be run during a period of lower server resource utilization to ensure maximum performance of the Business Copy jobs.

Figure 2. General purpose server

General Purpose Server

Customer Application
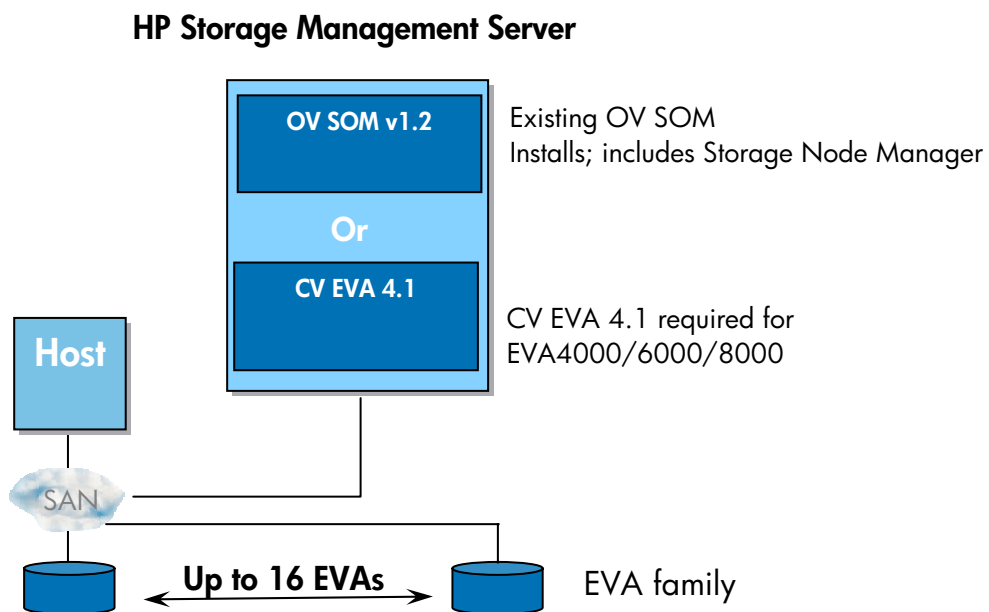
CV EVA 4.1

SAN

Up to 16 EVAs/SAN

Management server

In the third deployment model, HP StorageWorks Command View EVA 4.1 can be installed on a management server (see Figure 3). A management server is a Windows host that is intended for use with HP OpenView Storage Node Manager or other HP OpenView Storage Area Manager (OpenView SAM) add-on software modules and Command View EVA software. Installation requirements and restrictions are specified in Command View EVA documentation. Refer to the "For more information" section for the location of Command View EVA documentation.

Note: The management server option is also applicable to configurations where Command View EVA 4.1 software is required as a **dedicated** management sever configuration without Storage Node Manager software running on the same management server.

Figure 3. Management server

HP OpenView Storage Management Appliance

In the fourth deployment model, HP StorageWorks Command View EVA 4.1 can be installed on an HP OpenView Storage Management Appliance. The Storage Management Appliance is a centralized, dedicated monitoring and management hardware-software solution for the SAN. Connected directly to the fabric, it performs management functions outside the data path and without involving host computers, allowing data transfers to proceed independently between computers and storage devices (see Figure 4).

Note:

- The Storage Management Appliance was discontinued by HP. Contact your HP representative or HP authorized channel partner for available product in inventory.
- The Storage Management Appliance ships with its own special purpose HP OpenView Storage Management Appliance software 2.1. This software is unique to the Storage Management Appliance, and is not available on any other EVA management deployment model but the HP Storage Management Appliance.

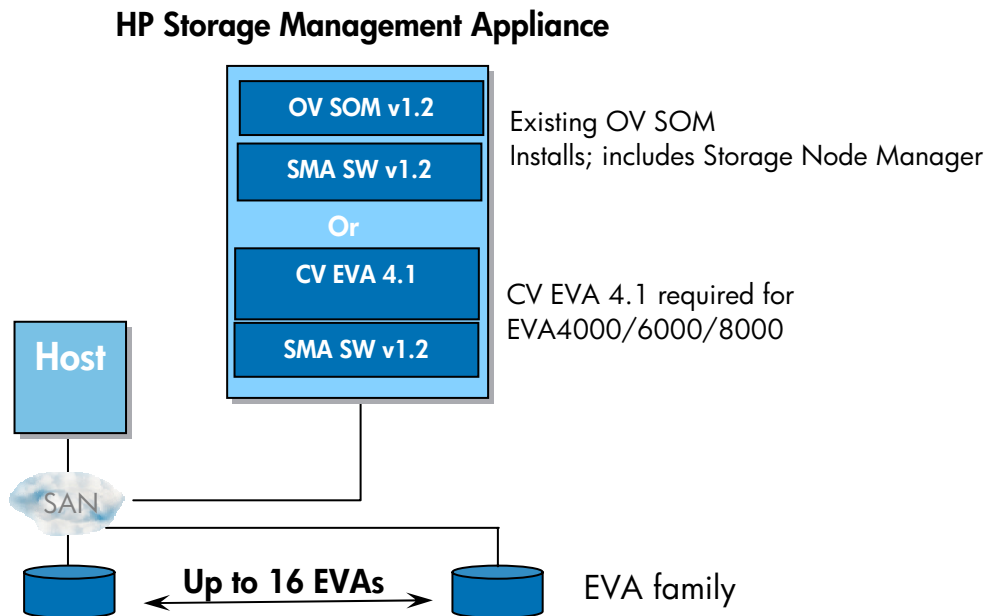**Figure 4.** HP OpenView Storage Management Appliance

Table 1. Software and general configuration support matrix

HP supported software	HP ProLiant Storage Server (NAS)	General purpose server	Management Server	HP OpenView Storage Management Appliance Note: The SMA is discontinued.
HP StorageWorks Secure Path (required for multipath configurations)	Supported	Supported	N/A	N/A
HP StorageWorks Secure Path Manager Note: SmartStart 7.2 requires SPM v4.0c SP2	Supported with SmartStart 7.1 Note: SmartStart 7.2 requires SPM v4.0c SP2	Supported with SmartStart 7.1 Note: SmartStart 7.2 requires SPM v4.0c SP2	Supported with SmartStart 7.1 Note: SmartStart 7.2 requires SPM v4.0c SP2	Supported with SmartStart 7.1 Note: SmartStart 7.2 requires SPM v4.0c SP2
Operating system platform kit v3.0e ~OR~ Storport Driver	Supported	Supported	N/A	N/A
HP StorageWorks Business Copy EVA 3.0	Supported	Supported	Supported	Supported
WEBES Note: Not supported on the HP ProLiant DL145 Server	Supported (HP Services obligation required)	Supported (HP Services obligation required)	Supported (HP Services obligation required)	Supported (HP Services obligation required)
ISEE remote support	Supported (HP platforms only)	Supported (HP platforms only)	Supported (HP platforms only)	Supported (HP platforms only)
HP StorageWorks Continuous Access EVA 1.2	Not supported	Not supported	Supported	Supported
HP StorageWorks Continuous Access EVA 2.1 with HP StorageWorks Replication Solutions Manager 1.1	Supported	Supported	Supported	Supported
HP OpenView Storage Area Manager	Not supported	Not supported	Supported	Supported
HP StorageWorks Virtual Controller Software (VCS) or (XCS)	3.020 or higher recommended for EVA3000 or EVA5000 XCS 5.020. or higher required for EVA4000, EVA6000, EVA8000	3.020 or higher recommended for EVA3000 or EVA5000 XCS 5.020. or higher required for EVA4000, EVA6000, EVA8000	3.020 or higher recommended for EVA3000 or EVA5000 XCS 5.020. or higher required for EVA4000, EVA6000, EVA8000	3.020 or higher recommended for EVA3000 or EVA5000 XCS 5.020. or higher required for EVA4000, EVA6000, EVA8000
Number of HP StorageWorks EVAs supported	16	16	16	16
HP StorageWorks Command View EVA 4.1	Supported	Supported	Supported	Supported

HP supported software	HP ProLiant Storage Server (NAS)	General purpose server	Management Server	HP OpenView Storage Management Appliance
				Note: The SMA is discontinued.
HSG Element Manager 1.0f	Not supported	Not supported	Not supported	Supported
Recommended servers	HP ProLiant DL380 G4 Storage Server (base model), HP ProLiant DL380 G4 Storage Server (SAN model), or HP ProLiant DL585 Storage Server, HP ProLiant DL585 Dual Core Storage Server Note: In **most** cases, the ProLiant DL380 SAN model is recommended.	HP ProLiant DL145 Server, HP ProLiant DL360 G4 Server (comparable to an SMA), HP ProLiant DL560 Server	HP ProLiant DL145 Server, HP ProLiant DL360 G4 Server (comparable to an SMA), HP ProLiant DL560 Server	Storage Management Appliance III
Operating system	Microsoft Windows Storage Server 2003	Microsoft Windows Server 2003 SP1 Enterprise Edition, Standard Edition and Microsoft Windows 2000 Server, Advanced Server, (SP3, SP4) (32-bit)	Refer to HP OpenView SAM QuickSpecs or Command View EVA QuickSpecs If installed as a dedicated Command View EVA management server, you can use the same Windows operating system supported for the HP management server configuration.	HP OpenView Storage Management Appliance software 2.1

For more information

HP StorageWorks Command View EVA software documentation

http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&locale=en_US&docIndexId=179911&taskId=101&prodTypeId=12169&prodSeriesId=471497

EVA software

HP StorageWorks Command View EVA software suite

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

HP StorageWorks Command View EVAPerf software

http://h20000.www2.hp.com/bizsupport/TechSupport/SoftwareDescription.jsp?locBasepartNum=co-30754-1&lang=English

HP StorageWorks Business Copy EVA software

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

HP StorageWorks Continuous Access EVA software

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

HP StorageWorks Secure Path Manager

http://h18006.www1.hp.com/products/sanworks/secure-path/index.html

Integration with Microsoft Operations Manager (MOM)

HP StorageWorks Management Pack for MOM 2005

http://h18006.www1.hp.com/products/storageworks/mpackmom2005/index.html

Unified server and storage management software

HP Systems Insight Manager

http://h18013.www1.hp.com/products/servers/management/hpsim/index.html?jumpid=go/hpsim

Infrastructure management

HP Storage Essentials Enterprise Edition

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

HP ProLiant storage servers

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