

HP StorageWorks EVA software compatibility reference

This series of tables describes the compatible hardware, operating system, and software for all HP StorageWorks Enterprise Virtual Array (EVA) software:

- HP StorageWorks Business Copy EVA
- HP StorageWorks Command View EVA
- HP StorageWorks Continuous Access EVA
- HP StorageWorks Replication Solutions Manager (RSM)

Note: Use of HP Business Copy EVA and HP Continuous Access EVA is described with and without HP Replication Solutions Manager, where noted.

EVA software version compatibility

This table shows the compatibility of EVA software versions (controller, management, and replication). A bullet (*) indicates compatibility and a blank cell indicates no compatibility.

	EVA3000/5000				EVA4000/6000/8000			HP Command View EVA				HP Business Copy EVA		HP Replication Solutions Manager		
	VCS 3.020	VCS 3.025	VCS 3.028	VCS 4.0x	XCS 5.02x	XCS 5.03x	XCS 5.1x	3.3.x	4.0.x	4.1.x	5.0	2.3	2.3.1	1.1	1.2	2.0
HP Command View EVA																
3.3.x ¹ (SMI-S EVA 3.3) (SSSU Build 7 for 3.2)	•	•										•	•	•		
4.0.x (EVAPerf 1.0) (SMI-S EVA 4.0) (SSSU 4.0.18)	•	•			•									•		
4.1.x ¹ (EVAPerf 1.0.x) (SMI-S EVA 4.1) (SSSU 4.1)	•	•	•	•	•	•							•			•
5.0.x (EVAPerf 1.2) (SMI-S EVA 5.0) (SSSU 5.0)			•	•	• ²	•	•									•
HP Replication software versions																
HP Business Copy EVA 2.3	•	•						•						•	•	•
HP Business Copy EVA 2.3.1	•	•	•					•		•				•	•	•
HP Replication Solutions Manager 1.0	•	•						•				•	•			
HP Replication Solutions Manager 1.1	•	•			•			•	•			•	•			
HP Replication Solutions Manager 1.2 ³		•	•	•	•	•				•		•	•			
HP Replication Solutions Manager 2.0			•	•	•	•	•			•	•					
HP Replication media kit and software compatibility																
HP Business Copy EVA 2.3.1	•	•	•					•		•			•			
HP Business Copy EVA 3.0 (05/05)	•	•						•	•					•		
HP Business Copy EVA 3.0 (09/05)		•	•		•	•				•					•	
HP Business Copy EVA 3.1			•	•	•	•				•					•	
HP Business Copy EVA 3.2			•	•	•	•	•			•	•					•
HP Continuous Access EVA 2.0	•	•						•						•		
HP Continuous Access EVA 2.1 (05/05)	• ⁴	• ⁴						•	•					•		
HP Continuous Access EVA 2.1 (09/05)		• ⁴	•		•	•				•					•	
HP Continuous Access EVA 2.2			•	•	•	•				•					•	
HP Continuous Access EVA 2.3			•	•	•	•	•			•	•					•
Storage Management Appliance software																
Storage Management Appliance 2.1	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

¹ Certified by SNIA's Conformance Test Program (CTP) .

² Supported during controller software upgrades only.

³ The HP RSM server software version is 1.2. The HP RSM host agent software version remains at 1.1.

⁴ Replication between EVA3000/5000 arrays and EVA4000/6000/8000 arrays requires that the former have a minimum VCS version of 3.025.

Controller software version support in remote replication environments

This table shows support between controller software versions in remote replication environments, meaning the controller software versions that are running on the source and destination arrays. A bullet (*) indicates support and a blank cell indicates that the remote replication environment is not supported when the source and destination arrays are running the controller software versions listed.

Controller software version (source array)	Controller software version (destination array)						
	VCS 3.020	VCS 3.025	VCS 3.028	VCS 4.00x	XCS 5.02x	XCS 5.03x	XCS 5.10x
VCS 3.020	•	• ¹	• ¹				
VCS 3.025	• ¹	•	• ¹		•	•	
VCS 3.028	• ¹	• ¹	•	• ¹	•	•	•
VCS 4.00x			• ¹	•		•	•
XCS 5.02x		•	•		•	• ¹	
XCS 5.03x		•	•	•	• ¹	•	• ¹
XCS 5.10x			•	•		• ¹	•

¹Supported during the seven day upgrade window only, meaning the source and destination arrays can be running these different controller software versions while you are upgrading the arrays and the upgrades must be completed within seven days. You can only upgrade one controller software family (either VCS or XCS) at a time and only allow two versions within that family.

HP StorageWorks EVA software deployment options

You can install HP StorageWorks EVA management and replication software on a management server. The management server types are:

General-purpose server: A server other than the HP OpenView Storage Management Appliance that runs customer applications, such as file and print services

HP OpenView Storage Management Appliance (SMA): A centralized, dedicated monitoring and management hardware-software solution for the storage area network (SAN)

Dedicated management server: A Windows host that is intended solely for HP storage software, such as HP OpenView Storage Node Manager, HP OpenView Storage Area Manager add-on software modules, or HP StorageWorks EVA software

HP ProLiant Storage Server: A server similar to the general-purpose server; it can be used for managing EVAs in the SAN as well as traditional NAS-based applications.

Required hardware

General-purpose server Dedicated management server	<p>Recommended servers: HP ProLiant DL145, DL360 G4, and DL560</p> <p>Processor: 1.26 GHz (minimum)</p> <p>Memory: 2 GB (minimum)</p> <p>Disk space requirements:</p> <ul style="list-style-type: none"> – 120 MB for Command View EVA installation – 10 MB for each managed array – 350 MB for HP Replication Solutions Manager installation – Additional 300–400 MB for HP Replication Solutions Manager installation to accommodate log and database growth – 10/100 Mps for RSM server to RSM host agent connectivity
Storage Management Appliance	G1, G2, G3
HP ProLiant Storage Server	<p>HP ProLiant DL380 G4 Storage Server (base model)</p> <p>HP ProLiant DL380 G4 Storage Server (SAN model)</p> <p>HP ProLiant DL585 Storage Server</p> <p>HP ProLiant DL585 Dual Core Storage Server</p> <p>Note: In most configurations, the HP ProLiant DL380 SAN model is preferred.</p>

Supported software for management server types

This table lists the software that is supported on each management server type. A bullet (*) indicates compatibility, a blank cell indicates no compatibility, and "N/A" indicates the software is not applicable to the management server type.

	General-purpose server	Storage Management Appliance	Dedicated management server	ProLiant Storage Server
HP StorageWorks Business Copy EVA 2.3 and later	•	•	•	•
HP StorageWorks Command View EVA 3.3 and later ¹	•	•	•	•
HP StorageWorks Command View EVA Cluster Failover on a Windows server				
HP StorageWorks Command View EVA and Command View XP 2.2A and/or Command View XP AE 1.0.0-01 coexistence on same Windows server	•		•	•
HP StorageWorks Command View for Tape Libraries 1.5.05 and later and HP Command View EVA software coexistence	•			
HP StorageWorks Replication Solutions Manager 1.1 and later ²	•	•	•	•
HP StorageWorks Secure Path (required for multipath configurations)	•	N/A	N/A	•
HP StorageWorks Secure Path Manager ³	•	•	•	•
HP Storage Essentials (Enterprise Edition) ⁴			•	
HP OpenView Storage Area Manager		•	•	
HSG Element Manager 1.0f	N/A	•	N/A	N/A
ISEE Remote Support (HP platforms only)	•	•	•	•
Microsoft Operations Manager support (MOM) ⁵	•	•	•	•
Number of HP StorageWorks Enterprise Virtual Arrays supported	16	16 ⁶	16	16
Operating system connectivity 3.0e OR Storport Driver	•	N/A	N/A	•
Operating systems ²	Microsoft Windows Server 2003 Standard and Enterprise Editions SP1 (32-bit) Microsoft Windows 2000 Server or Advanced Server SP3, SP4 (32-bit)	HP Storage Management Appliance software 2.1 (based on Microsoft Windows 2000)	Microsoft Windows Server 2003 Standard and Enterprise Editions SP1 (32-bit) Microsoft Windows 2000 Server or Advanced Server SP3, SP4 (32-bit)	Microsoft Windows Storage Server 2003 ³
WEBES 4.4.3 (HP Services obligation required)	•	•	•	•

¹Software must be installed on the C:\ drive.

²Do not install HP StorageWorks Command View SDM 1.09 and HP Replication Solutions Manager 1.1 or 1.2 on the same management server.

³SmartStart 7.2 requires HP Secure Path Manager 4.0C SP2.

⁴A dedicated management server is required for HP Storage Essentials.

⁵Supported with HP StorageWorks Management Pack for MOM 2005.

⁶When running HP Replication Solutions Manager or HP Business Copy EVA 2.3 on the SMA G1, the maximum number of EVAs supported is four.

Supported EVA software operating environments

This table lists the supported servers, operating systems and application integration for EVA software. A bullet (*) indicates support on all EVA models, an EVA model indicates support with that EVA model only, and a blank cell indicates no support. The environments are:

HP Business Copy EVA Basic I/O—The ability for HP Business Copy EVA (independent of HP Replication Solutions Manager) to work with this operating system. There may or may not be support through HP RSM on that operating system, as indicated in this table.

HP Continuous Access EVA Basic I/O—The ability for HP Continuous Access EVA (independent of HP Replication Solutions Manager) to work with this operating system. There may or may not be support through HP RSM on that operating system, as indicated in this table.

HP Replication Solutions Manager host agent—The HP RSM host agent is installed on servers running this operating system. The CLUI client is also supported on this operating system if the HP RSM host agent is installed.

HP StorageWorks DButil—The command line utility that facilitates application-consistent replication of Microsoft SQL Server 2000 databases. HP DButil is installed automatically with the HP RSM host agent on Windows servers.

HP Command View EVA, HP Command View EVAPerf, and HP RSM Server—The ability for HP Command View EVA, HP Command View EVAPerf, and HP RSM Server to work with this operating system.

HP SSSU—The ability for HP StorageWorks Storage Scripting Utility to be installed on and work with this operating system.

Server, operating system, or application type	Environment						HP RSM host agent resource requirements ¹⁰				
	HP Business Copy EVA Basic I/O	HP Continuous Access EVA Basic I/O	HP RSM host agent ¹	HP DButil	HP Command View EVA, HP Command View EVAPerf, and HP RSM Server	HP SSSU	Processor	Memory (in MB)	Disk Space (in MB)		
									/opt	/etc	/var
Server											
Dedicated management server					•						
General-purpose server					•						
ProLiant Storage Server					•						
Storage Management Appliance					•						
Storage Management Appliance with HP OpenView Storage Area Manager					•						
Operating system											
AIX 5.1		EVA3000/5000									
AIX 5.2		•	• ^{2,3}			•	340 MHz	256	106	<1	N/A
AIX 5.3		•	• ^{2,3}			•					
HP OpenVMS 7.2.2		EVA3000/5000									
HP OpenVMS 7.3-1		EVA3000/5000									
HP OpenVMS 7.3-2		•	• ⁴			•		256	53 (Install) 57 KB (SYSS\$LIBRARY) 2 KB (SYSS\$STARTUP)		
HP OpenVMS 8.2 on Alpha servers		•	• ⁵			•					
HP-UX 11.0 PA-RISC						•	256 Mhz	256	385	2	82
HP-UX PA-RISC 11.11 / 11iv1 (64b)			•			•	256 Mhz	256	15	0.1	N/A
HP-UX 11.23 PI / 11iv2 (PA-RISC)			•			•					
HP-UX 11.23 PI / 11iv2 (Intel)			•			•	1 Ghz	512	19	0.1	N/A
NetWare 5.1						•					
NetWare 6.0						•					
Netware 6.5		EVA3000/5000				•					
Red Hat AS 2.1 (32-bit) Update 5, 6						•					
Red Hat AS 2.1 (64-bit) Update 5, 6						•					
Red Hat AS 3.0 (32-bit) Update 6			•			•					
Red Hat AS 3.0 (64-bit) Update 4						•					
Red Hat AS 4.0 (32-bit) Update 2, 3			•			•	600 Mhz	512	30	1	N/A
Red Hat AS 4.0 (x64-bit AMD) Update 2			•			•					
Red Hat AS 4.0 (64-bit Itanium)						•					
Solaris 8		EVA3000/5000				•					
Solaris 9		•	• ^{6,7}			•	250 Mhz	256	220	2	40
Solaris 10		EVA3000/5000	• ⁶			•					
SuSE 8 (32-bit) SP3						•	600 MHz	512	320	5	120
SuSE 8 (64-bit)						•					
SuSE SLES 9.0 (32-bit AMD) SP3			•								
SuSE SLES 9.0 (32-bit Intel) SP3			•			•					
SuSE SLES 9.0 (x64-bit AMD) SP3			•								
SuSE SLES 9.0 (64-bit Itanium) SP3						•					
Tru64 5.1a		EVA3000/5000									
Tru64 5.1b						•					
VMware ESX Server 2.5, 3.0		EVA3000/5000									
VMware ESX Server 2.5.1		• ⁸									

All HP Business Copy EVA functions are supported on all EVA-supported operating systems.

Windows 2000 Server	All HP Business Copy EVA functions are supported on all EVA-supported operating systems.	EVA3000/5000					•	600 MHz	512	47.454
Windows 2000 Advanced Server SP4 (32-bit)		•	• ⁶	•	•	•	•			
Windows Server 2003 Standard Edition SP1		•	• ⁶	•	•	•	•			
Windows Server 2003 Enterprise Edition SP1 (32-bit)		•	• ⁶	•	•	•	•	633 MHz	1024	84.266
Windows Server 2003 Enterprise Edition SP1 (64-bit Itanium)		•	• ⁶	•						
Windows Server 2003 Datacenter Edition (64-bit Itanium)		•	•							
Windows Server 2003 Extended Systems Standard Edition (x64-bit AMD)		•	•	•						
Windows Server 2003 Extended Systems Enterprise Edition (64-bit)	•	•	•							
Application										
Oracle 9i, 10G R2			• ⁹							

¹ See the "Mounting host volumes" table for host volume mounting restrictions.

² The HP RSM 2.0 host agent requires that either the IBM XL C/C++ Enterprise Edition 7.0 Compiler or the IBM C++ Runtime Environment (RTE) Components for AIX is installed on the host server running this operating system. To download the current version of IBM C++ RTE, go to the following web site: http://www-1.ibm.com/support/docview.wss?rs=32&context=SSEP5D&dc=D400&uid=swg24009788&loc=en_US&cs=UTF-8&lang=en.

³ The AIX 5.2 host agent requires Maintenance Level 4 or later, however Maintenance Level 7 is recommended. The AIX 5.3 host agent requires Maintenance Level 3.

⁴ The HP RSM 2.0 host agent requires that the following patches be installed on the host server running this operating system: PCSI V1.0, SYS V8.0, Update V4.0, and FIBRE_SCSI V7.0. You can download these patches from the following web site: <http://www.itrc.hp.com/>.

⁵ The HP RSM 2.0 host agent requires that the FIBRE_SCSI V1.0 patch be installed on the host server running this operating system. You can download this patch from the following web site: <http://www.itrc.hp.com/>.

⁶ The host agent on this operating system depends on SNIA libraries that are delivered with HP's SAN Infrastructure offerings. If you have not already done so, go to the Fibre Channel Host Bus Adapters section on the following web site and download the software for your HBA: <http://h18006.www1.hp.com/storage/saninfrastructure.html>.

⁷ The host agent on this operating system does not support VERITAS DMP when accessing an EVA4000, EVA6000, or EVA8000.

⁸ On EVA3000/5000, VMware ESX Server 2.5.1 is supported with VCS 3.028 only.

⁹ Oracle application integration is supported on Windows hosts only and works in Real Application Clusters (RAC) environments. There is no ASM support for Oracle.

¹⁰ These are the minimum host agent requirements. Log files will require additional space.

RSM host agent support

This table describes RSM host agent support for:

- Volume Manager
- Mounting host volume copies on the same host
- Multipath solutions
- Cluster software

Host operating system	Supported Volume Manager	Mounting a host volume copy on the same host as the source	Compatible multipath solution ⁷		Supported cluster software
			EVA3000/5000	EVA4000/6000/8000	
AIX	Native Logical Volume	Y (EVA3000/5000 only)	Secure Path 2.0D SP2 or SP3 ³	MPIO 1.0.0.2 (Anlemeta basic HP Business Copy EVA support only, no host agent support)	HACMP 5.3
HP-UX	Native Logical Volume ²	Y	Secure Path 3.0F	Secure Path 3.0F, PVlinks (no VERITAS DMP)	Serviceguard
Linux Red Hat AS 3.0 Update 6	Sistina 1.08-13	N	QLogic failover driver 7.07.03-fo (no Secure Path)		
Linux Red Hat AS 4.0 Update 2,3	Sistina 2.01.14		QLogic failover driver 8.01.03-fo (no Secure Path)		Serviceguard 11.16.01
Linux SuSE SLES 9.0 SP3	Sistina 2.01.14		QLogic failover driver 8.01.03-fo (no Secure Path)		
Solaris ¹	VERITAS Volume Manager 4.1	Y, except copies of Solaris disk groups	Secure Path 3.0D SP1 ⁴	MPxIO ⁵ and VERITAS DMP ⁶	
Windows	Replication of Windows dynamic disks and VERITAS Volume Manager are not supported	Y, except copies of Windows Cluster Quorum disks in the same cluster	Secure Path 4.0C SP2-1 MPIO Basic Failover 1.01	Full featured MPIO DSM for EVA 1.00.02	Microsoft Cluster Server

¹ The HP RSM host agent on the Solaris 9 operating system does not support VERITAS Volume Manager when accessing an EVA4000, EVA6000, or EVA8000.

² Replication manager host volume job commands are supported only on HP-UX disks with Logical Volume Manager.

³ Secure Path 2.0D SP3 is the minimum required version for AIX 5.3.

⁴ To display host properties correctly, the HP RSM server software requires the QLA2310F/FCA2257P, QLA2342, QLA2340, or LP10000DC host bus adapter when running the Secure Path multipath solution.

⁵ To display host properties correctly, the HP RSM server software requires the QLA2342 (SUN) host bus adapter when running the MPxIO multipath solution.

⁶ To display host properties correctly, the HP RSM server software requires the ASL libraries on the host for QLA2310F/FCA2257P, QLA2342, or QLA2340 host bus adapter when running the VERITAS multipath solution.

⁷ These solutions apply to HP Continuous Access EVA in general.

Browser support

This table lists the supported browsers you can use to access HP EVA software and Storage Management Appliance user interfaces from the corresponding operating system. A supported JRE is required on the server from which you browse to HP Replication Solutions Manager.

Operating system	Required browser	Supported JRE
AIX 5.3 ¹	Mozilla 1.7.3	1.4.2_02 and later
HP OpenVMS 8.2	Mozilla 1.7	1.4.2_02 and later
HP-UX PA-RISC 11.11/11iv1 (64-bit)	Mozilla 1.7.3	1.5.0_02 and later
HP-UX 11.23 PI 64	Mozilla 1.7.3	1.5.0_02 and later
Red Hat AS 3.0 (32-bit)	Firefox 1.07	1.5.0_04 and later
Solaris 9	Mozilla 1.7.3	1.5.0_04 and later
Tru64 5.1b	Mozilla 1.7.5	1.4.2_02 and later
Windows 2000 Server	Internet Explorer 6.0 SP1	1.5.0_04 and later
Windows 2000 Advanced Server SP4 (32-bit)	Internet Explorer 6.0 SP1	1.5.0_04 and later
Windows 2000 Professional	Internet Explorer 6.0 SP1	1.5.0_04 and later
Windows Server 2003 Standard Edition SP1	Internet Explorer 6.0 SP1	1.5.0_04 and later
Windows Server 2003 Enterprise Edition SP1 (32-bit)	Internet Explorer 6.0 SP1	1.5.0_04 and later
Windows XP Professional	Internet Explorer 6.0 SP1	1.5.0_04 and later

¹Browsing to HP Replication Solutions Manager on this operating system is not supported.

EVA host connectivity

For the supported operating systems of hosts accessing EVA storage, see the OS-specific connectivity installation guides and connectivity release notes.

1. Go to the array web site at <http://h18006.www1.hp.com/storage/array systems.html>.
2. Select the virtual array system.
3. Click **Technical documentation**.
4. Select the connectivity guide for your operating system and EVA model.

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Part number: T3687-96039
Sixth edition: February 2006