



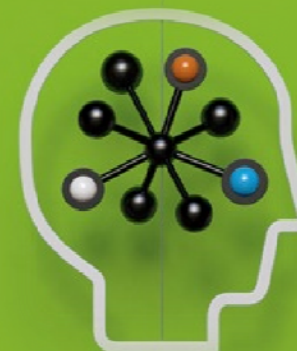
HP StorageWorks Enterprise Backup Solution (EBS) Hardware/Software Compatibility Matrix

April 2009 Version 1.0

Start Here

Key Updates:

- Library Firmware and features updates
- D2D connectivity updates
- Enhanced 8Gb FC HBA support
- EMC NetWorker and IBM TSM support updates
- Networking FW updates
- Storage software updates
- New Customer Advisory for Windows 2003 server and Emulex 8Gb HBAs



HP StorageWorks EBS Compatibility Matrix

Enterprise Backup Solution Compatibility Matrix Index

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The **HP StorageWorks Enterprise Backup Solution (EBS) Compatibility Matrix** provides information for designing data protection solutions, including backup/restore and archiving, that scale from entry-level workgroups to enterprise-level datacenters. It includes support for Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN). It does not imply product availability.

Updates/changes to individual fields within the Matrix will be **highlighted in bold RED**. Products **highlighted in yellow** will be removed from the EBS Compatibility Matrix in the next release. Previous versions of the EBS Compatibility Matrix are available on the web at www.hp.com/go/ebs.

HP partners with leading application and product vendors to provide backup/restore, archiving, and data security solutions. See below for information on the Extended Solution Interoperability (ESI) and Tape Automation Compatibility (TAC) categories:

Extended Solution Interoperability (ESI): HP performs on-going interoperability and extensive solution testing with these applications to provide fully certified and supported data protection solutions that include HP tape libraries, autoloaders, and virtual library systems. Extensive solution details including operating system details, host bus adapter and driver information, SAN infrastructure, and extended tape library feature support can be found throughout this document.

Tape Automation Compatibility (TAC): These products are verified for compatibility with HP tape libraries, autoloaders, and virtual library systems. Consult the product compatibility guide(s) for additional support details such as product version information, driver details, firmware revisions, patch levels, etc.

This document shows compatibility for SAN media servers. A SAN media server is defined as a server with direct access to backup devices. Other operating systems may be supported within EBS by the respective ISVs as LAN clients, where a LAN client does not have direct access to the backup device but is backed up over a LAN connection to a server with direct access to backup devices.


Additional technical information can be found in the Enterprise Backup Solution Design Guide and various Backup Application Implementation Guides located on the web at www.hp.com/go/ebs. For information on stand-alone tape products and compatibility, go to www.hp.com/go/connect.

For D2D compatibility, follow these two steps:

1. Refer to the D2D Operating Systems, ESI, and TAC Partner Product pages for Operating System and ISV support.
2. Refer to the Operating System pages for server platform, OS patch levels, HBAs, and disk multi-path information.

HP recommends that you always use the latest firmware versions available in all of your devices.

HP StorageWorks EBS Compatibility Matrix						
Windows (Integrity)						
DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	BMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
Servers						
HP Integrity Superdome and Mid-Range (rv7000-rv8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rv1000-rv2000 Series, Integrity)	✓	✓	✓	✓		✓
4Gb Fibre Channel Host Bus Adapters^{1,4} (HP Branded / 3rd Party)						
LPe1105 (4G, PCIe) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
AB002A / Emulex LPe1150 (4G, PCIe)						
AB003A / Emulex LPe11002 (4G, PCIe)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
AE311A / QLogic QLE2460 (4G, PCIe)						
AD000A / QLogic QLE2462 (4G, PCIe)						
ER	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
AD167A / Emulex IP1150 (4G, PCI-X 2.0)						
AD168A / Emulex IP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
AB429A / QLogic QLA2460 (4G, PCI-X 2.0)						
AB379A/B / QLogic QLA2462 (4G, PCI-X 2.0)						
ER	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
2Gb Fibre Channel Host Bus Adapters^{1,4} (HP Branded / 3rd Party)						
AB446A / Emulex LP1050C (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
A7298A / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
AS232A / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
SCSI Host Bus Adapters⁸						
A7173A (Ultra320, PCI-X, 2 channel)						
✓	✓	✓	✓	✓		✓
Disk Array Multipath Support⁴						
Windows MPIO ⁶	✓	✓	✓	✓		✓
High Availability³						
Windows (MSCS)	✓	✓	✓	✓		✓

CLICK  to navigate to the HP product webpage

CLICK  to navigate to the firmware/driver download page

Red indicates a changes from last month

NOTES: section contains specific configuration details

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Matrix Version

- 1) 3rd Party adapters require HP drivers and firmware.
- 2) Please reference your ITV support matrix for supported application and operating system version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ITV's web page for supported High Availability configurations.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) Please reference ITV application installation/support document for specific driver and patch requirements.
- 6) Windows FullFeature MPIO software support. Clusters sharing disk and tape on the same HBA require StorPort.
- 7) All except2 systems running applications other than Tool require updated Storport v1.91a5 (minimum) or K8916 (recommended).
- 8) Refer to server QuickSpecs to determine which HBAs are supported.

Darkened section indicates environment currently not supported by application

HP StorageWorks EBS Compatibility Matrix

Firmware for Virtual Library Systems / D2D Backup / Tape Libraries / Autoloaders / Tape Drive Products

Disk Storage Systems ¹		
Virtual Library Systems	Firmware	Deduplication
VLS 12000 EVA Gateway	2.3.0	3.1.2 ⁴
EVA 4000/6000/8000		6.200 ³
EVA 4100/6100/8100		6.200 ³
EVA 4400		9.006
EVA 3000/5000 ²		4.100
VLS 9000 Series	2.3.0	3.1.2 ⁴
VLS 6800 Series	1.2.0	
VLS 6600 Series & 6200 Series	2.3.0	3.1.2 ⁴
VLS 6100 Series & 6500 Series	2.3.0	

VLS Firmware Level	2.X (non-dedup)	3.X
Supported Platforms	All VLS models with 4 GB RAM	VLS6200, VLS6600, VLS9000,
VLS9000/VLS12000 node support	Up to 8 nodes	Up to 4 nodes with
Performance per node	600 MB/sec per	480 MB/sec per
Number of slots	1024 per library*	10000 per library
Number of libraries	16 per node	16 per node
Number of cartridges	8192*	32000
Automigration - Echo Copy	Yes	No
Automigration - Smart Copy	Yes with DP 6.1**	No
Delete Cartridge	Yes	No
Hot Add Arrays	Yes	No
Hot Add Nodes	Yes	No
Storage pool support	Multiple storage	Single storage pool
Virtual LUN Support	144 per node	96 per node
LTO4 Emulation (capacity only, no encryption)	No	Yes
LUN Masking usability, Command line	No	Yes

Disk-to-Disk Backup Systems	Firmware
D2D4112 (Fibre Channel & iSCSI)	100.394
D2D4009fc (Fibre Channel & iSCSI)	100.393
D2D4004fc (Fibre Channel & iSCSI)	100.393
D2D4009i (iSCSI)	100.391
D2D4004i (iSCSI)	100.391
D2D2503i (iSCSI)	100.392
D2D130 (iSCSI)	Kn7b
D2D120 (iSCSI)	Kn7b

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) EVA3000/5000 support requires minimum VLS firmware version 1.2.0.
- 3) EVA 4x00/6x00/8x00 support requires minimum XCS firmware version 6.110.
- 4) See the *Advanced VLS and D2D Features* [Page 7](#) for details.

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Tape Storage ¹		
Enterprise Class Libraries		Firmware
HP Secure Key Manager ⁵		
ESL E-Series		4.8.1
Ultrium 1840 FC	(LTO-4 FC)	6.23
Ultrium 960 FC	(LTO-3 FC)	H36W ⁵
Ultrium 460 FC	(LTO-2 FC)	L67W
SDLT 600	(SCSI)	K48W
EML E-Series		v41
		1223
Ultrium 1840 FC	(LTO-4 FC)	H36S ⁵
Ultrium 960 FC	(LTO-3 FC)	L6CS

Business Class Libraries		
MSL 8096		9.10
MSL 4048		6.70
MSL 2024		4.40
Ultrium 1840	(LTO-4 FC)	H49W
Ultrium 1840	(LTO-4 SCSI)	B49W
Ultrium 1760	(LTO-4 SAS HH)	U28W
Ultrium 1760	(LTO-4 SCSI HH)	W24W
Ultrium 960	(LTO-3 4Gb FC)	M63W
Ultrium 960	(LTO-3 2Gb FC)	L63W
Ultrium 960	(LTO-3 SCSI)	G63W
Ultrium 920	(LTO-3 SCSI HH)	D22W
Ultrium 920	(LTO-3 SAS HH)	C24W or Q24W
MSL 6000 Series		5.20
Ultrium 1840	(LTO-4 SCSI)	B45W
Ultrium 960	(LTO-3 SCSI)	G65W
SDLT 600	(SCSI)	v41

Tape Autoloaders		
1/8 G2 Autoloader		2.50
Ultrium 1760	(LTO-4 SAS HH)	U28W
Ultrium 1760	(LTO-4 SCSI HH)	W24W
Ultrium 920	(LTO-3 SAS HH)	C24W or Q24W
Ultrium 920	(LTO-3 SCSI HH)	D22W
Ultrium 448	(LTO-2 SCSI HH)	S63W

- 5) HP Secure Key Manager (SKM) requires ESLe LTO4 drive firmware version H36W or later and EML LTO4 drive firmware version H36S or later and that the client tape libraries and Interface Controllers use firmware package i232 or later. See the Interface Controller table on [Page 17](#) for the full list of firmware requirements.

HP StorageWorks EBS Compatibility Matrix

Virtual Library Systems, ESI and TAC Partner Products

DAS, DAF and SAN Support ¹	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Virtual Library Systems	Extended Solution Interoperability (ESI) ¹					
VLS 12000 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000	✓	✓ ²	✓	✓	✓	✓
VLS 9000 Series	✓	✓ ²	✓	✓	✓	✓
VLS 6800 Series	✓	✓ ²	✓	✓	✓	✓
VLS 6600 Series	✓	✓ ²	✓	✓	✓	✓
VLS 6500 Series	✓	✓ ²	✓	✓	✓	✓
VLS 6200 Series	✓	✓ ²	✓	✓	✓	✓
VLS 6100 Series	✓	✓ ²	✓	✓	✓	✓

DAS, DAF and SAN Support ¹	Software TAC Partners ¹										Hardware TAC Partners ¹					
	HP File System Extender	Atempo Time Navigator	BakBone NetVault	BridgeHead HT ISM Suite	CommVault QInNetx Galaxy	QStar HSM	Quantum StorNext	SGL FlashNet	SymSort Backup Express	Cisco MDS 9000 SME	NetApp Data ONTAP 7.2.x (NDMP)	QStar Data Director				
Virtual Library Systems	Software TAC Partners ¹										Hardware TAC Partners ¹					
VLS 12000 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 9000 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 6800 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 6600 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 6500 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 6200 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				
VLS 6100 Series	✓	✓	✓	✓	✓ ³		✓	✓			✓	✓				

Indicates Partners with Archiving Solutions - See [Page 15](#) for more detail

- NOTES:**
- 1) See "[How To Use This Document](#)" for description of support.
 - 2) VLS software version 2.1.0 or later is required with ARCserve 11.1 or 11.5 running on Linux. See Customer Advisory [c01181673](#) for further details.
 - 3) Support is with LTO emulations only.

Advanced VLS and D2D Features

VLS Accelerated Deduplication ²		Accelerated Deduplication requires integration with backup application and data source							Automigration Support
DAF and SAN Support ¹	Minimum FW required	File System ⁵	MS Exchange (Non-MAPI)	Oracle	MS SQL Server	NDMP	VMware	Lotus Domino	
Data Protector 6.1 ³	3.1.2	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23, 11.31 Solaris 9, 10 AIX 5.3 Tru64 5.1B OVMS 8.3	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10, 11 RMAN Backup ⁴	File Backup		File Backup VMware Agent	File Backup	Smart copy (VLS 2.3.x code only)
Data Protector 6.0 ³	3.1.2	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23, 11.31 Solaris 9, 10 AIX 5.3 Tru64 5.1B OVMS 8.3	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup		File Backup	File Backup	
Data Protector 5.5 ³	3.1.2	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23, 11.31 Solaris 9, 10 AIX 5.3 Tru64 5.1B OVMS 8.3	Exchange 2003 File Backup Exchange 2003 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup		File Backup	File Backup	
NetBackup 6.5	3.1.2	Win2003 - x86, x64, IA64 RH 3.0, 4.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23 Solaris 9, 10 AIX 5.3 Tru64 5.1B	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup	File Backup	File Backup	
NetBackup 6.0	3.1.2	Win2003 - x86, x64, IA64 RH 4.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23 Solaris 9, 10	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup	File Backup	File Backup	
NetBackup 5.1	3.1.2	Win2003 RH 4.0, SUSE 10 HP-UX 11.11 Solaris 10	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup SQL 2005 Agent Backup	NetApp Filer Backup	File Backup	File Backup	
TSM ³ 5.5, 5.4, 5.3	3.1.2	Win2003 - x86, x64, IA64 RH 3.0, 4.0, 5.0 - x86, x64 SUSE 10 - x86 HP-UX 11.11, 11.23 Solaris 9, 10 AIX 5.3	Exchange 2003 File Backup Exchange 2003 Agent Backup Exchange 2007 File Backup Exchange 2007 Agent Backup	9, 10, 11 File Backup 9, 10 11 RMAN Backup ⁴	File Backup	NetApp Filer Backup (LAN backup only)	File Backup Agent Backup (7.0 and 8.0.1)		

D2D Advanced Features	Dynamic Deduplication Does NOT require integration with backup applications	Replication Requires separate license purchase for enablement
D2D4112 (Fibre Channel & iSCSI)	✓	✓
D2D4009fc (Fibre Channel & iSCSI)	✓	✓
D2D4004fc (Fibre Channel & iSCSI)	✓	✓
D2D4009i (iSCSI)	✓	✓
D2D4004i (iSCSI)	✓	✓
D2D2503i (iSCSI)	✓	✓
D2D130 (iSCSI)		
D2D120 (iSCSI)		

NOTES:

1) See "How To Use This Document" for description of support.

2) NOT supported in the VLS300, VLS1001, VLS1002, VLS6100, VLS6500 or VLS6800.

3) Supports 6200/6600 single node series, and up to 2-nodes on multimode VLS9000/12000 systems running minimum v3.1.2 code.

4) RMAN script modifications required to enable deduplication. See [HP StorageWorks Deduplication Solutions Guide](#) for details.

5) Raw Disk deduplication is also supported for the listed file systems.

HP StorageWorks EBS Compatibility Matrix

D2D Backup Systems - Operating System, ESI and TAC Partner Products (page 1 of 3)

iSCSI and SAN Support ¹		Windows NT Backup	TAR	CPIO	DD	Fbackup / Frecover	Ufsdump / Ufsrestore	HP Data Protector	CA ARCaseve	EMC Networker	IBM Tivoli Storage Manager	Symantec Backup Manager	Symantec Backup Exec	HP Data Protector NetBackup	HP File System Express	Attempo Time Extender	BakBone NetVault	Barracuda Yosemite Server Backup	CommVault O!Netix Galaxy	EMC Retrospect	Front Porch Digital DVArchive	IBM TSM E-express	Microsoft DPM 2007	NeoScale CryptoStor	Oracle Secure Backup	QStar iHSM	SQL FlashNet	Syncsort Backup Express	XenData Archive Series		
		Native Applications					Software ESI Partners ¹										Software TAC Partners ¹														
D2D Backup Systems	Supported OS																														
D2D4112 ^{3,7,8} (FC Connectivity)	Windows 2008 (x86)																														
	Windows 2008 (x64)																														
	Windows 2008 (IA-64)																														
	Windows 2003 (x86)	✓						✓	✓																						
	Windows 2003 (x64)	✓						✓	✓																						
	Windows 2003 (IA-64)	✓						✓	✓																						
	Novell OES 2		✓	✓	✓			✓																							
	Novell OES		✓	✓	✓																										
	RHEL 5 (x86)		✓	✓	✓																										
	RHEL 5 (x64)		✓	✓	✓																										
	RHEL 5 (IA-64)		✓	✓	✓																										
	RHEL 4 (x86)		✓	✓	✓																										
	RHEL 4 (x64)		✓	✓	✓																										
	RHEL 4 (IA-64)		✓	✓	✓																										
	SLES 10 (x86)		✓	✓	✓				✓																						
	SLES 10 (x64)		✓	✓	✓				✓																						
	SLES 10 (IA-64)		✓	✓	✓				✓																						
	SLES 9 (x86)		✓	✓	✓				✓																						
SLES 9 (x64)		✓	✓	✓				✓																							
SLES 9 (IA-64)		✓	✓	✓				✓																							
D2D4112 ^{2,8} (iSCSI Connectivity)	Windows 2008 (x86)													✓																	
	Windows 2008 (x64)													✓																	
	Windows 2003 (x86) ⁴	✓						✓	✓					✓																	
	Windows 2003 (x64) ⁴	✓						✓	✓					✓																	
	Windows 2003 (IA-64) ⁴	✓						✓	✓																						
	HP-UX 11i v3 (IA-64)		✓	✓	✓	✓																									
	HP-UX 11i v3 (PA-RISC)		✓	✓	✓	✓																									
	HP-UX 11i v2 (IA-64)		✓	✓	✓	✓																									
	HP-UX 11i v2 (PA-RISC)		✓	✓	✓	✓																									
	Novell OES 2		✓	✓	✓				✓ ⁹						✓																
	RHEL 5 (x86)		✓	✓	✓										✓																
	RHEL 5 (x64)		✓	✓	✓										✓																
	RHEL 5 (IA-64)		✓	✓	✓																										
	SLES 11 (x86)		✓	✓	✓																										
	SLES 11 (x64)		✓	✓	✓																										
	SLES 11 (IA-64)		✓	✓	✓																										
	SLES 10 (x86) ⁵		✓	✓	✓				✓ ⁶						✓																
	SLES 10 (x64) ⁵		✓	✓	✓				✓ ⁶						✓																
SLES 10 (IA-64) ⁵		✓	✓	✓				✓ ⁶																							
Solaris 10 (SPARC)		✓	✓	✓																											

- NOTES:**
- 1) D2D ISV by OS compatibility is explicitly listed only in the D2D section and cannot be implied from any other section of EBS Matrix.
 - 2) Supported with Embedded iSCSI or Qlogic iSCSI HBAs only
 - 3) SAN support only with 2Gb, 4Gb and 8Gb QLogic and Emulex based FC HBAs listed in the EBS Matrix.
 - 4) Supported with minimum Microsoft iSCSI Initiator v2.07.
 - 5) Supported with minimum SLES 10 SP1.

- 6) Supported with minimum SLES 10 SP2
- 7) Only supported on FC fabric topologies using NPIV (N_Port Identifier Virtualization) enabled switches. Direct attached (private loop) topologies are not yet supported.
- 8) D2D4112 supports both iSCSI and FC interfaces.
- 9) Supported with minimum Novell OES 2 SP1.

HP StorageWorks EBS Compatibility Matrix

D2D Backup Systems - Operating System, ESI and TAC Partner Products (page 2 of 3)

iSCSI and SAN Support ¹		Native Applications				Software ESI Partners ¹								Software TAC Partners ¹																
		TAR	CPIO	DD	Fibbackup / Freecover	Ufsdump / Uferstore	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	HP Data Protector Express	HP File System Express	Atempo Time Navigator	BakBone NetVault	Barracuda Yosemite Server Backup	CommVault OilNetix Suite	EMC Retrospect	Front Porch Digital DVArchive	IBM TSM Express	Microsoft DPM 2007	NeoScale CryptoStor	NetApp Data ONTAP 7.2.x (NDMP)	Oracle Secure Backup	QStar iSM	SGL FlashNet	Syncsort Backup Express	XenData Archive Series		
D2D4000 Series (FC Connectivity)	Supported OS																													
	Windows 2008 (x86)																													
	Windows 2008 (x64)																													
	Windows 2008 (IA-64)																													
	Windows 2003 (x86)	✓					✓	✓	✓	✓	✓	✓																		
	Windows 2003 (x64)	✓					✓	✓	✓	✓	✓	✓																		
	Windows 2003 (IA-64)	✓					✓	✓	✓	✓	✓	✓																		
	Novell OES 2		✓	✓	✓		✓																							
	Novell OES		✓	✓	✓																									
	RHEL 5 (x86)		✓	✓	✓																									
	RHEL 5 (x64)		✓	✓	✓																									
	RHEL 5 (IA-64)		✓	✓	✓																									
	RHEL 4 (x86)		✓	✓	✓																									
	RHEL 4 (x64)		✓	✓	✓																									
	RHEL 4 (IA-64)		✓	✓	✓																									
	SLES 10 (x86)		✓	✓	✓			✓																						
	SLES 10 (x64)		✓	✓	✓			✓																						
	SLES 10 (IA-64)		✓	✓	✓			✓																						
SLES 9 (x86)		✓	✓	✓																										
SLES 9 (x64)		✓	✓	✓																										
SLES 9 (IA-64)		✓	✓	✓																										
D2D4000 Series (iSCSI Connectivity)	Windows 2008 (x86)																													
	Windows 2008 (x64)																													
	Windows 2003 (x86) ⁵	✓					✓	✓	✓	✓ ⁴	✓	✓	✓	✓																
	Windows 2003 (x64) ⁵	✓					✓	✓	✓	✓ ⁴	✓	✓	✓	✓																
	Windows 2003 (IA-64) ⁵	✓					✓	✓	✓	✓ ⁴	✓	✓	✓	✓																
	Windows Vista (x86)																													
	Windows Vista (x64)																													
	Windows XP (x86) ⁵	✓					✓	✓			✓	✓																		
	HP-UX 11i v3 (IA-64)		✓	✓	✓	✓																								
	HP-UX 11i v3 (PA-RISC)		✓	✓	✓	✓																								
	HP-UX 11i v2 (IA-64)		✓	✓	✓	✓																								
	HP-UX 11i v2 (PA-RISC)		✓	✓	✓	✓																								
	Novell OES 2		✓	✓	✓		✓ ⁹		✓			✓																		
	RHEL 5 (x86)		✓	✓	✓																									
	RHEL 5 (x64)		✓	✓	✓																									
	RHEL 5 (IA-64)		✓	✓	✓																									
	SLES 11 (x86)		✓	✓	✓																									
	SLES 11 (x64)		✓	✓	✓																									
	SLES 11 (IA-64)		✓	✓	✓																									
	SLES 10 (x86) ⁶		✓	✓	✓		✓ ⁷		✓			✓																		
SLES 10 (x64) ⁶		✓	✓	✓		✓ ⁷		✓			✓																			
SLES 10 (IA-64) ⁶		✓	✓	✓		✓ ⁷					✓																			
Solaris 10 (SPARC)		✓	✓	✓			✓																							

NOTES:
 1) D2D ISV by OS compatibility is explicitly listed only in this D2D section and cannot be implied from any other section
 2) Supported with Embedded iSCSI or Qlogic QLA4050 PCI-X iSCSI Initiator HBA only
 3) SAN support only with 4 Gb FC HBAs listed in the EBS Matrix.
 4) Supported with Qlogic QLA4050 PCI-X iSCSI Initiator HBA only
 5) Supported with minimum Microsoft iSCSI Initiator v2.07.
 6) Supported with minimum SLES 10 SP1.
 7) Supported with minimum SLES 10 SP2.

8) Only supported on FC Fabric topologies using NPIV (N_Port_Identifier Virtualization) enabled switches. Direct attached (private loop) topologies are not yet supported.
 9) Supported with minimum Novell OES 2 SP1.

D2D Backup Systems		Supported OS		iSCSI and SAN Support ¹																												
				Native Applications				Software ESI Partners ¹								Software TAC Partners ¹																
		Windows NT Backup	TAR	CPIO	DD	Fbackup / Frecover	Ufsalump / Ufsrestore	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Manager	Symantec Backup Exec	HP Data Protector Express	HP File System Express	Atempo Time Extender	BakBone NetVault	Barracuda Yosemite Server Backup	CommVault HT ISM Suite	EMC Retrospect	Front Porch Digital DVArchive	IBM TSM Express	Microsoft DPM 2007	NeoScale CryptoStor	NetApp Data ONTAP 7.2.x (NDMP)	Oracle Secure Backup	QStar HSM	SGL FlashNet	Syncsort Backup Express	XenData Archive Series		
D2D120 ² D2D130 ²	Windows 2008 (x86)										✓		✓			✓	✓		✓	✓											✓	
	Windows 2008 (x64)										✓		✓				✓	✓		✓	✓										✓	
	Windows 2003 (x86) ⁴	✓						✓	✓	✓	✓ ³		✓			✓	✓	✓		✓	✓										✓	
	Windows 2003 (x64) ⁴	✓						✓	✓	✓	✓ ³		✓			✓	✓	✓		✓	✓										✓	
	Windows 2003 (IA-64) ⁴	✓						✓	✓	✓	✓ ³		✓			✓	✓	✓		✓	✓										✓	
	Windows 2000 ⁴	✓						✓	✓	✓		✓			✓	✓	✓	✓		✓	✓											
	Windows Vista (x86)												✓				✓	✓														
	Windows Vista (x64)												✓				✓	✓														
	Windows XP (x86) ⁴	✓						✓	✓			✓				✓	✓	✓														
	Windows XP (x64) ⁴	✓						✓	✓			✓				✓	✓	✓														
	Novell OES 2		✓	✓	✓			✓ ⁷		✓				✓			✓	✓									✓					
	RHEL 5 (x86)		✓	✓	✓									✓			✓	✓								✓						
	RHEL 5 (x64)		✓	✓	✓									✓			✓	✓								✓						
	RHEL 5 (IA-64)		✓	✓	✓											✓																
	SLES 11 (x86)		✓	✓	✓																					✓						
	SLES 11 (x64)		✓	✓	✓																					✓						
	SLES 11 (IA-64)		✓	✓	✓																					✓						
	SLES 10 (x86) ⁵		✓	✓	✓			✓ ⁶		✓				✓			✓	✓								✓						
SLES 10 (x64) ⁵		✓	✓	✓			✓ ⁶		✓				✓			✓	✓								✓							
SLES 10 (IA-64) ⁵		✓	✓	✓			✓ ⁶									✓																

NOTES:
 1) D2D ISV by OS compatibility is explicitly listed only in this D2D section and cannot be implied from any other section of EBS Matrix.
 2) Supported with Embedded iSCSI or QLogic iSCSI HBAs only
 3) Supported with QLogic QLA4050 PCI-X iSCSI Initiator HBA only
 4) Supported with minimum Microsoft iSCSI Initiator v2.07.

5) Supported with minimum SLES 10 SP1.
 6) Supported with minimum SLES 10 SP2.
7) Supported with minimum Novell OES 2 SP1.

HP StorageWorks EBS Compatibility Matrix

Tape Libraries/Autoloaders and Extended Solution Interoperability (ESI) Partner Products

DAS, DAF, and SAN Support ¹	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Enterprise Class Libraries						
Extended Solution Interoperability (ESI) Partners ¹						
HP Secure Key Manager ^{4,9}	✓	✓	✓	✓	✓	✓
ESL E-Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 FC (LTO-3 FC)	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓
EML E-Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 FC (LTO-3 FC)	✓	✓	✓	✓	✓	✓
Business Class Libraries						
MSL LTO-4 Encryption Kit ^{8,9}	✓	✓	✓	✓	✓	✓
MSL 8096	✓	✓	✓	✓	✓ ⁷	✓
MSL 4048	✓	✓	✓	✓	✓ ⁷	✓
MSL 2024	✓	✓	✓	✓	✓ ⁷	✓
Ultrium 1840 ⁶ (LTO-4 FC)	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁶ (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ⁶ (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,6} (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 4Gb FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓
MSL 6000 Series	✓	✓	✓	✓	✓	✓
Ultrium 1840 ² (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓
Ultrium Tape Autoloaders ⁵						
1/8 G2 LTO-4 Encryption Kit ^{8,9}	✓	✓	✓	✓	✓	✓
1/8 G2 Autoloader	✓	✓	✓	✓	✓	✓
Ultrium 1760 ⁶ (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 1760 ⁶ (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓
Ultrium 448 (LTO-2 SCSI HH)	✓	✓	✓	✓	✓	✓
Advanced Drive and Media Features						
Ultrium LTO4 Application Key Management	✓	✓	✓	✓	✓	✓
Ultrium WORM	✓	✓	✓	✓	✓	✓
SDLT 600 WORM	✓	✓	✓	✓	✓	✓

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) MSL 6000 Series libraries do not have library key management for the LTO4 drives. The key management must come from the backup application.
- 3) Supported with MSL4048 and MSL2024 only
- 4) Please refer to Customer Advisory "[c01269477](#)" for operational details.

- 5) Refer to [EBS Design Guide](#) for additional info on the use of native backup commands and programs.
- 6) LTO4 (Ultrium 1840 and 1760) drives support AES hardware encryption. Refer to the backup/restore application vendor for LTO4 hardware encryption support details.
- 7) Not supported with Symantec Backup Exec for NetWare (BENW)

- 8) USB Token for use only with LTO-4 1/8 G2 Autoloaders and MSL2024/4048/8096 Tape Libraries.
- 9) SKM and EK are designed to provide encryption keys to LTO4 tape drives in HP tape libraries, transparent to the ISV software. Their use with all ISV software in the EBS matrix has been verified, and is fully supported.

DAS, DAF, iSCSI and SAN Support ¹	Software TAC Partners ¹												Hardware TAC Partners ¹															
	HP Data Protector Express	HP File System Extender	Attempo Time Navigator	BakBone NetVault	Barracuda Yosemite Server Backup	Bridgehead HT ISM Suite	CommVault QInNetix Galaxy	EMC Retrospect	Front Porch Digital DV Archive	IBM TSM Express	Microsoft DPM 2007	NeoScale CryptoStor ^{13,14}	QStar HSM	Quantum StorNext	SGL FlashNet	Synacor Backup Express	XenData Archive Series	HP NonStop Servers	Cisco MDS 9000 SME	Crossroads TapeSentry	Crossroads Virtual TapeServer	Decru DataFort ^{7,15}	FalconStor VTL	Intradyn ComplianceVault	NetApp Data ONTAP 7.2.x (NBMP)	NetApp NearStore VTL Series	QStar Data Director	
Enterprise Class Libraries																												
HP Secure Key Manager ^{9, 16}																												
ESL E-Series	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 FC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EML E-Series	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 FC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Business Class Libraries																												
MSL LTO-4 Encryption Kit ¹⁶	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 8096	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 4048	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 2024	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 FC)	✓ ³	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁵ (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,5} (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{6,15} (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 4Gb FC)	✓ ³	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 FC)	✓ ³	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL 6000 Series	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 ¹⁰ (LTO-4 SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 (LTO-3 SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600 (SCSI)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tape Autoloaders ⁶																												
1/8 G2 LTO-4 Encryption Kit ¹⁶	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 G2 Tape Autoloader	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ^{3,6} (LTO-4 SAS HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 ⁶ (LTO-4 SCSI HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SAS HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 (LTO-3 SCSI HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 448 (LTO-2 SCSI HH)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Advanced Drive and Media Features																												
Ultrium LTO4 Application Key Management	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium WORM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600 WORM	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Indicates Partners with Archiving Solutions - See Page 15 for more detail

- NOTES:**
- 1) See "How To Use This Document" for description of support.
 - 2) Please refer to Customer Advisory "c01154679" for interoperability details.
 - 3) Direct Attached FC only.
 - 4) Not supported on Win2008
 - 5) LTO4 (Ultrium 1840 and 1760) drives support AES hardware encryption. Refer to the backup/restore application vendor for LTO4 hardware encryption support details.
 - 6) Refer to EBS Design Guide for additional info on the use of native backup commands & programs
 - 7) Support is with the Decru DataFort FC-Series and S-Series for Tape only.
 - 8) Support with Decru DataFort S-Series in a direct attach SCSI configuration only.
 - 9) Please refer to Customer Advisory "c01269477" for operational details.
 - 10) MSL 6000 Series libraries do not have library key management for the LTO4 drives. The key management must come from the backup application.
 - 11) Requires connectivity of tape library to HP Virtual TapeServer for NonStop Systems.
 - 12) Support is only with MSL 6026 and MSL 6030 models.
 - 13) Refer to vendor for software application and additional hardware interoperability support.
 - 14) Support is with the NeoScale CryptoStor Tape 700 Family only.
 - 15) Supported with MSL4048 and MSL2024 only
 - 16) SKM and EK are designed to provide encryption keys to LTO4 tape drives in HP tape libraries, transparent to the ISV software. Their use with all ISV software in the EBS matrix has been verified, and is fully supported.

HP StorageWorks EBS Compatibility Matrix

Advanced Library Features

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage	Symantec Backup Exec	Symantec Veritas NetBackup
Enterprise Libraries	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.					
HP Secure Key Manager	✓	✓	✓	✓	✓ ⁴	✓
ESL E-Series 2 Unit Cross Link ¹	✓	✓ ³	✓	✓		✓
ESL E-Series 3-5 Unit Cross Link ¹	✓			✓		✓
ESL Mixed Media	✓	✓ ³	✓	✓	✓ ⁴	✓
ESL Library Partitioning	✓	✓ ³	✓	✓	✓ ⁴	✓
EML Library Partitioning	✓		✓	✓	✓ ⁴	✓
Midrange Libraries						
MSL G3 LTO-4 Encryption Kit (EK) ^{5, 6}	✓	✓	✓	✓	✓ ⁴	✓
1/8 G2 Autoloader Encryption Kit (EK) ^{5, 6}	✓	✓	✓	✓	✓ ⁴	✓
MSL G3 Library Partitioning	✓	✓	✓	✓	✓ ⁴	✓
MSL 6000 Multi-Unit Scalability ^{1,2}	✓	✓	✓	✓	✓ ⁴	✓
MSL 6000 Mixed Media Support	✓	✓	✓	✓	✓ ⁴	✓

NOTES:

- 1) Contact your ISV for scalability support.
- 2) MSL multi-unit scalability is with a vertical pass-through mechanism.
- 3) NetWare is supported with ESL libraries in a homogeneous environment only.
- 4) Windows support only.

- 5) USB Encryption Key server token for LTO-4 based Autoloaders, MSL2024, MSL4048, and MSL8096 libraries.
- 6) SKM and EK are designed to provide encryption keys to LTO4 tape drives in HP tape libraries, transparent to the ISV software. Their use with all ISV software in the EBS matrix has been verified, and is fully supported.

HP StorageWorks EBS Compatibility Matrix

Backup Application Details ¹

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec (Windows)	Symantec Backup Exec (NetWare)	Symantec Veritas NetBackup
Partner Device Compatibility Pages ¹	Data Protector HCL	ARCserve HCL	NetWorker HCL	Tivoli Storage Manager HCL	Backup Exec HCL	Backup Exec HCL	NetBackup HCL
Recommended Tape Driver	Native Drivers	CABA Drivers	HP Drivers	Tivoli Drivers	BE Drivers	BE Drivers	HP or NBU Drivers

Latest and Minimum Application Version Support

	HP Data Protector		CA ARCserve		EMC NetWorker		IBM Tivoli Storage Manager		Symantec Backup Exec (Windows)		Symantec Backup Exec (NetWare)		Symantec Veritas NetBackup	
Enterprise Class Libraries	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum
ESL E-Series	6.1	5.0	12.0 ⁵	9.0	7.5	6.0	5.5 ⁸	5.3	12.5 ⁹	9.0	9.2	9.0	6.5	4.5
EML E-Series	6.1	5.1	12.0 ⁵	9.0	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10.0			6.5	5.0

Virtual Library Systems

VLS 12000 EVA Gateway	6.1	5.5	12.0 ^{5,7}	11.1 ⁷	7.5	7.0	5.5 ¹⁰	5.3	12.5 ⁹	10.0			6.5	5.0
VLS 9000 Series	6.1	5.5	12.0 ^{5,7}	11.1 ⁷	7.5	7.0	5.5 ¹⁰	5.3	12.5 ⁹	10.0			6.5	5.0
VLS 6000 Series	6.1	5.1	12.0 ^{5,7}	11.1 ⁷	7.5	7.0	5.5 ¹⁰	5.3	12.5 ⁹	10.0			6.5	5.0

Disk-to-Disk Backup Systems

D2D4112 Backup System (Fibre Channel)	6.1	6.0	12.0 ⁵	12.0 ⁵					12.5	12.5				
D2D4112 Backup System (iSCSI)	6.0	6.0	12.0 ⁵	12.0 ⁵					12.5	12.5				
D2D Backup Systems 4000 Series (Fibre Channel)	6.1	5.5	12.0 ⁵	11.5	7.5	7.3	5.5 ¹⁰	5.4	12.5	12.0			6.5	6.0
D2D Backup Systems 4000 Series (iSCSI)	6.0	5.5	12.0 ⁵	11.5	7.5	7.3	5.5 ¹⁰	5.4	12.5	12.0			6.5	6.5
D2D Backup Systems 2500 Series (iSCSI)	6.0	5.5	12.0 ⁵	11.5	7.5	7.3	5.5 ¹⁰	5.4	12.5	12.0			6.5	6.5
D2D Backup Systems 100 Series (iSCSI)	6.0	5.5	12.0 ⁵	11.5	7.5	7.3	5.5	5.4	12.5	11d			6.5	6.0

Business Class Libraries

MSL 8096	6.1	5.5	12.0 ⁵	11.1	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10d ^{2,4}			6.5	6.0
MSL 4048	6.1	5.1	12.0 ⁵	11.1	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10d ^{2,4}			6.5	6.0
MSL 2024	6.1	5.1	12.0 ⁵	11.1	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10d ^{2,4}			6.5	6.0
MSL 6000 Series	6.1	5.0	12.0 ⁵	9.0	7.5	6.0	5.5 ⁸	5.3	12.5 ⁹	9.0	9.2	9.0	6.5	4.5

Autoloaders

1/8 G2 Tape Autoloader (Ultrium 1760 SAS)	6.1	5.5	12.0 ⁵	11.5	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 1760 SCSI)	6.1	5.5	12.0 ⁵	11.5	7.5	7.0	5.5 ⁸	5.3	12.5 ⁹	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920)	6.1	5.5	12.0 ⁵	11.5	7.5	7.0	5.5	5.3	12.5 ⁹	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920 SAS)	6.1	5.5	12.0 ⁵	11.5	7.5	7.0	5.5	5.3	12.5 ⁹	11d ⁴			6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 448)	6.1	5.5	12.0 ⁵	11.5	7.5	7.0	5.5	5.3	12.5 ⁹	10d ³	9.2 ⁶	9.0 ⁶	6.5	6.0

NOTES:

- 1) Use the latest backup application maintenance release unless otherwise noted. Refer to the backup application vendor for specific operating system support, patches, builds, and drivers required to support HP tape automation and virtual library products.
- 2) Backup Exec version 10d and Device Driver Installer (DDI) version 20060615 or later are required.
- 3) Backup Exec version 10d and Device Driver Installer (DDI) version 20061015 or later are required.
- 4) Backup Exec version 11d and Device Driver Installer (DDI) version 20061215 or later are required.

- 5) CA ARCserve 12.0 only supports Windows based media servers.
- 6) BENW 9.x Driver SET 2 is required for Ultrium 448 1/8 G2 Autoloader support. Also, multi-LUN support must be enabled on the SCSI HBA.
- 7) VLS models 6200, 6600, and the 12000 EVA Gateway running software version 2.0.0 are not currently supported with ARCserve 11.1, 11.5 or 12 running on Linux. See Customer Advisory "[c01181673](#)" for further details.
- 8) TSM 5.4.2 or later is required to support LTO4 tape drives.
- 9) Backup Exec version 12.5 supports Linux based media servers.
- 10) TSM 5.4.5 or later is required to support LTO4 drive emulation. TSM 5.5 does not currently support LTO4 drive emulation.

Archiving Solution Partners

Software Partners ¹

Application	Feature	Link to Product Page	Hardware Compatibility List
Atempo Time Navigator	Advanced protection and archival solution	Click Here	Click Here
Front Porch Digital DIVArchive	Content Storage Management system for digital media	Click Here	
Qstar HSM	Provides data archive functionality and automigration	Click Here	Click Here
Quantum StorNext	High Performance Workflow and Intelligent Archiving	Click Here	Click Here
SGL FlashNet	Content storage and archive management	Click Here	
XenData Archive Series	Powerful, scalable digital archives	Click Here	Click Here

Hardware Partners ¹

Product	Feature	Link to Product Page	Hardware Compatibility List
Intradyn ComplianceVault	Email Archiving & Retrieval Appliance	Click Here	
QSM Data Director	Real-time file system replication to protect archive data	Click Here	Click Here
Crossroads ReadVerify Appliance	Monitors and verifies readability of data written to tape	Click Here	

1) See "[How To Use This Document](#)" for description of support.

HP StorageWorks EBS Compatibility Matrix

Libraries and Interface Controllers

DAF and SAN Support		e2400-FC 4Gb (FC-FC)	e2400-FC 2Gb (FC-FC)	e2400-160 (FC-SCSI)	Native FC Connection	e1200-320 4Gb (FC-SCSI)	NSR E1200-160	NSR N1200-320 4Gb
ESL E-Series								
Ultrium 1840	(LTO-4 FC)				✓			
Ultrium 960	(LTO-3 FC)	✓	✓					
Ultrium 460	(LTO-2 FC)	✓	✓					
SDLT600	(SCSI)			✓				
ESL E-Series Cross Link		✓	✓	✓				
Interface Manager		✓	✓	✓				
EML E-Series								
Ultrium 1840	(LTO-4 FC)				✓			
Ultrium 960	(LTO-3 FC)	✓	✓					
MSL G3 (8096, 4048, 2024)								
Ultrium 1840 ¹	(LTO-4 FC)				✓			
Ultrium 1840	(LTO-4 SCSI)							✓
Ultrium 1760	(LTO-4 SCSI HH)							✓
Ultrium 960 ¹	(LTO-3 4Gb FC)				✓			
Ultrium 960 ¹	(LTO-3 FC)				✓			
Ultrium 960	(LTO-3 SCSI)							✓
Ultrium 920	(LTO-3 SCSI HH)							✓
MSL 6000 Series								
Ultrium 1840	(LTO-4 SCSI)					✓	✓ ²	
Ultrium 960	(LTO-3 SCSI)					✓	✓	
SDLT 600	(SCSI)					✓	✓	
MSL 6000 Multi-Unit Scalability						✓	✓	

NOTES:

1) Library is controlled through tape drive and does not have a physical connection.

2) Use the e1200-320 4Gb FC interface controller for best performance. The e1200-160 is still supported, but performance will be limited.

HP StorageWorks EBS Compatibility Matrix

Interface Controller Firmware

Interface Manager Firmware Required Minimum Components	I182	I200	I220	I230 ¹	I231 ¹	I232 ¹
e2400-FC 4Gb Interface Controller (FC-FC)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
e2400-FC 2Gb Interface Controller (FC-FC)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
e2400-160 Interface Controller (FC-SCSI)	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
NSR E1200-160	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d	5.9.44
ESL E-Series		5.10	6.00	6.20	6.22	6.23
EML E-Series		1126	1200	1222	1222	1223
JAVA Run Time	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
Command View TL	1.8.00 or 2.0.00	2.0.00	2.2.00	2.3.00	2.3.01	2.3.02

Interface Controller Firmware (Non-Interface Manager)	
e1200-320 4Gb (MSL6000)	5.9.44
N1200-320 4Gb	5.9.44

NOTES:

1) HP Secure Key Manager (SKM) requires ESL-e LTO4 drive firmware version H36W or later and EML-e LTO4 drive firmware version H36S or later and that the client tape libraries and Interface Controllers use firmware package I232 or later.

HP StorageWorks EBS Compatibility Matrix

HP-UX (PA-RISC) ⁶

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
HP-UX 11.11 (11i v1)	HWE & QPK bundles, Jun 2008		HWE & QPK bundles, Dec 2007	HWE & QPK bundles, Dec 2004		HWE & QPK bundles, Dec 2007
HP-UX 11.23 (11i v2)	HWE & QPK bundles, Jun 2008		HWE & QPK bundles, Jun 2008 Jun 2008	HWE & QPK bundles, Jun 2008		HWE & QPK bundles, Jun 2008
HP-UX 11.31 (11i v3)	HWE & QPK bundles, Sep 2008		HWE & QPK bundles, Sep 2008 ⁷	HWE & QPK bundles, Sep 2008		HWE & QPK bundles, Sep 2008
Servers						
HP 9000 Superdome and Mid-Range (rp7000-rp8000 Series, PA-RISC)	✓		✓	✓		✓
HP 9000 Entry-Level (rp2000-rp5000 Series, PA-RISC)	✓		✓	✓		✓
HP A, L, N, and V Class (PA-RISC)	✓		✓	✓		✓
HP R Class (PA-RISC) ³	✓		✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ⁵						
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
2Gb Fibre Channel Host Bus Adapters ⁵						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6795A (2G, PCI)						
td Driver	Native		Native	Native		Native
SCSI Host Bus Adapters ⁸						
A7173A (Ultra320, PCI-X, 2 channel)						
	Native		Native	Native		Native
AB290A (Ultra320, PCI-X, 2 channel, Combo Card)						
	Native		Native	Native		Native
Disk Array Multipath Support ⁵						
Native Multi-pathing (11i v3)	✓		✓	✓		✓
Secure Path for HP-UX (11i v2, 11i v1)	3.0F SP3		3.0F SP3	3.0F SP3		3.0F SP2 patch 2
High Availability ⁴						
MC/ServiceGuard	✓ ³		✓ ³			

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) ATS is not supported.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For O/S's not listed, please refer to the ISV's web page for supported HA configurations.

- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.
- 7) The HP-UX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver.
- 8) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

HP-UX (Integrity) ⁵

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ⁹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
HP-UX 11.23 (11i v2)	HWE & QPK bundles, Jun 2008		HWE & QPK bundles, Jun 2008	HWE & QPK bundles, Jun 2008		HWE & QPK bundles, Jun 2008
HP-UX 11.31 (11i v3)	HWE & QPK bundles, Sep 2008		HWE & QPK bundles, Sep 2008 ⁷	HWE & QPK bundles, Sep 2008		HWE & QPK bundles, Sep 2008
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓		✓	✓		✓
HP Integrity Entry - Level (rx1000-rx6000 Series, Integrity)	✓		✓	✓		✓
HP ProLiant c-Class BladeSystem	✓		✓	✓		✓
8Gb Fibre Channel Host Bus Adapters ⁴						
AH400A / QLogic QLE2560 (8G, PCIe) & AH401A / QLogic QLE2562 (8G, PCIe)						
FW			4.03.02	4.03.02		
fcpl Driver			Native	Native		
4Gb Fibre Channel Host Bus Adapters ⁴						
AD299A / AD355A (4G, PCIe) ⁸						
FW	2.70X5		2.70X5	2.70X5		2.70X5
fcpl Driver	Native ⁸		Native ⁸	Native ⁸		Native ⁸
AD300A / QLogic QLE2462 (4G, PCIe)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AD221A / AD222A / AD393A (4G, PCIe, Combo Card)						
FW	2.72A2		2.72A2	2.72A2		2.72A2
fcpl Driver	Native ⁸		Native ⁸	Native ⁸		Native ⁸
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0) & AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcd Driver	Native		Native	Native		Native
4Gb Fibre Channel HP c-Class BladeSystem Host Bus Adapters ⁴						
QMH2462 (4G, PCIe) for HP c-Class BladeSystem (403619-B21)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcpl Driver	Native		Native	Native		Native
LPe1105 (4G, PCIe) for HP c-Class BladeSystem (403621-B21) ^{8,1}						
FW	2.72A2		2.72A2	2.72A2		2.72A2
fcpl Driver	Native ^{8,1}		Native ^{8,1}	Native ^{8,1}		Native ^{8,1}
2Gb Fibre Channel Host Bus Adapters ⁴						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154		3.003.154	3.003.154		3.003.154
fcd Driver	Native		Native	Native		Native
A6795A (2G, PCI)						
EFI	1.24		1.24	1.24		1.24
td Driver	Native		Native	Native		Native
SAS Host Bus Adapters ¹⁰						
AH303A (HP SC44Ge, 3Gb, PCIe, 4 channel) ¹						
	Native		Native			Native
SCSI Host Bus Adapters ¹⁰						
A7173A (Ultra320, PCI-X, 2 channel)						
	Native		Native	Native		Native
AB290A (Ultra320, PCI-X, 2 channel, Combo Card)						
	Native		Native	Native		Native
Disk Array Multipath Support ⁴						
Native Multi-pathing (11i v3)	✓		✓	✓		
Secure Path for HP-UX (11i v2, 11i v1)	3.0F SP3		3.0F SP3	3.0F SP3		3.0F SP2 patch 2
High Availability ⁶						
MC/ServiceGuard	✓ ³		✓ ³			

NOTES:

- 1) Supported with HP-UX 11i v3 0803 or later.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) ATS is not supported.

4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

5) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.

6) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

7) The HPUX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver

8) Requires FibrChan-02 driver

9) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients

10) Refer to server QuickSpecs to determine which HBAs are supported

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 1 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
Windows Server 2003 Release 2 (32-bit)	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2008 (32-bit)	✓	✓	✓	✓	✓	
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters^{1,5} (HP Branded / 3rd Party)						
AK344A QLogic QLE2560 (8G, PCI-e) & AJ764A / QLogic QLE2562 (8G, PCI-e, Dual)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 StorPort Driver	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	
AJ762A / Emulex LPe12000 (8G, PCI-e) & AJ763A / Emulex LPe12002 (8G, PCI-e)						
FW	1.00a12	1.00a12	1.00a12	1.00a12	1.00a12	1.00a12
WIN 2003 StorPort Driver	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	
4Gb Fibre Channel Host Bus Adapters^{1,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e) & FC2242SR DC / Emulex LPe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{4,6}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	
FC1142SR / QLogic QLE2460 (4G, PCI-e) & FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{4,6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	
FC2143 / Emulex LP1150 (4G, PCI-X 2.0) & FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{4,6}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0) & FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{4,6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	
4Gb Fibre Channel HP c-Class BladeSystem Host Bus Adapters⁵						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver ^{4,6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{4,6}	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	

NOTES:

- 1) 3rd Party adapters require HP drivers and firmware.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.

- 4) Please reference ISV application installation/support documents for specific driver and patch requirements
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) Systems running Tivoli with WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 2 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
2Gb Fibre Channel Host Bus Adapters ^{1,2} (HP Branded / 3rd Party)						
A7560A / Emulex LP1050EX (2G, PCI-X)						
A7388A / Emulex LP1050 (2G, PCI-X)						
A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5,6}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{6,10}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	
FCA2408 / Emulex LP982 (2G, PCI-X)						
FCA2404 / Emulex LP9802 (2G, PCI-X)						
FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5,6}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4
WIN 2008 StorPort Driver ^{6,10}	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	5-2.01a4	
FCA2214 / QLogic QLA2340 (2G, PCI-X)						
FCA2214DC / QLogic QLA2342 (2G, PCI-X)						
FW	1.45	1.45	1.45	1.45	1.45	1.45
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{5,6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{6,10}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	
2Gb Fibre Channel HP p-Class BladeSystem Host Bus Adapters						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver ^{5,6}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver ^{6,10}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{5,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{6,10}	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	
SAS Host Bus Adapters and Controllers						
P212, P410, P411 & P700m (3Gb, PCI-e, 8 channel)	✓	✓	✓		✓	✓
SC44Ge (3Gb, PCI-e, 4 channel) ^{3,8,9}	✓	✓	✓	✓	✓	✓
SCSI Host Bus Adapters ^{8,9}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓	✓	✓	✓	✓	✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{4,7}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓	✓	✓	✓	✓	✓

NOTES:

1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

2) 3rd Party adapters require HP drivers and firmware.

3) SC44Ge (416096B21) is supported in the PCI Expansion Blade (448018B21).

4) Third Party SCSI HBA support is for HP servers only.

5) All sp2 systems are required to run Storport.sys KB945119. Non-sp2 systems running applications other than TSM require Storport.sys KB891793 (min) or KB916048 (recommended); systems running TSM require Storport.sys KB901371

6) Please reference ISV application installation/support documents for specific driver and patch requirements.

7) See vendor website for additional details.

8) Refer to server QuickSpecs to determine which HBAs are supported.

9) Third party x86 servers supported with HP-branded adapters only.

10) Systems running TSM on WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x86) (page 3 of 3)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Disk Array Multipath Support ¹						
Windows MPIO ⁵	✓	✓	✓	✓	✓	✓
High Availability ²						
Windows (MSCS)	✓	✓	✓	✓ ³	✓ ⁴	✓

NOTES:

1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

2) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

3) Not supported with TSM 5.3.x or later.

4) Support includes NAS9000 and NAS4000 platforms.

5) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.

HP StorageWorks EBS Compatibility Matrix

Windows (Integrity)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
Windows Server 2008 (64-bit)	✓	✓		✓		
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
8Gb Fibre Channel Host Bus Adapters ^{1,4} (HP Branded / 3rd Party)						
AH400A / Qlogic QLE 2560 (8G, PCIe) & AH401A / Qlogic QLE 2562 (8G, PCIe)						
FW			2.02	2.02		
WIN 2003 StorPort Driver ^{5,7}			9.1.7.17	9.1.7.17		
AH402A / Emulex LPe12000 (8G, PCIe) & AH403A / Emulex LPe12002 (8G, PCIe)						
FW			1.00a12	1.00a12		1.00a12
WIN 2003 StorPort Driver ^{5,7}			6-2.01a4	6-2.01a4		6-2.01a4
WIN 2008 StorPort Driver ^{5,9}				6-2.01a4		6-2.01a4
4Gb Fibre Channel Host Bus Adapters ^{1,4} (HP Branded / 3rd Party)						
LPe1105 (4G, PCIe) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.01a4	6-2.01a4	6-2.01a4	6-2.01a4		6-2.01a4
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4	6-2.01a4		6-2.01a4		
A8002A / Emulex LPe1150 (4G, PCIe) & A8003A / Emulex LPe11002 (4G, PCIe)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver ^{5,7}	6-2.01a4	6-2.01a4	6-2.01a4	6-2.01a4		6-2.01a4
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4	6-2.01a4		6-2.01a4		
AE311A / Qlogic QLE2460 (4G, PCIe) & AD300A / Qlogic QLE2462 (4G, PCIe)						
EFI	2.00	2.00	2.02	2.02		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17		9.1.3.18
WIN 2008 StorPort Driver ^{5,9}	9.1.7.17	9.1.7.17				
AD167A / Emulex LP1150 (4G, PCI-X 2.0) & AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-2.01a4	6-2.01a4	6-2.01a4	6-2.01a4		6-2.01a4
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4	6-2.01a4		6-2.01a4		
AB429A / Qlogic QLA2460 (4G, PCI-X 2.0) & AB379A/B / Qlogic QLA2462 (4G, PCI-X 2.0)						
EFI	2.00	2.00	2.02	2.02		1.09
WIN 2003 StorPort Driver ^{5,7}	9.1.3.18	9.1.3.18	9.1.7.17	9.1.7.17		9.1.3.18
WIN 2008 StorPort Driver ^{5,9}	9.1.7.17	9.1.7.17				
2Gb Fibre Channel Host Bus Adapters ^{1,4} (HP Branded / 3rd Party)						
AB232A / Emulex LP9802 (2G, PCI-X), AB467A / Emulex LP1050 (2G, PCI-X) & AB466A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5,7}	6-2.01a4	6-2.01a4	6-2.01a4	6-2.01a4		6-2.01a4
WIN 2008 StorPort Driver ^{5,9}	6-2.01a4	6-2.01a4		6-2.01a4		
SCSI Host Bus Adapters ⁸						
A7173A (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓		✓
Disk Array Multipath Support ⁴						
Windows MPIO 6	✓	✓	✓	✓		✓
High Availability ³						
Windows (MSCS)	✓	✓	✓	✓		✓

NOTES:

- 1) 3rd Party adapters require HP drivers and firmware.
- 2) Please reference ISV support matrices for supported application and OS version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) Please reference ISV application documents for specific driver and patch requirements.
- 6) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.
- 7) All sp2 systems require Storport.sys KB945119. Non-sp2 systems running applications other than TSM require Storport.sys KB891793 (min) or KB916048 (recommended) while systems running TSM require Storport.sys KB901371
- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Systems running Tivoli with WS2008 requires Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x64) (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Windows Server 2003 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2003 R2 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2008 x64 Edition	✓	✓	✓	✓	✓	✓
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 StorPort Driver	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
AJ762A / Emulex LPe12000 (8G, PCI-e)						
AJ763A / Emulex LPe12002 (8G, PCI-e)						
FW	1.00a12 ³	1.00a12	1.00a12	1.00a12	1.00a12	1.00a12
WIN 2003 StorPort Driver ^{1,6}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
4Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 StorPort Driver ^{1,6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{1,7}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,7}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02	2.02	2.02	2.02	2.02	2.02
WIN 2003 StorPort Driver ^{1,6}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
WIN 2008 StorPort Driver ^{1,7}	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17	9.1.7.17
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters ⁴						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{1,6}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver ^{1,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 StorPort Driver ^{1,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{1,7}	9.1.3.18	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15

NOTES:

- 1) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Requires MS hotfix 943545 to see tape devices.

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB903081 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.
- 7) Systems running Tivoli with WS2008 require Storport.sys KB953390.

HP StorageWorks EBS Compatibility Matrix

Windows (x64) (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
2Gb Fibre Channel Host Bus Adapters ^{4,5} (HP Branded / 3rd Party)						
7560A / Emulex LP1050EX (2G, PCI-X)						
A7388A / Emulex LP1050 (2G, PCI-X)						
A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver ^{1,6}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,10}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
FCA2408 / Emulex LP982 (2G, PCI-X)						
FCA2404 / Emulex LP9802 (2G, PCI-X)						
FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver ^{1,6}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
WIN 2008 StorPort Driver ^{1,10}	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4	7-2.01a4
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters ⁴						
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 StorPort Driver ^{1,6}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
WIN 2008 StorPort Driver ^{1,10}	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15
SAS Host Bus Adapters and Controllers						
P212, P410, P411 & P700m (3Gb, PCIe, 8 channel)	✓	✓	✓		✓	✓
SC44Ge (3Gb, PCIe, 4 channel) ^{8,9,11}	✓	✓	✓	✓	✓	✓
SCSI Host Bus Adapters and Controllers ^{8,9}						
AH627A (HP U320e, Ultra320, PCIe, 2 channel)	✓	✓	✓	✓	✓	✓
412911-B21 (HP SC11Xe, Ultra320, PCIe, 1 channel)	✓	✓	✓	✓	✓	✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{7,12}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓	✓	✓	✓	✓	✓
ATTOTech UL5D (Ultra320, PCIe, 2 channel)	✓	✓	✓	✓	✓	✓
Disk Array Multipath Support ⁴						
Windows MPIO	✓	✓	✓	✓	✓	✓
High Availability ³						
Windows (MSCS)	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB903081 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB945119.
- 7) See vendor website for additional details.
- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Third party x86 servers supported with HP-branded adapters only
- 10) Systems running TSM on WS2008 require Storport.sys KB953390
- 11) SC44Ge (416096-B21) is supported in the PCI Expansion Blade (448018-B21)
- 12) Third Party SCSI HBA support is for HP servers only

HP StorageWorks EBS Compatibility Matrix

Linux (x86) ⁴ (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
RHEL [AS/ES/WS] 4.0 (32-bit) ⁷	Update 7		Update 7	Update 7	Update 7	Update 7
RHEL [AS/ES/WS] 5.0 (32-bit) ⁷	Update 2		Update 2	Update 2	Update 2	
SUSE SLES 9 (32-bit) ⁶	SP4		SP4	SP4	SP4	SP4
SUSE SLES 10 (32-bit)	SP2		SP2	SP2	SP2	SP2
Servers						
HP ProLiant	✓		✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓		✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓		✓	✓	✓	✓
Third Party X86	✓		✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
AJ762A / Emulex LPe12000 (8G, PCI-e)						
AJ763A / Emulex LPe12002 (8G, PCI-e)						
FW	1.00a12		1.00a12	1.00a12	1.00a12	1.00a12
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
4Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.

- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.

- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.
- 7) RHEL kernel versions include support for Oracle Enterprise Linux (OEL)

HP StorageWorks EBS Compatibility Matrix

Linux (x86) ^{4,6} (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters ^{3,5}						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26		1.26	1.26	1.26	1.26
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
2Gb Fibre Channel Host Bus Adapters ^{3,5} (HP Branded / 3rd Party)						
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45		1.45	1.45	1.45	1.45
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters ^{3,5}						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5		1.91a5	1.91a5	1.91a5	1.91a5
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for BL20p G2/G3 (2G, PCI-X)						
FW (BL25p)	1.48		1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48		1.48	1.48	1.48	1.48
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
SAS Host Bus Adapters and Controllers						
P212, P410, P411 & P700 (3Gb, PCI-e, 8 channel)	✓		✓		✓	✓
SC44Ge (3Gb, PCI-e, 4 channel) ^{8,9,10}	✓		✓	✓	✓	✓
SCSI Host Bus Adapters ^{8,9}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓		✓	✓		✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓		✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{7,2}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓		✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓		✓	✓		✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
Disk Array Multipath Support ³						
Device Mapper	4.1.0		4.1.0	4.1.0	4.1.0	4.1.0
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9	2.1.9	2.2.20	2.2.20
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05		7.07.05	7.07.05		7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Third Party SCSI HBA support is for HP servers only
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.

- 5) 3rd Party adapters require HP drivers and firmware.
- 6) SP2 for SLES 9 is not supported.
- 7) See vendor website for additional details.
- 8) Refer to server QuickSpecs to determine HBA supported
- 9) Third party x86 servers supported with HP-branded adapters only
- 10) SC44Ge (416096-B21) is supported in the PCI Expansion Blade (448018-B21)

HP StorageWorks EBS Compatibility Matrix

Linux (Integrity)^{3,5}

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
RHEL [AS/ES/WS] 4.0 (64-bit) ⁷	Update 7		Update 7			Update 7
RHEL [AS/ES/WS] 5.0 (64-bit) ^{7,8}	Update 2		Update 3			
SUSE SLES 9 (64-bit)	SP4		SP4			SP4
SUSE SLES 10 (64-bit)	SP2		SP2			SP1
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓		✓			✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓		✓			✓
HP ProLiant c-Class BladeSystem	✓		✓			✓
4Gb Fibre Channel Host Bus Adapters⁴ (HP Branded / 3rd Party)						
A8002A / Emulex LPe11000 (4G, PCI-e)						
A8003A / Emulex LPe11002 (4G, PCI-e)						
FW	2.72a2					2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40					8.0.16.32
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1					
AE311A / QLogic QLE2460 (4G, PCI-e)						
AD300A / QLogic QLE2462 (4G, PCI-e)						
EFI	2.00		1.09			1.09
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11					
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.01.07.25			8.01.07.25
AD167A / Emulex LP1150 (4G, PCI-X 2.0)						
AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2		2.72a2			2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40			8.0.16.32
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1			8.1.6.7
AB429A / QLogic QLA2460 (4G, PCI-X 2.0)						
AB379A/AB379B / QLogic QLA2462 (4G, PCI-X 2.0)						
EFI	2.00		1.09			1.09
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.01.07.25			8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.01.07.25			8.01.07.25
QMH2462 (4G, PCI-e) for HPC-Class BladeSystem						
EFI	1.09		1.09			1.09
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25			8.01.07.25
2Gb Fibre Channel Host Bus Adapters⁴ (HP Branded / 3rd Party)						
A7538A / Qlogic QLA2340 (2G, PCI-X)						
A6826A / Qlogic QLA2342 (2G, PCI-X)						
BIOS	1.50		1.49			1.49
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.01.07.25			8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.01.07.25			8.01.07.25
SAS Host Bus Adapters⁶						
SC44Ge (3Gb, PCIe, 4 channel)						
	✓		✓			✓
SCSI Host Bus Adapters⁶						
A7173A (Ultra320, PCI-X, 2 channel)						
	✓		✓			✓
Disk Array Multipath Support⁴						
Device Mapper	4.0.1		4.1.1			
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9			2.2.20
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05		7.07.05			7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25			8.01.07.25

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.

- 3) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

- 6) Refer to server QuickSpecs to determine which HBAs are supported
- 7) RHEL kernel versions include support for Oracle Enterprise Linux (OEL)
- 8) Only in-box HBA drivers and device-mapper multipathing are supported with RHEL 5 Update 3.

HP StorageWorks EBS Compatibility Matrix

Linux (x64)^{4,6} (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
RHEL [AS/ES/WS] 4.0 (x64) ⁷	Update 7		Update 7	Update 7	Update 7	Update 7
RHEL [AS/ES/WS] 5.0 (x64) ⁷	Update 2		Update 2	Update 2	Update 2	Update 2
SUSE SLES 9 (x64)	Update 4		Update 4	Update 4	SP4	Update 4
SUSE SLES 10 (x64)	SP2		SP2	SP2	SP1	SP1
Servers						
HP ProLiant	✓		✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓		✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓		✓	✓	✓	✓
HP NetServer	✓		✓	✓	✓	✓
Third Party X86	✓		✓	✓	✓	✓
8Gb Fibre Channel Host Bus Adapters^{3,5} (HP Branded / 3rd Party)						
AK344A / QLogic QLE2560 (8G, PCI-e)						
AJ764A / QLogic QLE2562 (8G, PCI-e)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
AJ762A / Emulex LPe12000 (8G, PCI-e)						
AJ763A / Emulex LPe12002 (8G, PCI-e)						
FW	1.00a12		1.00a12	1.00a12	1.00a12	1.00a12
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
4Gb Fibre Channel Host Bus Adapters^{3,5} (HP Branded / 3rd Party)						
FC21425R / Emulex LPe1150 (4G, PCI-e)						
FC22425R DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
FC11425R / QLogic QLE2460 (4G, PCI-e)						
FC12425R DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	2.02		2.02	2.02	2.02	2.02
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.

- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.
- 7) RHEL kernel versions include support for Oracle Enterprise Linux (OEL)

HP StorageWorks EBS Compatibility Matrix

Linux (x64) ^{4,5} (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters ³						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2		2.72a2	2.72a2	2.72a2	2.72a2
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26		1.26	1.26	1.26	1.26
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
2Gb Fibre Channel Host Bus Adapters ^{3,6} (HP Branded / 3rd Party)						
FCA2214 / QLogic 2340 (2G, PCI-X) and FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45		1.45	1.45	1.45	1.45
RHEL 4.0 driver & SUSE SLES 9 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
RHEL 5.0 driver & SUSE SLES 10 driver	8.02.11		8.02.11	8.02.11	8.02.11	8.02.11
2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters ³						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5		1.91a5	1.91a5	1.91a5	1.91a5
RHEL 4.0 driver & SUSE SLES 9 driver	8.0.16.40		8.0.16.40	8.0.16.40	8.0.16.40	8.0.16.40
RHEL 5.0 driver & SUSE SLES 10 driver	8.2.0.22_p1		8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1	8.2.0.22_p1
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades G2/G3 (2G, PCI-X)						
BIOS (BL25p)	1.48		1.48	1.48	1.48	1.48
BIOS (BL20p, BL30p, and BL35p)	1.48		1.48	1.48	1.48	1.48
RHEL 4.0 driver & SUSE SLES 9 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
RHEL 5.0 driver & SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25
SAS Host Bus Adapters and Controllers						
P212, P410, P411 & P700m (3Gb, PCI-e, 8 channel)	✓		✓		✓	✓
SC44Ge (3Gb, PCI-e, 4 channel) ^{7, 8, 9}	✓		✓	✓	✓	✓
SCSI Host Bus Adapters ^{8, 9}						
AH627A (HP U320e, Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
412911-B21 (HP SC11Xe, Ultra320, PCI-e, 1 channel)	✓		✓	✓		✓
374654-B21 (Ultra320, PCI-X, 1 channel)	✓		✓	✓	✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{10, 11}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓		✓	✓	✓	✓
ATTOTech UL4D (Ultra320, PCI-X, 2 channel)	✓		✓	✓		✓
ATTOTech UL5D (Ultra320, PCI-e, 2 channel)	✓		✓	✓		✓
Disk Array Multipath Support ³						
Device Mapper	4.1.0		4.1.0	4.1.0	4.1.0	4.1.0
Emulex Multipulse (2.6 kernels only)	2.1.9		2.1.9	2.1.9	2.2.20	2.2.20
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.07.25		8.01.07.25	8.01.07.25	8.01.07.25	8.01.07.25

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required supported kernel errata refer to your online storage array and backup application support documentation.
- 5) Due to tape device discovery issues, SP2 for SLES 9 is not supported.
- 6) 3rd Party adapters require HP drivers and firmware.
- 7) SC44Ge (416096-B21) is supported in the PCI Expansion Blade (448018-B21)

- 8) Refer to server QuickSpecs to determine which HBAs are supported
- 9) Third party x86 servers supported with HP-branded adapters only
- 10) See vendor website for additional details.
- 11) Third Party SCSI HBA support is for HP servers only

HP StorageWorks EBS Compatibility Matrix

EBS ESI Partner VM Support Details (page 1 of 2)

The table below shows the options that each ESI partner supports on virtualization host and guest virtual machines. It also shows support for extended virtual machine backup utilities like VCB (VMware Consolidated Backup).

	HP Data Protector ²	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup ²
Virtual Operating Systems ³	Extended Solution Interoperability (ESI) ¹					
HP Integrity VM	Host (disk & media agent) Guest VM (disk & media agent)		Host (client, storage node)			Host (client, media server)
Windows Server 2008 Hyper-V	Host (disk & media agent) Guest VM (disk agent)	Host (client, server) Guest VM (client)	Host (client, storage node) Guest VM (client)	Host (client, storage agent) Guest VM (client)	Host (agent, media server) Guest VM (agent)	Host (client, media server) Guest VM (client)
VMware ESX Server	Host (disk & media agent) Guest VM (disk & media agent) VCB ESX Integration	Host (client) Guest VM (client) VCB	Host (client) Guest VM (client, storage node) VCB	Host (client) Guest VM (client) VCB	Host (agent) Guest VM (agent) VCB	Host (client) Guest VM (client) VCB

Legend:

- Host** = Backup application installed on virtual machine host
- Guest VM** = Backup application installed on virtual machine
- VCB** = VMware Consolidated Backup (off host backup using proxy server)
- ESX Integration** = Integration with ESX Server that allows backup of VMs (shutdown or suspended) without any scripting, and without VCB proxy

NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) For details on backup methods see the implementation guides at www.hp.com/go/ebs.
- 3) Please reference the ISV application installation/support documents for specific virtual Operating System requirements and support details.**

The table below shows tape support for virtualization products and where to get details on supported interfaces.

VM Product	Direct Attached SCSI	iSCSI SAN	FC SAN	Support Notes
Citrix XenServer Host				No support statement for tape at this time.
Citrix XenServer Guest VM				No support statement for tape at this time.
HPVM Host	Yes	Yes	Yes	HP-UX 11.23 supported interfaces Tape drive must not be attached to a guest VM while being used by the host.
HPVM Guest VM	Yes	Yes	Yes	HP-UX 11.23 supported interfaces Tape drive must only be attached to a single guest VM at a time.
Hyper-V Host	Yes	Yes	Yes	Windows 2008 Supported interfaces
Hyper-V Guest VM				No support statement for tape at this time.
ESX 3.5 VMware Host	Yes	No ¹	No ¹	Multi target only (no multi LUN). Tape drive must not be attached to a VM while being used by the host. For ESX Server supported interfaces see http://www.vmware.com/pdf/vi3_san_guide.pdf
VMware Guest VM	Yes	No	No	Multi target only (no multi LUN). Tape drive must only be attached to a single VM at a time. Detaching a tape drive from a VM requires a VM shutdown. For ESX Server supported interfaces see http://www.vmware.com/pdf/vi3_san_guide.pdf
VMware Consolidated Backup	Yes	Yes	Yes	Windows 2003 supported interfaces SAN and shared tape devices are limited to the VCB Proxy server.

NOTES:
1) SAN tape devices (FC and iSCSI) are not yet supported directly by VMware ESX Server. VMware Consolidated Backup (VCB) uses a Windows proxy server and software snapshots to allow FC and iSCSI backups.

HP StorageWorks EBS Compatibility Matrix

Solaris (page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
Solaris 9	✓		✓	✓		✓
Solaris 10 SPARC	Update 5		Update 6	Update 6		Update 6
Solaris 10 x86/x64	Update 5		Update 6 ⁷	Update 6		Update 4
Servers						
Sun UltraSPARC	✓		✓	✓		✓
Sun Sun Fire	✓		✓	✓		✓
HP ProLiant	✓		✓	✓		✓
HP ProLiant c-Class BladeSystem	✓		✓	✓		✓
8Gb Fibre Channel Host Bus Adapters ³						
SG-XPCIE1FC-EM8-Z / SG-XPCIE2FC-EM8-Z (8G, PCIe)						
Sun Native Driver	✓ ⁵		✓ ⁵	✓ ⁵		✓ ⁵
SG-XPCIE1FC-QF8-Z / SG-XPCIE2FC-QF8-Z (8G, PCIe)						
Sun Native Driver	✓ ⁵		✓ ⁵	✓ ⁵		✓ ⁵
4Gb Fibre Channel Host Bus Adapters ³						
SG-XPCIE1FC-EM4 / SG-XPCIE2FC-EM4 (4G, PCIe)						
Sun Native Driver	✓ ⁵		✓ ⁵	✓ ⁵		✓ ⁵
SG-XPCIE1FC-QF4 / SG-XPCIE2FC-QF4 (4G, PCIe)						
Sun Native Driver	✓ ⁵		✓ ⁵	✓ ⁵		✓ ⁵
SG-XPCI1FC-EM4-Z / SG-XPCI2FC-EM4-Z (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QF4 / SG-XPCI2FC-QF4 (4G, PCI-X 2.0)						
Sun Native Driver	✓		✓	✓		✓
LPe1105 (4G, PCIe) for HP c-Class BladeSystem						
Sun Native Driver	✓ ⁶		✓ ⁶	✓ ⁶		✓ ⁶
QMH2462 (4G, PCIe) for HP c-Class BladeSystem						
Sun Native Driver	✓ ⁶		✓ ⁶	✓ ⁶		✓ ⁶
2Gb Fibre Channel Host Bus Adapters ³						
SG-XPCI1FC-EM2 / SG-XPCI2FC-EM2 (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QF2 (X6767A) / SG-XPCI2FC-QF2 (X6768A) (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
SG-XPCI1FC-QL2 / SG-XPCI2FC-QF2-2 (2G, PCI-X)						
Sun Native Driver	✓		✓	✓		✓
QLogic QLA2340 / QLogic QLA2342 (2G, PCI-X)						
Fcode			2.00.09	2.00.09		
QLogic Driver			4.20	4.20		
Sun Native Driver			✓	✓		
FCA2684 (Emulex LP10000) / FCA2684DC (Emulex LP10000DC) (2G, PCI-X)						
FW	1.91a1		1.91a1	1.91a1		1.91a1
Emulex Driver	6.02h		6.02h ⁴	6.02h ⁴		6.02h
Sun Native Driver			✓	✓		✓

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) Supported with Solaris 9 only.
- 5) Supported with Solaris 10 only.
- 6) Supported with Solaris 10 x86/x64 only.

7) Supported with Solaris 10 x64 only. (AMD64 and Intel EM64T)

HP StorageWorks EBS Compatibility Matrix

Solaris (page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
SAS Host Bus Adapters						
SG-XPCI8SAS-E-Z (PCI-X)						✓ ⁴
SG-XPCIE8SAS-E-Z (PCI-e)						✓ ⁴
SCSI Host Bus Adapters						
SGXPCI1SCSILM320-Z (Ultra320, PCI-X, 1 Channel)						✓ ⁴
SG-XPCIE2SCSIU320Z (Ultra320, PCI-e, 2 Channel)						✓ ⁴
Disk Array Multipath Support ¹						
Solaris MPxIO	✓		✓	✓		✓
VERITAS DMP			✓ ³			✓ ³
High Availability ²						
VERITAS Cluster Server						✓

NOTES:

- 1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 2) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 3) Supported with Solaris 10 only.
- 4) Please refer to Customer Advisory "[c01536454](#)" for required configuration details.

HP StorageWorks EBS Compatibility Matrix

Tru64 Unix

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker ¹⁰	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems²						
Tru64 5.1A ⁸	5.1A pk6		5.1A pk6			5.1A pk6
Tru64 5.1B ⁸	5.1B-4		5.1B-4			5.1B-4
Servers						
HP AlphaServer	✓		✓			✓
2Gb Fibre Channel Host Bus Adapters⁵						
FCA2684 / FCA2684 DC (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
FCA2354 (2G, PCI-X)						
FW	3.93a0		3.93a0			3.93a0
Tru64 Driver	2.17		2.17			2.17
FCA2354 (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
SCSI Host Bus Adapters⁹						
3X-KXPEA-DB (Ultra 160, PCI-X, 2 channel)	✓		✓			✓
Disk Array Multipath Support⁵						
Tru64 Multipath			Native			Native
High Availability⁴						
Tru64 (TruCluster)			✓			✓

OpenVMS

Operating Systems^{1, 2}						
OpenVMS 8.2 ^{3, 6, 8}	✓					
OpenVMS 8.2-1 ^{3, 6, 8}	✓					
OpenVMS 8.3 ^{3, 6, 8}	✓					
Servers						
HP AlphaServer	✓					
HP Integrity	✓					
2Gb Fibre Channel Host Bus Adapters⁵						
FCA2684 / FCA2684 DC (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
FCA2354 (2G, PCI-X)						
FW	3.93a0					
OVMS Driver	Native					
FCA2354 (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application, device and operating system version compatibility.
- 3) OpenVMS supported in switched fabric configurations only.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 6) [Click here](#) for additional data protection applications and solution information for OpenVMS, which includes HP and 3rd Party Heterogeneous Backup Solutions, as well as OpenVMS-specific solutions including ABS (Archive Backup Systems) and SLS (Storage Library System)
- 7) Support is with BEB v10.5 only
- 8) Ultrium 230 (LTO) not supported
- 9) Refer to server QuickSpecs to determine which HBAs are supported
- 10) **Supported with NetWorker 7.4 and prior.**

HP StorageWorks EBS Compatibility Matrix

AIX

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ²						
AIX 6.1	✓ ³		✓	✓		
AIX 5.3	✓ ³		✓	✓		✓
AIX 5.2	✓ ³		✓	✓		✓
Servers						
IBM RS/6000	✓		✓	✓		✓
IBM pSeries	✓		✓	✓		✓
4Gb Fibre Channel Host Bus Adapters ⁴						
AIX 5773 (4G, PCI-e) AIX 5774 (4G, PCI-e)						
AIX Driver	Native ⁷		Native ⁷	Native ⁷		
IBM 1905 (4G, PCI-X 2.0) IBM 1910 (4G, PCI-X 2.0)						
AIX Driver	Native ⁶		Native ⁶	Native ⁶		Native ⁶
IBM 5758 (4G, PCI-X 2.0) IBM 5759 (4G, PCI-X 2.0)						
AIX Driver	Native ⁶		Native ⁶	Native ⁶		Native ⁶
2Gb Fibre Channel Host Bus Adapters ⁴						
IBM 5716 (2G, PCI-X)						
AIX Driver	Native ⁶		Native	Native		Native
IBM 6239 (2G, PCI-X)						
AIX Driver	Native		Native	Native		Native
IBM 6228 (2G, PCI-X)						
AIX Driver	Native		Native	Native		Native
Disk Array Multipath Support ⁴						
AIX MPIO	✓ ⁵		✓	✓		✓

NOTES:

- 1) SAN Media server supported with CA ARCserve 11.5 & prior. Version 12 only supports backup of LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Robot control is not supported
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 5) Disk and tape require dedicated HBA's.
- 6) Supported with AIX 5.3 only.
- 7) Supported with AIX 6.1 only.

HP StorageWorks EBS Compatibility Matrix

NetWare

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve ¹	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec for NetWare	Symantec Veritas NetBackup
Operating Systems ²						
NetWare 6.5	6.5 SP6	6.5 SP2 ³			6.5 SP6	
Servers						
HP ProLiant ⁵	✓	✓			✓	
HP ProLiant p-Class Blade Server ⁵	✓	✓			✓	
Third Party X86	✓	✓			✓	
4Gb Fibre Channel Host Bus Adapters ^{3, 5}						
FCI143 / QLA2460 (4G, PCI-X 2.0)						
FCI243 / QLA2462 (4G, PCI-X 2.0)						
FW	2.02					
NetWare Driver	6.90m					
2Gb Fibre Channel Host Bus Adapters ^{3, 5}						
FCA2214 (FCA2210) / QLA2340 (2G, PCI-X)						
FCA2214DC / QLA2342 (2G, PCI-X)						
FW	1.45	1.45			1.45	
NetWare Driver	6.90m	6.51b			6.90m	
SCSI Host Bus Adapters ^{6, 7}						
374654-B21 (Ultra320, PCI-X, 1 channel)	✓	✓			✓	✓
SCSI - Third Party HBAs and Integrated Controllers ^{8, 9}						
Adaptec 29320ALP-R (Ultra320, PCI-X, 1 channel)	✓	✓			✓	✓
Disk Array Multipath Support ⁵						
MPIO	✓				✓	
High Availability ⁴						
NetWare 6.5 (NWCS)	✓				✓	

NOTES:

- 1) Supported with CA ARCserve 11.1 only
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) NetWare is supported with ESL libraries in a homogeneous environment only.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) Refer to server QuickSpecs to determine which HBAs are supported
- 7) Third party x86 servers supported with HP-branded adapters only
- 8) See vendor website for additional details.
- 9) Third Party SCSI HBA support is for HP servers only

HP StorageWorks EBS Compatibility Matrix

RAID Arrays

SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
RAID Arrays						
XP 24000/20000 ¹	✓	✓	✓	✓	✓	✓
XP 12000/10000 ¹	✓	✓	✓	✓	✓	✓
XP 1024/128 ¹	✓	✓	✓	✓	✓	✓
XP 48/512 ¹	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4100/6100/8100	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4000/6000/8000	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3} EVA 4400	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1,3,6} EVA 3000/5000	✓	✓	✓	✓	✓	✓
MSA2000fc	✓	✓	✓	✓	✓	✓
MSA2012sa	✓	✓	✓	✓	✓	✓
MSA1500 ¹	✓	✓	✓	✓	✓	✓
MSA1000 Small Business SAN Kit	✓ ⁴	✓ ⁵			✓ ⁵	
MSA1000 ²	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Consult with your HP solutions provider for disk array SAN compatibility information
- 2) For compatibility information about the optional MSA SAN Switch, refer to the [Networking](#) page within this document for support details
- 3) Supported with Fibre Channel and FATA disk drives.

- 4) LINUX and Windows support only
- 5) Windows support only
- 6) Supported with VCS 3.X and 4.X.

HP StorageWorks EBS Compatibility Matrix

Storage Networking

SAN Support		Native Fibre Channel Drives			Virtual Library Systems			D2D Backup Systems	Interface Controllers						MSL G3 Libraries & 1/8 G2 Autoloaders	
SAN Switches ¹	Firmware	Ultrium 1840 FC Drive (4Gb)	Ultrium 960 FC Drive (4Gb)	Ultrium 960 FC Drive (2Gb)	VLS 12000 EVA Gateway	VLS 9000 Series	VLS 6000 Series	D2D4000 Series ⁹ (4Gb)	e2400-FC (4Gb)	e2400-FC (2Gb)	e2400-160 (2 Gb)	e1200-320 (4Gb)	NSR e1200-160 (2 Gb)	NSR n1200-320 (4Gb)	Ultrium 1760 SAS Drive	Ultrium 920 SAS Drive
B-Series ⁸																
SAN Director 4/256 with 8/16, 8/32, 4/16, 4/32, and 4/48 FC Blades	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
SAN Switch 8/8, 8/24, 8/40, 8/80	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
SAN Switch 4/64, 4/32B, 4/32, 4/16, 4/8	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
Brocade 4Gb SAN Switch for HP c-Class BladeSystem (4/12 and 4/24)	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
Brocade 8Gb SAN Switch for HP BladeSystem c-Class (8/12c and 8/24c)	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
Brocade 8Gb embedded SAN Switch for EVA4400	6.2.0d	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓	✓	✓	✓	✓	✓		
SAN Director 2/128	5.3.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Core Switch 2/64	5.0.5f	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
SAN Switch 2/32, 2/8V, 2/16V, 2/16N	5.3.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
SAN Switch 2/16, 2/8, 2/8-EL, 2/16-EL	3.2.1c	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
FC Switch 16B, 8B	3.2.1c	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
MSA SAN Switch 2/8	3.2.1c	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
C-Series																
Cisco MDS 9513, 9509, 9506, 9222i, 9216i, 9124, 9124e, 9134	4.1(3a)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Cisco MDS 9216A, 9216, 9140, 9120	3.3(2)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Cisco MDS 9020	2.1(3)	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
M-Series																
McData 4Gb SAN Switch for HP p-Class BladeSystem	6.4.0.13.00	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
McData Spheron 4700, 4400	09.09.00	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Director Switch 2/140, 2/64	09.09.00	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Edge Switch 2/32, 2/24, 2/16, 2/12	09.09.00	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
8Gb Simple SAN Connection																
HP StorageWorks 8/20q Fibre Channel Switch ⁶	8.0.02.02.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Multi-Protocol Routers, Gateways, and Virtual Connect ¹																
HP 4Gb Fibre Channel Pass-Thru Module for c-Class Bladesystem	2.01	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
HP 4Gb Virtual Connect FC Module (VC-FC) ⁷	1.30	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
StorageWorks 400 Multi-Protocol Router ^{2,5}	6.2.0d	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
StorageWorks Multi-Protocol Router Blade ^{2,5}	6.2.0d	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
Multi-Protocol Router ^{2,3}	7.4.1e	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
IP Storage Router 2122-2 ⁴	3.4.5c	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
StorageWorks IP Distance Gateway	2.4.3.0	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓		
SAS Switches																
3Gb SAS BL Switch ¹⁰	SEP 2.40														✓	✓

NOTES:

- 1) Refer to [HP StorageWorks SAN Design Reference Guide](#) for configuration rules and guidelines
- 2) Supported with all backup application/operating system combinations.
- 3) Supported as a SAN-to-SAN interconnect only.
Direct connection of libraries or hosts to the MP Router is not supported.

4) Supported for FC-IP SAN-to-SAN interconnect only.

5) Tape pipelining not supported.

6) Support for this platform is restricted. Please reference the switches' [Quick Spec on hp.com](#) for supported operating systems and host bus adapters.

7) Cisco supported with SAN-OS version 3.2(3) only. Does not support direct connection of tape devices.

8) Access Gateway (AG) mode is supported. See [SPOCK](#) for detailed support information.

9) Only supports fabric attach FC topologies using N_Port Identifier Virtualization (NPIV). Private and public loop topologies are not yet supported

10) FW 6.2.0 or greater required.

HP StorageWorks EBS Compatibility Matrix

ProLiant Storage Servers (NAS), All-in-One (AiO) Storage Servers

DAS ² , DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
HP StorageWorks Enterprise File Services (EFS) Clustered Gateway is a file server gateway. Based on a truly symmetrical cluster file system						
EFS Clustered Gateway (PolyServe) Windows EVA File Services (PolyServe) Windows	✓	✓	✓ ⁴	✓	✓	✓
EFS Clustered Gateway (PolyServe) Linux EVA File Services (PolyServe) Linux	✓		✓	✓		✓
HP All-in-One (AiO) Storage, single solution providing shared storage for application servers (iSCSI Target), file serving (NAS), backup target services and data protection software						
AiO1200	✓	✓	✓	✓	✓	✓
AiO1200r	✓	✓	✓	✓	✓	✓
AiO600	✓	✓	✓	✓	✓	✓
AiO400t	✓	✓	✓	✓	✓	✓
AiO400r	✓	✓	✓	✓	✓	✓
AiO SB600c Storage Blade ³	✓	✓	✓	✓	✓	✓
HP ProLiant Storage Server is a powerful file and print solution that enables environments to centralized Network Attached Storage (NAS).						
DL585 G2 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL380 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL320s Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL185 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL160 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML350 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML110 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
BL460c Storage Server ³	✓	✓	✓	✓	✓	✓ ¹

NOTES:

1) Requires NetBackup 5.0 MP2 or later.

2) SAS support requires Storport.sys KB950448.

3) Tape connectivity via direct-attach FC and Tape Blade.

4) Please refer to Customer Advisory "[c01290486](#)" for required configuration details.

HP StorageWorks EBS Compatibility Matrix

Storage Software

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Command View TL	2.3.02	2.3.02	2.3.02	2.3.02	2.3.02	2.3.02
Continuous Access	✓	✓	✓	✓	✓	✓
Insight Manager Agents	8.22.0.0	8.22.0.0	8.22.0.0	8.22.0.0	8.22.0.0	8.22.0.0
PolyServe	✓	✓ ²	✓ ¹	✓	✓	✓
Smart Start	8.20	8.20	8.20	8.20	8.20	8.20
Storage Essentials	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4	6.0.4
Systems Insight Manager (SIM)	5.5	5.3	5.3	5.3	5.3	5.3

NOTES:

- 1) Please refer to Customer Advisory "[c01290486](#)" for required configuration details.
- 2) Supported with CA ARCserve for Windows.

HP StorageWorks EBS Compatibility Matrix

Legacy Device Support

Device Name	Last EBS Compatibility Matrix Where Device Was Listed ¹
Ultrium 460 & 448 Drives, Ultrium 232 1/8 Autoloader, D2D110, VLS300, VLS1002i	November 2008
Network Storage Routers N1200 & M2402	July 2008
1/8 Autoloaders	December 2007
ESL9000 series libraries	September 2007
ESL E-Series SDLT 160/320, ESL9000 Series SDLT 160/320, 1/8 Tape Autoloader (SDLT 160/320)	July 2007
ESL9000 Series (Ultrium 230 and SDLT 110/220),MSL5000 Series	March 2006
SSL1016 Tape Autoloaders, 1/8 Tape Autoloaders (Ultrium 230 and Ultrium 460)	March 2006
ESL9326 DX, ESL9198 DLX, MSL5026 DLX, SSL2020 TL, DLT 40/80	March 2005
Modular Data Router (MDR)	February 2004
TL895, TL891DLX	December 2002
ESL9326D, TL891D, DLT 35/70	April 2002

NOTES:

1) EBS Compatibility Matrices from the last several years can be found on <http://www.hp.com/go/ebs>.
For matrices older than listed, consult your HP Account Representative.

HP StorageWorks EBS Compatibility Matrix

Useful Links

Product Family	URL
EBS Home Webpage	http://www.hp.com/go/ebs
EBS Design Guide	http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00775232/c00775232.pdf
EBS 1-2-3	http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html
EBS Example Configurations	http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf
Library and Tape Tools (LTT)	http://h18006.www1.hp.com/products/storageworks/ltt/index.html
Interconnects	http://h18006.www1.hp.com/storage/saninfrastructure.html
RAID Arrays	http://h18006.www1.hp.com/storage/arrayssystems.html
Storage Software	http://h18006.www1.hp.com/storage/software.html
Data Protector	http://www.hp.com/go/dataprotector
Storage Media	http://h18006.www1.hp.com/storage/storagemedia.html
Firmware & Driver Downloads	http://welcome.hp.com/country/us/en/support.html
Windows OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/windows/index-all.html
Linux OS/ProLiant Server Support Matrix	http://h18004.www1.hp.com/products/servers/linux/hplinuxcert.html
NetWare OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/novell/index-all.html
IT Resource Center Website	http://itrc.hp.com
Performance and Troubleshooting Support	http://www.hp.com/support/pat
Network Services - Backup and Recovery	http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx
Tape Systems	http://www.hp.com/go/tape
HP StorageWorks SAN Design Reference Guide	http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&locale=en_US&docIndexId=179911&taskId=101&prodTypeId=12169&prodSeriesId=406734

HP StorageWorks EBS Compatibility Matrix

Important Advisories

Date	Problem Description	Number
Tape Libraries Advisories		
Dec 17, 2008	Erroneous cleaning cartridge nearly expired warning messages from the HP StorageWorks 1/8 G2 Tape Autoloader or the HP StorageWorks MSL2024, MSL4048, and MSL8096 G3 libraries	c01626857
Aug 27, 2008	Errors on all tokens when the HP StorageWorks Encryption Kit is used with early HP StorageWorks MSL2024 libraries	c01509121
Aug 20, 2008	The HP StorageWorks 1/8 G2 autoloader, MSL2024, MSL4048, and MSL8096 tape libraries are not supported with HP StorageWorks SAS drives on HP-UX 11.23	c01534825
Jul 18, 2008	HP StorageWorks Ultrium 4 drives do not communicate with the host on HP StorageWorks 1/8 G2 Autoloader or HP StorageWorks MSL2024, MSL4048, or MSL8098 libraries when the Encryption Kit is enabled	c01487509
Mar 13, 2008	HP StorageWorks ESL E-Series libraries will post an error message when upgrading from 6.20 to 6.22 firmware	c01387942
Mar 12, 2008	HP StorageWorks D2D Backup Systems using HP Data Protector 6.0 (A.06.00) cannot import media containing spanned backup sessions	c01214249
Mar 7, 2008	HP StorageWorks ESL E-Series libraries have issues migrating from 1.x Interface Manager code to Interface Manager 2.20, 2.30, and possibly future firmware	c01377519
Feb 27, 2008	HP StorageWorks Virtual Library Systems (VLS) will not initialize after upgrading the system BIOS on HP ProLiant DL360 G5 node server using the 7.91 Firmware Maintenance CD	c01369226
Jan 2, 2008	HP StorageWorks Virtual Library System (VLS) is not functional after entering or modifying the network configuration settings	c01292136
Nov 30, 2007	Error F5 during an HP L&T drive or media assessment test on an HP StorageWorks 1/8 G2 Tape Autoloader or HP StorageWorks MSL2024, 4048, or 8096 Tape Libraries.	c01273166
Nov 12, 2007	HP Secure Key Manager (SKM) - Data Protection Application behavior when SKM is unavailable	c01269477
Oct 1, 2007	HP StorageWorks Ultrium 230/460/960 Tape Drives - tape unload instructions for tapes stuck in Ultrium 230/460/960 tape drives	c00795203
Oct 5, 2007	Virtual Library Systems - VLS models 6200, 6600, and the 12000 EVA Gateway running software version 2.0.0 are not currently supported with ARCserve 11.1 or 11.5 running on Linux.	c01181673
Sep 1, 2007	NetApp Filers - Unable to Access Tape Devices Mapped Behind Port 1 of Interface Controllers in ESL E-Series and EML E-Series Enterprise Tape Libraries	c01154679
May 31, 2007	HP StorageWorks MSL5000 and MSL6000 Libraries - potential for CRC or Parity Errors when SCSI Termination is on the Controller	c00659626
Application Advisories		
Feb 24, 2009	HP StorageWorks One Button Disaster Recovery with Symantec Backup Exec for Windows requires creation of a disaster recovery file for automatic mode to work properly	c01678591
Nov 14, 2008	HP Storage Essentials CIM Extensions might slow down or disrupt the operation of a busy HP Data Protector Cell Manager when the Cell Manager is running on minimal hardware	c01598751
Sep 23, 2008	Data Protector Express 4.0 is unable to read or import data from Data Protector Express 3.5 on Linux 32bit or 64bit systems	c01548338
Apr 4, 2008	Cleaning cartridge does not return to original storage slot after performing an autoloader tape drive clean operation when using Data Protector Express 3.5 SP2 Media wizard	c01413689
Apr 4, 2008	Move media operation from the mail slot to any storage slot in an Autoloader or Changer library will hang when using Data Protector Express 3.5 SP2	c01413680
Dec 5, 2007	EMC NetWorker not recognizing the HP PolyServe clustered file system (PSFS)	c01290486
Operating System Advisories		
Mar 17, 2009	Microsoft Windows 2003 Server with Emulex 8Gb Fibre Channel Host Bus Adapter returns error on bus scan, device configuration, and display for HP L&T and some backup applications	c01695925
Aug 21, 2008	Data Protector in HP-UX version 11.31 may issue spurious critical warnings on reads and writes to LTO WORM media	c01519155
Aug 18, 2008	HP-UX 11.31 Poor I/O performance due to memory blocking during high system memory usage.	c01527093
Nov 21, 2007	Solaris – ESL E-Series and EML E-Series Library Reboots Causing Device Access Issues on Servers Running Sun Native HBA Drivers	c00965686
May 31, 2007	Microsoft Windows Server 2003 - Interoperability Issues with Persistent Binding of Symbolic Tape Names in an Enterprise Backup Solution (EBS) Configuration	c01064312
Mar 26, 2007	Emulex StorPort Driver - Targets Cannot be Persistently Bound when Running with the Emulex StorPort Driver	c00871551
Mar 7, 2007	Microsoft Windows SAN - How to Disable Tape Drive Polling on Microsoft Windows SAN-Attached Servers Running hplto.sys	c00718488
Mar 1, 2007	HP-UX 11.11 - Running Get All Elements Details on HP-UX 11.11 Hosts Can Cause Tape Backups to Abort	c00869191
Miscellaneous Advisories		

NOTE: There may be other important advisories that may effect your EBS environment that are not listed on this page. Refer to the technical knowledge base or contact your local support representative for additional information. To view these advisories do the following:

- 1) Click on the advisory number above to go to the Business Support Center or go to the IT Resource Center at <http://itrc.hp.com> (NOTE: To review the ITRC documents, you must register to use this website.)
- 2) Select "search technical knowledge base" (located at the top of the page under "maintenance and support (hp products)")
- 3) To search the technical knowledge base, enter a search word like "EBS" or an advisory number listed above.