

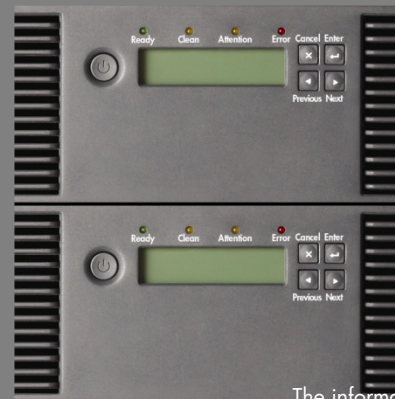
# HP StorageWorks Enterprise Backup Solution (EBS) Hardware/Software Compatibility Matrix

June 2008 Version 1.0

## Start Here

### Key Updates:

- New “Advanced VLS Features” page showing Accelerated Deduplication support
- New “Ultrium 1760 SCSI” LTO4 half-height encryption enabled tape drive
- New Encryption Kit (EK), Encryption Key Server for MSL Libraries and Autoloaders with LTO4 drives
- New MSL Library Partition support
- New C-class VC-FC Module support (Virtual Connect )
- Interoperability updates throughout



# HP StorageWorks EBS Compatibility Matrix

## Enterprise Backup Solution Compatibility Matrix Index

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## How To Use This Document

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. 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](http://www.hp.com/go/ebs).

Updates/changes to individual fields within the Matrix will be **highlighted in RED**.

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. See the VLS or Libraries ESI Partner Products pages for compatibility information. 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. See the VLS or Libraries TAC Partner Products pages for compatibility information. Consult the product compatibility guide(s) for additional support details such as product version information, driver details, firmware revisions, patch levels, etc.

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](http://www.hp.com/go/ebs). For information on stand-alone tape products and compatibility, go to [www.hp.com/go/connect](http://www.hp.com/go/connect).

### HP StorageWorks EBS Compatibility Matrix

#### HP-UX (Integrity)<sup>5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>6</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems<sup>1,2</sup></b>						
HP-UX 11.23 (11i v2)	HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11i v2 May 2005 Quality Pack May 2005	HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11i v2 Dec 2007 Quality Pack Dec 2007		HWE 11i v2 Dec 2007 Quality Pack Dec 2007
HP-UX 11.31 (11i v3)			HWE 11i v3 Mar 2008 <sup>7</sup> Quality Pack Mar 2008 <sup>7</sup>			
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem						✓
<b>4Gb Fibre Channel Host Bus Adapters<sup>4</sup></b>						
AD299A / AD355A (4G, PCIe) <sup>8</sup>						
FW	2.70X5		2.70X5	2.70X5		2.70X5
fcip Driver	Native <sup>8</sup>		Native <sup>8</sup>	Native <sup>8</sup>		Native <sup>8</sup>
AD300A / QLogic QLE2462 (4G, PCIe)						
FW	4.00.90			4.00.90		4.00.90
fcid Driver	Native			Native		Native
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcid 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
fcid 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
fcid Driver	Native		Native	Native		Native
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters<sup>4</sup></b>						
QMH2462 (4G, PCIe) for HP c-Class BladeSystem (403619-B21)						
FW	4.00.90		4.00.90	4.00.90		4.00.90
fcid Driver	Native		Native	Native		Native
<b>2Gb Fibre Channel Host Bus Adapters<sup>4</sup></b>						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
fcid Driver	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
EFI	1.24	1.24	1.24	1.24		1.24
td Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support<sup>4</sup></b>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability<sup>9</sup></b>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

CLICK cell to navigate to the HP product webpage

CLICK cell to navigate to the firmware/driver download page

NOTES: section contains specific configuration details

Matrix Version

Darkened section indicates environment currently not supported by application

Navigation buttons

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) ATS is not supported.

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- 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 HP-UX 11.31 PHKL\_26212 patch is required to support the NetWorker 7.4 CDI driver.
- 8) Requires FibreChanH02 driver.
- 9) Supported with CA ARCserve 11.5 only.

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# HP StorageWorks EBS Compatibility Matrix

## Virtual Library Systems, D2D Backup Systems and Extended Solution Interoperability (ESI) Partner Products

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) and iSCSI Support <sup>1</sup>		HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Virtual Library Systems	Firmware	Extended Solution Interoperability (ESI) <sup>1</sup>					
VLS 12000 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000 <sup>2</sup>	2.2.0 6.110 <sup>8</sup> 6.110 <sup>8</sup> 9.000 4.100	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 300 EVA Gateway EVA 4000/6000/8000 EVA 4100/6100/8100 EVA 4400 EVA 3000/5000 <sup>2</sup>	2.2.0 6.110 <sup>8</sup> 6.110 <sup>8</sup> 9.000 4.100	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 9000 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 6800 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 6600 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 6500 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 6200 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
VLS 6100 Series	2.2.0	✓	✓ <sup>3</sup>	✓	✓	✓	✓
D2D130 <sup>7</sup> (iSCSI)		✓	✓	✓	✓ <sup>6</sup>	✓	✓
D2D120 <sup>7</sup> (iSCSI)		✓	✓	✓	✓ <sup>6</sup>	✓	✓
D2D110 <sup>7</sup> (iSCSI)		✓	✓	✓	✓ <sup>6</sup>	✓	✓
VLS 1000i Series <sup>5</sup> (iSCSI)	2.6.0.228	✓	✓	✓	✓ <sup>6</sup>	✓ <sup>4</sup>	✓

### 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) 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.

4) Symantec Backup Exec 10.d requires the QLA4050C-CK or QLA4050C-BK PCI-X iSCSI Host Bus Adapter to be installed in each Windows server that will connect to the VLS1000i.

5) Supported with Windows 2003 (32-bit) only using the native Microsoft iSCSI initiator or QLogic 4050c iSCSI HBA.

6) Supported with the QLogic QLA4050 iSCSI HBA for Windows only. For more information go to ["www.hp.com/go/connect"](#)

7) For more information go to ["www.hp.com/go/connect"](#)

8) EVA 4x00/6x00/8x00 support requires minimum XCS firmware version 6.110.

9) Configurations running an HP VLS1000i virtual tape library must use the "HP VLS1000i" emulation in order to function properly.

# HP StorageWorks EBS Compatibility Matrix

## Virtual Library Systems, D2D Backup Systems and Tape Automation Compatibility (TAC) Partner Products

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) and iSCSI Support <sup>1</sup>		HP Data Protector Express	HP NonStop Servers	HP File System Extender	Atempo Time Navigator	BakBone NetVault	Bridgehead HT ISM Suite	CommVault QiNetix Galaxy	EMC Retrospect	Front Porch Digital DVArchive	IBM TSM Express	Intradyn ComplianceVault	Microsoft DPM 2007	NeoScale CryptoStor	NetApp Data ONTAP 7.2.x	Quantum StorNext	SGL FlashNet	Syncsort Backup Express	XenData Archive Series	Yosemite Backup	CipherMax CM140T / KeyCruiser	Cisco MDS 9000 SME	Crossroads TapeSentry	Crossroads ReadVerify Appliance	Decru DataFort	FalconStor VTL	NetApp NearStore VTL Series
Virtual Library Systems	Firmware	Software TAC Partners <sup>1</sup>																			Hardware TAC Partners <sup>1</sup>						
VLS 12000 EVA Gateway	2.2.0																										
EVA 4000/6000/8000	6.110 <sup>3</sup>																										
EVA 4100/6100/8100	6.110 <sup>3</sup>																										
EVA 4400	9.000																										
EVA 3000/5000 <sup>2</sup>	4.100																										
VLS 300 EVA Gateway	2.2.0																										
EVA 4000/6000/8000	6.110 <sup>3</sup>																										
EVA 4100/6100/8100	6.110 <sup>3</sup>																										
EVA 4400	9.000																										
EVA 3000/5000 <sup>2</sup>	4.100																										
VLS 9000 Series	2.2.0																										
VLS 6800 Series	2.2.0																										
VLS 6600 Series	2.2.0																										
VLS 6500 Series	2.2.0																										
VLS 6200 Series	2.2.0																										
VLS 6100 Series	2.2.0																										
D2D130 <sup>4</sup> (iSCSI)																											
D2D120 <sup>4</sup> (iSCSI)																											
D2D110 <sup>4</sup> (iSCSI)																											
VLS 1000i Series <sup>5</sup> (iSCSI)	2.6.0.228																										

**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) For more information go to "[www.hp.com/go/connect](http://www.hp.com/go/connect)"

5) Supported with Windows 2003 (32-bit) only using the native Microsoft iSCSI initiator or QLogic 4050c iSCSI HBA.

6) Support is with LTO emulations only.

# HP StorageWorks EBS Compatibility Matrix

## Advanced VLS Features

<b>VLS Accelerated Deduplication</b> <sup>2, 3, 4</sup>		Accelerated Deduplication requires integration with backup application and data source				
Direct Attach Fibre (DAF) and Storage Area Network (SAN) Support <sup>1</sup>	Native File System	Exchange 2003 <sup>5</sup>	Exchange 2007 <sup>5</sup>	Oracle 9i <sup>6</sup> File Backup	Oracle 10g File Backup	Oracle 10g RMAN
Data Protector 6.0	<i>Support scheduled for September 2008</i>					
NetBackup 6.5	✓	✓	✓	✓	✓	✓
NetBackup 6.0	✓	✓		✓	✓	✓
NetBackup 5.1	✓	✓		✓	✓	

### NOTES:

- 1) See "[How To Use This Document](#)" for description of support.
- 2) Accelerated Deduplication requires minimum firmware version 3.0.
- 3) Supported on VLS6600 and VLS9000. Support on VLS6200 and VLS 12000 EVS Gateway pending verification. NOT supported in the VLS300, VLS1001, VLS1002, VLS6100, VLS6500 or VLS6800.
- 4) Refer to application vendor (ISV) for specific operating system and database compatibility.
- 5) Accelerated Deduplication is supported with file backup only (no agent support).
- 6) Accelerated Deduplication is supported with file backup only (no RMAN support).

# HP StorageWorks EBS Compatibility Matrix

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

Direct Attach SCSI and SAS (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support <sup>1</sup>		HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Enterprise Class Libraries</b>	<b>Firmware</b>	<b>Extended Solution Interoperability (ESI) Partners<sup>1</sup></b>					
HP Secure Key Manager <sup>10,11</sup>	4.7.1	✓	✓	✓	✓	✓	✓
<b>ESL E-Series</b>	6.22	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC <sup>6</sup>	H36W <sup>11</sup>	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L67W	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K48W	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓
<b>EML E-Series</b>	1222	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC <sup>6</sup>	H36S <sup>11</sup>	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L6CS	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K710	✓	✓	✓	✓	✓	✓
<b>Business Class Libraries</b>	<b>Firmware</b>						
<b>MSL 8096<sup>2</sup></b>	<b>8.60</b>	✓	✓	✓	✓	✓ <sup>9</sup>	✓
<b>MSL 4048<sup>2</sup></b>	<b>6.20</b>	✓	✓	✓	✓	✓ <sup>9</sup>	✓
<b>MSL 2024<sup>2</sup></b>	<b>3.90</b>	✓	✓	✓	✓	✓ <sup>9</sup>	✓
Ultrium 1840 FC <sup>6</sup>	H36W	✓	✓	✓	✓	✓	✓
Ultrium 1840 SCSI <sup>6</sup>	B34W	✓	✓	✓	✓	✓	✓
Ultrium 1760 SAS <sup>3,6</sup>	U24W	✓	✓	✓	✓	✓	✓
<b>Ultrium 1760 SCSI<sup>6,12</sup></b>	<b>W22W</b>	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M63W	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L63W	✓	✓	✓	✓	✓	✓
Ultrium 960 SCSI	G63W	✓	✓	✓	✓	✓	✓
Ultrium 448 SCSI	S63W	✓	✓	✓	✓	✓	✓
Ultrium 920 SCSI	D22W	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS <sup>3</sup>	C24W	✓	✓	✓	✓	✓	✓
<b>MSL 6000 Series</b>	5.20	✓	✓	✓	✓	✓	✓
Ultrium 1840 <sup>6</sup>	B34W	✓	✓	✓	✓	✓	✓
Ultrium 960	G63W	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓
<b>Tape Autoloaders<sup>2,4,5</sup></b>	<b>Robot (Drive)</b>						
1/8 G2 (Ultrium 1760 SAS) <sup>3,6</sup>	<b>2.00</b> (U24W)	✓	✓	✓	✓	✓	✓
<b>1/8 G2 (Ultrium 1760 SCSI)<sup>6</sup></b>	<b>2.00 (W22W)</b>	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 920 SAS) <sup>3</sup>	<b>2.00</b> (C24W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 920)	<b>2.00</b> (D22W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 448)	<b>2.00</b> (S63W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 232)	<b>2.00</b> (P63W)	✓	✓	✓	✓	✓	✓
<b>Advanced Drive and Media Features</b>							
Ultrium LTO4 Application Key Management		✓	✓		✓	✓	
Ultrium WORM		✓	✓	✓	✓	✓	✓
SDLT 600 WORM			✓	✓	✓	✓	✓

**NOTES:**

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

2) Autoloaders, MSL 2024, MSL 4048, and MSL 8096 are not supported with SMART Array Controllers.

3) Automation products with SAS drives must be connected using the HP SC44Ge SAS HBA.

4) Autoloaders are only supported in Direct Attach SCSI configurations.

5) Refer to the EBS Design Guide for additional information 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 hardware encryption support details.

7) Support is with the Decru DataFort S-Series and S-Series for Tape only.

8) Support with Decru DataFort S-Series in a direct attach SCSI configuration only.

9) Not supported with Symantec Backup Exec for NetWare (BENW).

10) Please refer to Customer Advisory ["c01269477"](#) for operational details.

11) HP Secure Key Manager (SKM) requires ESIe LTO4 drive firmware version H36W or later and EMLe LTO4 drive firmware version H36S or later and that the libraries and Interface Controllers use firmware package **I231** or later. See the Interface Controller table on [page 13](#) for the full list of firmware requirements.

**12) Supported with MSL4048 and MSL2024 only**



# HP StorageWorks EBS Compatibility Matrix

## Tape Libraries/Autoloaders and Tape Automation Compatibility (TAC) Partner Products

Direct Attach SCSI and SAS (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support <sup>1</sup>

		HP Data Protector Express	HP Non-Stop Servers	HP File System Extender	Attempo Time Navigator	BakBone NetVault	Bridgehead HT ISM Suite	CommVault QInHex Galaxy	EMC Retrospect	Front Porch Digital DIVArchive	IBM TSM Express	Intradyn ComplianceVault	Microsoft DPM 2007	NeoScale CryptoStor <sup>13,14</sup>	Net-App Data ONTAP 7.2.x	Quantum StorNext	SGL FlashNet	Syncsort Backup Express	XenData Archive Series	Yosemite Backup	CipherMax CM140T / KeyCruiser	Cisco MDS 9000 SME	Crossroads TapeSentry	Crossroads ReadVerify Appliance	Decru DataFort <sup>13,17</sup>	FalconStor VTL	NetApp NearStore VTL Series	
		Software TAC Partners <sup>1</sup>																		Hardware TAC Partners <sup>1</sup>								
Enterprise Class Libraries	Firmware																											
HP Secure Key Manager <sup>9,15</sup>	4.7.1																											
<b>ESL E-Series</b>	6.22		✓	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC <sup>6</sup>	H36W <sup>15</sup>				✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L67W		✓	✓	✓	✓	✓	✓	✓	✓			✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW		✓	✓	✓	✓	✓	✓	✓	✓				✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K48W		✓	✓	✓	✓	✓	✓	✓	✓				✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600	v41			✓	✓	✓	✓	✓	✓	✓				✓			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>EML E-Series</b>	1222	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC <sup>6</sup>	H36S <sup>15</sup>				✓	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L6CS	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K710	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓				✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Business Class Libraries	Firmware																											
<b>MSL 8096 <sup>10</sup></b>	<b>8.60</b>		✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 4048 <sup>10</sup></b>	<b>6.20</b>	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 2024 <sup>10</sup></b>	<b>3.90</b>	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC <sup>6</sup>	H36W	✓ <sup>16</sup>				✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 SCSI <sup>6</sup>	B34W	✓				✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1760 SAS <sup>3,6</sup>	U24W	✓				✓	✓	✓	✓	✓					✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Ultrium 1760 SCSI <sup>6,17</sup></b>	<b>W22W</b>	✓				✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M63W	✓ <sup>16</sup>	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L63W	✓ <sup>16</sup>	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 SCSI	G63W	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 448 SCSI	S63W	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 SCSI	D22W	✓	✓ <sup>11</sup>			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS <sup>3</sup>	C24W	✓			✓	✓	✓	✓	✓	✓																		✓
<b>MSL 6000 Series</b>	5.20			✓	✓	✓	✓	✓	✓	✓	✓ <sup>12</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 1840 <sup>6</sup>	B34W					✓	✓	✓	✓	✓				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G63W			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600	v41			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Tape Autoloaders <sup>4,5,10</sup>	Robot (Drive)																											
1/8 G2 (Ultrium 1760 SAS) <sup>3,6</sup>	2.00 (U24W)	✓																										✓
<b>1/8 G2 (Ultrium 1760 SCSI) <sup>6</sup></b>	<b>2.00 (W22W)</b>	✓				✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 920 SAS) <sup>3</sup>	2.00 (C24W)																											✓
1/8 G2 (Ultrium 920)	2.00 (D22W)												✓															✓
1/8 G2 (Ultrium 448)	2.00 (S63W)																											✓
1/8 G2 (Ultrium 232)	2.00 (P63W)																											✓
Advanced Drive and Media Features																												
Ultrium LTO4 Application Key Management		✓								✓																		✓
Ultrium WORM			✓	✓		✓	✓	✓		✓	✓				✓				✓	✓								✓
SDLT 600 WORM				✓		✓	✓	✓		✓									✓	✓								✓

NOTES:

- See "How To Use This Document" for description of support.
- Please refer to Customer Advisory "c01154679" for interoperability details.
- Automation products using SAS drives must be connected using the HP SC44Ge SAS HBA.
- Autoloaders are only supported in Direct Attach SCSI configurations.
- Refer to the EBS Design Guide for additional information on the use of native backup commands and programs.
- LTO4 (Ultrium 1840 and 1760) drives support AES hardware encryption. Refer to the backup/restore application vendor for hardware encryption support details.
- Support is with the Decru DataFort FC-Series and S-Series for Tape only.
- Support with Decru DataFort S-Series in a direct attach SCSI configuration only.
- Please refer to Customer Advisory "c01269477" for operational details.
- Autoloaders, MSL 2024, MSL 4048, and MSL 8096 are not supported with SMART Array Controllers.
- Requires connectivity of tape library to HP Virtual TapeServer for Non-Stop Systems.
- Support is only with MSL 6026 and MSL 6030 models.
- Refer to vendor for software application and additional hardware interoperability support.
- Support is with the NeoScale CryptoStor Tape 700 Family only.
- HP Secure Key Manager (SKM) requires ESLe LTO4 drive firmware version H36W or later and EMLe LTO4 drive firmware version H36S or later and that the libraries and Interface Controllers use firmware package 1231 or later. See the Interface Controller table on [page 13](#) for the full list of firmware requirements.
- Direct Attached FC only.
- Supported with MSL4048 and MSL2024 only

# HP StorageWorks EBS Compatibility Matrix

## Advanced Library Features

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Enterprise Libraries</b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.					
ESL E-Series 2 Unit Cross Link <sup>1</sup>	✓	✓ <sup>3</sup>	✓	✓		✓
ESL E-Series 3-5 Unit Cross Link <sup>1</sup>	✓			✓		✓
ESL Mixed Media	✓	✓ <sup>3</sup>	✓	✓	✓ <sup>4</sup>	✓
ESL Library Partitioning	✓	✓ <sup>3</sup>	✓	✓	✓ <sup>4</sup>	✓
EML Library Partitioning	✓		✓	✓	✓ <sup>4</sup>	✓
<b>Midrange Libraries</b>						
Autoloader & MSL G3 LTO-4 Encryption Kit (EK) <sup>5</sup>	✓	✓	✓	✓	✓	✓
MSL G3 Library Partitioning	✓	✓	✓	✓	✓	✓
MSL 6000 Multi-Unit Scalability <sup>1,2</sup>	✓	✓	✓	✓	✓	✓
MSL 6000 Mixed Media Support	✓	✓	✓	✓	✓ <sup>4</sup>	✓

### 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) Encryption key server token for LTO-4 based Autoloaders, MSL2024, MSL4048, and MSL8096 libraries.**

# HP StorageWorks EBS Compatibility Matrix

## Backup Application Details <sup>1</sup>

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec (Windows)	Symantec Backup Exec (NetWare)	Symantec Veritas NetBackup
<b>Partner Device Compatibility Pages <sup>1</sup></b>	<a href="#">Data Protector HCL</a>	<a href="#">ARCserve HCL</a>	<a href="#">NetWorker HCL</a>	<a href="#">Tivoli Storage Manager HCL</a>	<a href="#">Backup Exec HCL</a>	<a href="#">Backup Exec HCL</a>	<a href="#">NetBackup HCL</a>
<b>Recommended Tape Driver</b>	Native Drivers	CABA Drivers	HP Drivers	Tivoli Drivers	BE Drivers	BE Drivers	HP or NBU Drivers

## Lastest and Minimum Application Version Support

Enterprise Class Libraries	HP Data Protector		CA ARCserve <sup>9</sup>		EMC NetWorker		IBM Tivoli Storage Manager		Symantec Backup Exec (Windows)		Symantec Backup Exec (NetWare)		Symantec Veritas NetBackup	
	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum
ESL E-Series	6.0	5.0	12.0 <sup>9</sup>	9.0	7.4	6.0	5.5 <sup>8</sup>	5.3	12.0	9.0	9.2	9.0	6.5	4.5
EML E-Series	6.0	5.1	12.0 <sup>9</sup>	9.0	7.4	7.0	5.5 <sup>8</sup>	5.3	12.0	10.0			6.5	5.0

## Virtual Library Systems

VLS 12000/300 EVA Gateway	6.0	5.5	12.0 <sup>7,9</sup>	11.1 <sup>7</sup>	7.4	7.0	5.5	5.3	12.0	10.0			6.5	5.0
VLS 9000 Series	6.0	5.5	12.0 <sup>7,9</sup>	11.1 <sup>7</sup>	7.4	7.0	5.5	5.3	12.0	10.0			6.5	5.0
VLS 6000 Series	6.0	5.1	12.0 <sup>7,9</sup>	11.1 <sup>7</sup>	7.4	7.0	5.5	5.3	12.0	10.0			6.5	5.0
VLS 1000i Series (iSCSI)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5 <sup>5</sup>	5.3 <sup>5</sup>	12.0 <sup>5</sup>	10d <sup>5</sup>			6.5	5.0

## D2D Backup Systems

For complete list of compatibility see: [www.hp.com/go/connect](http://www.hp.com/go/connect)

## Business Class Libraries

MSL 6000 Series	6.0	5.0	12.0 <sup>9</sup>	9.0	7.4	6.0	5.5	5.3	12.0	9.0	9.2	9.0	6.5	4.5
MSL 8096	6.0	5.5	12.0 <sup>9</sup>	11.1	7.4	7.0	5.5	5.3	12.0	10d <sup>2,4</sup>			6.5	6.0
MSL 4048	6.0	5.1	12.0 <sup>9</sup>	11.1	7.4	7.0	5.5	5.3	12.0	10d <sup>2,4</sup>			6.5	6.0
MSL 2024	6.0	5.1	12.0 <sup>9</sup>	11.1	7.4	7.0	5.5	5.3	12.0	10d <sup>2,4</sup>			6.5	6.0

## Autoloaders

1/8 G2 Tape Autoloader (Ultrium 1760 SAS)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	10d <sup>3</sup>	9.2	9.0	6.5	6.0
<b>1/8 G2 Tape Autoloader (Ultrium 1760 SCSI)</b>	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	10d <sup>3</sup>	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	10d <sup>3</sup>	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920 SAS)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	11d <sup>4</sup>			6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 448)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	10d <sup>3</sup>	9.2 <sup>6</sup>	9.0 <sup>6</sup>	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 232)	6.0	5.5	12.0 <sup>9</sup>	11.5	7.4	7.0	5.5	5.3	12.0	10d <sup>3</sup>	9.2 <sup>6</sup>	9.0 <sup>6</sup>	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 to support the HP StorageWorks MSL2024 and MSL4048 Tape Automation Libraries.
- 3) Backup Exec version 10d and Device Driver Installer (DDI) version 20061015 or later are required to support the HP StorageWorks 1/8 G2 Tape Autoloaders.
- 4) Backup Exec 11d and Device Driver Installer (DDI) version 20061215 or later are required to support HP StorageWorks Ultrium 920 SAS drives in HP libraries.
- 5) Configurations running an HP VLS1000i virtual tape library must use the "HP VLS1000i" emulation in order to function properly.
- 6) BENW 9.x Driver SET 2 is required for Ultrium 232 and 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 drives
- 9) CA ARCserve 12.0 only supports Windows based media servers.

Libraries and Interface Controllers

(page 1 of 2)

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 M2402	NSR N1200-320 4Gb	NSR N1200
ESL E-Series 712e/322e (Ultrium 1840 FC)				✓					
ESL E-Series 712e/322e (Ultrium 960 FC)	✓	✓							
ESL E-Series 712e/322e (Ultrium 460)			✓						
ESL E-Series 712e/322e (Ultrium 460 FC)	✓	✓							
ESL E-Series 630e/286e (SDLT600)			✓						
EML E-Series (Ultrium 1840 FC)				✓					
EML E-Series (Ultrium 960 FC)	✓	✓							
EML E-Series (Ultrium 460 FC)	✓	✓							
ESL E-Series Cross Link	✓	✓	✓						
Interface Manager	✓	✓	✓						
MSL 6060 (Ultrium 1840)					✓	✓ <sup>3</sup>	✓ <sup>3</sup>		
MSL 6060 (Ultrium 960)					✓	✓	✓		
MSL 6060 (Ultrium 460)					✓	✓	✓		
MSL 6052 (SDLT 600)					✓	✓	✓		
MSL 6030 (Ultrium 1840)					✓	✓	✓		
MSL 6030 (Ultrium 960)					✓	✓	✓		
MSL 6030 (Ultrium 460)					✓	✓	✓		
MSL 6026 (SDLT 600)					✓	✓	✓		
MSL 6000 Multi-Unit Scalability					✓	✓	✓		
MSL 8096 (Ultrium 1840 FC) <sup>1</sup>				✓					
MSL 8096 (Ultrium 1840 SCSI)								✓	✓
MSL 8096 (Ultrium 960 4Gb FC) <sup>1</sup>				✓					
MSL 8096 (Ultrium 960 SCSI)								✓	✓
MSL 4048 (Ultrium 1840 FC) <sup>1</sup>				✓					
MSL 4048 (Ultrium 1840 SCSI)								✓	✓
MSL 4048 (Ultrium 960 4Gb FC) <sup>1</sup>				✓					
MSL 4048 (Ultrium 960 FC) <sup>1</sup>				✓					
MSL 4048 (Ultrium 960 SCSI)								✓	✓
MSL 4048 (Ultrium 920 SCSI)								✓	✓
MSL 4048 (Ultrium 448 SCSI)								✓	✓
MSL 2024 (Ultrium 1840 FC) <sup>1</sup>				✓					
MSL 2024 (Ultrium 1840 SCSI)								✓	✓
MSL 2024 (Ultrium 960 4Gb FC) <sup>1</sup>				✓					
MSL 2024 (Ultrium 960 FC) <sup>1</sup>				✓					
MSL 2024 (Ultrium 960 SCSI)								✓	✓
MSL 2024 (Ultrium 920 SCSI)								✓	✓
MSL 2024 (Ultrium 448 SCSI)								✓	✓

NOTES:

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

3) Use the e1200-320 4Gb FC interface controller for best performance. NSR M2402 and e1200-160 are still supported, but performance will be limited.

2) Multi-unit configurations that include an Interface Manager card are restricted to two libraries.

**Interface Controllers**

(page 2 of 2)

Interface Manager Firmware Required Minimum Component	i160	i161	i170	i171	i180	i182	i200	i220	i230	i231 <sup>1</sup>
e2400-FC 4Gb Interface Controller (FC-FC)	N/A	5.7.06	5.7.18	5.7.1b	5.7.1f	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d
e2400-FC 2Gb Interface Controller (FC-FC)	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d
e2400-160 Interface Controller (FC-SCSI)	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d
NSR E2400	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d
NSR E1200-160	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c	5.9.28	5.9.28	5.9.29	5.9.36	5.9.3d
ESL E-Series	4.10	4.10	4.60	4.60	4.86		5.10	6.00	6.20	6.22
EML E-Series	1022	1022	1022	1022	1070		1126	1200	1222	1222
JAVA Run Time	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
Command View TL	1.6.00	1.6.01	1.7	1.7	1.8.00	1.8.00 or 2.0.00	2.0.00	2.2.00	2.3.00	2.3.01

Interface Controller Firmware (non-Interface Manager)	
e1200-320 4Gb (MSL6000)	5.9.3d
N1200-320 4Gb	5.9.3d

**NOTES:**

1) HP Secure Key Manager (SKM) requires ESLe LTO4 drive firmware version H36W or later and EMLe LTO4 drive firmware version H36S or later and that the libraries and Interface Controllers use firmware package i231 or later.

# HP StorageWorks EBS Compatibility Matrix

## HP-UX (PA-RISC) <sup>6</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>9</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1,2</sup>						
HP-UX 11.11 (11i v1)	HWE 11i v1, June 2005 Quality Pack. June 2005	HWE 11i v1, Dec 2004 Gold Pack, Dec 2004	HWE 11i v1, Dec 2007 Quality Pack Dec 2007	HWE 11i v1, Dec 2004 Gold Pack, Dec 2004		HWE 11i v1, Dec 2007 Quality Pack. Dec 2007
HP-UX 11.23 (11i v2)	HWE 11i v2 March 2006 Quality Pack March 2006		HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11i v2 June 2006 Quality Pack March 2006		HWE 11i v2 Dec 2007 Quality Pack Dec 2007
HP-UX 11.31 (11i v3)	✓ <sup>7</sup>		HWE 11i v3 Sept 2007 <sup>8</sup> Quality Pack Sept 2007 <sup>8</sup>			
<b>Servers</b>						
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) <sup>3</sup>	✓	✓	✓	✓		✓
<b>4Gb Fibre Channel Host Bus Adapters</b> <sup>5</sup>						
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
<b>2Gb Fibre Channel Host Bus Adapters</b> <sup>5</sup>						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
td Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support</b> <sup>5</sup>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability</b> <sup>4</sup>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

### NOTES:

1) Other Operating Systems may be supported within EBS by the respective ISVs as 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) DP 5.5 support only

8) The HP-UX 11.31 PHKL\_36312 patch is required to support the NetWorker 7.4 CDI driver.

9) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

## HP-UX (Integrity)<sup>5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>9</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems<sup>1, 2</sup></b>						
HP-UX 11.23 (11i v2)	HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11i v2 May 2005 Quality Pack May 2005	HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11i v2 Dec 2007 Quality Pack Dec 2007		HWE 11i v2 Dec 2007 Quality Pack Dec 2007
HP-UX 11.31 (11i v3)			HWE 11i v3 Mar 2008 <sup>7</sup> Quality Pack Mar 2008 <sup>7</sup>			
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem						✓
<b>4Gb Fibre Channel Host Bus Adapters<sup>4</sup></b>						
AD299A / AD355A (4G, PCI-e) <sup>8</sup>						
FW	2.70X5		2.70X5	2.70X5		2.70X5
fclp Driver	Native <sup>8</sup>		Native <sup>8</sup>	Native <sup>8</sup>		Native <sup>8</sup>
AD300A / QLogic QLE2462 (4G, PCI-e)						
FW	<b>4.00.90</b>			<b>4.00.90</b>		<b>4.00.90</b>
fcd Driver	Native			Native		Native
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	<b>4.00.90</b>		<b>4.00.90</b>	<b>4.00.90</b>		<b>4.00.90</b>
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)						
FW	<b>4.00.90</b>		<b>4.00.90</b>	<b>4.00.90</b>		<b>4.00.90</b>
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	<b>4.00.90</b>		<b>4.00.90</b>	<b>4.00.90</b>		<b>4.00.90</b>
fcd Driver	Native		Native	Native		Native
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters<sup>4</sup></b>						
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem (403619-B21)						
FW	<b>4.00.90</b>		<b>4.00.90</b>	<b>4.00.90</b>		<b>4.00.90</b>
fcd Driver	Native		Native	Native		Native
<b>2Gb Fibre Channel Host Bus Adapters<sup>4</sup></b>						
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
EFI	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>	<b>1.24</b>		<b>1.24</b>
td Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support<sup>4</sup></b>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability<sup>6</sup></b>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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 [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 FibrChanI02 driver
- 9) Supported with CA ARCserve 11.5 only

# 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
<b>Operating Systems 1, 2</b>						
Windows Server 2003 Release 2 (32-bit)	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2008 (32-bit)					✓	
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓
<b>8Gb Fibre Channel Host Bus Adapters 5,6 (HP Branded / 3rd Party)</b>						
81Q / QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00	2.00	2.00	2.00	2.00	2.00
WIN 2003 StorPort Driver	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15
<b>4Gb Fibre Channel Host Bus Adapters 5,6 (HP Branded / 3rd Party)</b>						
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	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver 4					5-2.00a12	
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
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					9.1.6.15	
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	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver 4					5-2.00a12	
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
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					9.1.6.15	
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters 5</b>						
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					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					9.1.6.15	

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 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) 3rd Party adapters require HP drivers and firmware.



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
<b>2Gb Fibre Channel Host Bus Adapters <sup>1,2</sup> (HP Branded / 3rd Party)</b>						
A7560A / Emulex LP1050EX (2G, PCI-e)						
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 <sup>3,4</sup>	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver <sup>4</sup>					5-2.00a12	
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 <sup>3,4</sup>	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver <sup>4</sup>					5-2.00a12	
FCA2101 / Emulex LP952 (2G, PCI-X)						
FCA2355 / Emulex LP9002DC (2G, PCI-X)						
FW	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0
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 <sup>3,4</sup>	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
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 <sup>3,4</sup>	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 <sup>4</sup>					9.1.6.15	
<b>2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters <sup>5</sup></b>						
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 <sup>3,4</sup>	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
WIN 2008 StorPort Driver <sup>4</sup>					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 <sup>3,4</sup>	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 <sup>4</sup>					9.1.6.15	

NOTES:

- 1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 2) 3rd Party adapters require HP drivers and firmware.

- 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.

## 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
<b>Disk Array Multipath Support <sup>1</sup></b>						
Secure Path for Windows	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1
Windows MPIO <sup>5</sup>	✓	✓	✓	✓	✓	✓
<b>High Availability <sup>2</sup></b>						
Windows (MSCS)	✓	✓	✓	✓ <sup>3</sup>	✓ <sup>4</sup>	✓

### 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.

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.

**Windows (Integrity)**

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters</b> <sup>4, 7</sup>						
<b>HP Branded / 3rd Party</b>						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
A8002A / Emulex LPe1150 (4G, PCI-e) A8003A / Emulex PLe11002 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2		2.72a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-2.00a12	6-2.00a12	6-2.00a12	6-2.00a12		6-2.00a12
AE311A / QLogic QLE2460 (4G, PCI-e) AD300A / QLogic QLE2462 (4G, PCI-e)						
EFI	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver <sup>5, 8</sup>	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
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 <sup>5, 8</sup>	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)						
EFI	1.09	1.09	1.09	1.09		1.09
WIN 2003 StorPort Driver <sup>5, 8</sup>	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18		9.1.3.18
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 <sup>5, 8</sup>	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 <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
AB232A / Emulex LP9802 (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 <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
<b>Disk Array Multipath Support</b> <sup>4</sup>						
Secure Path for Windows	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1		4.0C SP2-1
Windows MPIO <sup>6</sup>	✓	✓	✓	✓		✓
<b>High Availability</b> <sup>3</sup>						
Windows (MSCS)	✓	✓	✓	✓		✓

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
  - 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.
- June 2008, v1.0

- 5) Please reference ISV application installation/support 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) 3rd Party adapters require HP drivers and firmware.
- 8) All non-sp2 systems running applications other than Tivoli require updated Storport.sys KB8891793 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys **KB945119**.

# 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
<b>Operating Systems</b> <sup>1,2</sup>						
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					✓	
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
<b>8Gb Fibre Channel Host Bus Adapters</b> <sup>4,5</sup> (HP Branded / 3rd Party)						
81Q / QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00	2.00	2.00	2.00	2.00	2.00
WIN 2003 StorPort Driver	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15	9.1.6.15
<b>4Gb Fibre Channel Host Bus Adapters</b> <sup>4,5</sup> (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 <sup>6,7</sup>	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver <sup>7</sup>					7-2.00a12	
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 StorPort Driver <sup>6,7</sup>	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 <sup>7</sup>					9.1.6.15	
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 <sup>6,7</sup>	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver <sup>7</sup>					7-2.00a12	
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 StorPort Driver <sup>6,7</sup>	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 <sup>7</sup>					9.1.6.15	
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters</b> <sup>4</sup>						
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 <sup>6,7</sup>	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver <sup>7</sup>					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 <sup>6,7</sup>	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 <sup>7</sup>					9.1.6.15	

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 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) Please reference ISV application installation/support documents for specific driver and patch requirements.

**Windows (x64)**

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DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>2Gb Fibre Channel Host Bus Adapters <sup>4,5</sup> (HP Branded / 3rd Party)</b>						
FCA2408 / Emulex LP982 (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 <sup>6,7</sup>	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver <sup>7</sup>					7-2.00a12	
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 <sup>6,7</sup>	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
WIN 2008 StorPort Driver <sup>7</sup>					7-2.00a12	
<b>2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters <sup>4</sup></b>						
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 <sup>6,7</sup>	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 <sup>7</sup>					9.1.6.15	
<b>Disk Array Multipath Support <sup>4</sup></b>						
Windows MPIO	✓	✓	✓	✓	✓	✓
<b>High Availability <sup>3</sup></b>						
Windows (MSCS)	✓	✓	✓	✓	✓	✓

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 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) Please reference ISV application installation/support documents for specific driver and patch requirements.

# HP StorageWorks EBS Compatibility Matrix

**LINUX (x86)** <sup>4,6</sup>

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DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>7</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1,2</sup>						
Red Hat Enterprise Linux [AS/ES/WS] 3.0 (32-bit)	✓	✓	✓	✓		✓
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (32-bit)	✓	✓	✓	✓		✓
Red Hat Enterprise Linux [AS/ES/WS] 5.0 (32-bit)	✓		✓	✓		✓
SUSE SLES 9 (32-bit)	✓	✓	✓	✓		✓
SUSE SLES 10 (32-bit)	✓		✓	✓		✓
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
<b>8Gb Fibre Channel Host Bus Adapters</b> <sup>3,5</sup> (HP Branded / 3rd Party)						
81Q / QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00		2.00	2.00		2.00
Red Hat Enterprise Linux 5.0 driver	8.02.03		8.02.03	8.02.03		8.02.03
SUSE SLES 10 driver	8.02.03		8.02.03	8.02.03		8.02.03
<b>4Gb Fibre Channel Host Bus Adapters</b> <sup>3,5</sup> (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6			7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLE2462 (4G, PCI-e)						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05			7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6			7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

## LINUX (x86) <sup>4,6</sup>

(page 2 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>7</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters <sup>3,5</sup></b>						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>2Gb Fibre Channel Host Bus Adapters <sup>3,5</sup> (HP Branded / 3rd Party)</b>						
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45	1.45	1.45	1.45		1.45
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters <sup>3,5</sup></b>						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
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
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>Disk Array Multipath Support <sup>3</sup></b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	2.1.9	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	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
Secure Path for Linux	3.0C		3.0C SP2	3.0C SP1		3.0C SP2

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

## LINUX (Integrity)<sup>3,5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>6</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems<sup>1,2</sup></b>						
Red Hat Enterprise Linux [AS/ES/WS] 3.0 (64-bit)	✓		✓			✓
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (64-bit)	✓	✓	✓			✓
Red Hat Enterprise Linux [AS/ES/WS] 5.0 (64-bit)						✓
SUSE SLES 9 (64-bit)	✓	✓	✓			✓
SUSE SLES 10 (64-bit)	✓					✓
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓			✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓			✓
<b>4Gb Fibre Channel Host Bus Adapters<sup>4</sup> (HP Branded / 3rd Party)</b>						
A8002A / Emulex LPe11000 (4G, PCI-e)						
A8003A / Emulex LPe11002 (4G, PCI-e)						
FW						2.72a2
Red Hat Enterprise Linux 4.0 driver						8.0.16.32
SUSE SLES 9 driver						8.0.16.32
AE311A / QLogic QLE2460 (4G, PCI-e)						
AD300A / QLogic QLE2462 (4G, PCI-e)						
EFI						1.09
Red Hat Enterprise Linux 5.0 driver						8.01.07.25
SUSE SLES 10 driver						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			2.72a2
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27			8.0.16.32
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27			8.0.16.32
SUSE SLES 10 driver	8.1.6.7					8.1.6.7
AB429A / QLogic QLA2460 (4G, PCI-X 2.0)						
AB379A/AB379B / QLogic QLA2462 (4G, PCI-X 2.0)						
EFI	1.09	1.09	1.09			1.09
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.07.25	8.01.07.25			8.01.07.25
Red Hat Enterprise Linux 5.0 driver						8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.07.25	8.01.07.25			8.01.07.25
SUSE SLES 10 driver	8.01.07.25					8.01.07.25
<b>2Gb Fibre Channel Host Bus Adapters<sup>4</sup> (HP Branded / 3rd Party)</b>						
A7538A / Qlogic QLA2340 (2G, PCI-X)						
A6826A / Qlogic QLA2342 (2G, PCI-X)						
BIOS	1.49	1.49	1.49			1.49
Red Hat Enterprise Linux 3.0 driver	7.07.05		7.07.05			7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.07.25	8.01.07.25			8.01.07.25
Red Hat Enterprise Linux 5.0 driver						8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.07.25	8.01.07.25			8.01.07.25
SUSE SLES 10 driver	8.01.07.25					8.01.07.25
<b>Disk Array Multipath Support<sup>4</sup></b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	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			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
Secure Path for Linux	3.0C		3.0C			3.0C SP2

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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) Supported with CA ARCserve 11.5 only



# HP StorageWorks EBS Compatibility Matrix

**LINUX (x64)** <sup>4,6</sup>  
(page 1 of 2)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>7</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1,2</sup>						
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (x64)	✓	✓	✓	✓		✓
Red Hat Enterprise Linux [AS/ES/WS] 5.0 (x64)	✓		✓	✓		✓
SUSE SLES 9 (x64)	✓	✓	✓	✓		✓
SUSE SLES 10 (x64)	✓		✓	✓		✓
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
HP NetServer	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
<b>8Gb Fibre Channel Host Bus Adapters</b> <sup>3,5</sup> (HP Branded / 3rd Party)						
81Q / QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00		2.00	2.00		2.00
Red Hat Enterprise Linux 5.0 driver			8.02.03	8.02.03		8.02.03
SUSE SLES 10 driver	8.02.03		8.02.03	8.02.03		8.02.03
<b>4Gb Fibre Channel Host Bus Adapters</b> <sup>3,5</sup> (HP Branded / 3rd Party)						
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLE2462 (4G, PCI-e)						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
FC1143 / QLogic QLA2460 (4G, PCI-X 2.0)						
FC1243 / QLogic QLA2462 (4G, PCI-X 2.0)						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

**LINUX (x64)** <sup>4,5</sup>

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DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>7</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>4Gb HP c-Class BladeSystem Fibre Channel Host Bus Adapters <sup>3</sup></b>						
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	<b>8.1.6.7</b>		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	<b>8.1.6.7</b>		8.1.6.7
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>2Gb Fibre Channel Host Bus Adapters <sup>3,6</sup> (HP Branded / 3rd Party)</b>						
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45	1.45	1.45	1.45		1.45
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>2Gb HP p-Class BladeSystem Fibre Channel Host Bus Adapters <sup>3</sup></b>						
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
Red Hat Enterprise Linux 5.0 driver			8.1.6.7	8.1.6.7		8.1.6.7
SUSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.32
SUSE SLES 10 driver	8.1.6.7		8.1.6.7	8.1.6.7		8.1.6.7
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
Red Hat Enterprise Linux 4.0 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
Red Hat Enterprise Linux 5.0 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 9 driver	8.01.07.25	8.01.06	8.01.07.25	8.01.07.25		8.01.07.25
SUSE SLES 10 driver	8.01.07.25		8.01.07.25	8.01.07.25		8.01.07.25
<b>Disk Array Multipath Support <sup>3</sup></b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	2.1.9	2.1.9	2.1.9		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) Other Operating Systems may be supported within EBS by the respective ISVs as 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) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

## Solaris

(page 1 of 2)

DAS, DAF, and SAN Support 1, 2	HP Data Protector	CA ARCserve 5	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b>						
Solaris 9	✓	✓	✓	✓		✓
Solaris 10 SPARC	✓	✓	✓	✓		✓
Solaris 10 x86/x64				✓		✓
<b>Servers</b>						
Sun UltraSPARC	✓	✓	✓	✓		✓
Sun Sun Fire	✓	✓	✓	✓		✓
HP ProLiant				✓		✓
<b>4Gb Fibre Channel Host Bus Adapters</b> 3						
SG-XPCI1FC-EM4-Z (4G, PCI-X 2.0)						
SG-XPCI2FC-EM4-Z (4G, PCI-X 2.0)						
Sun Native Driver	✓	✓	✓	✓		✓
Emulex LP11000 (4G, PCI-X 2.0)						
Emulex LP11002 (4G, PCI-X 2.0)						
Sun Native Driver	✓	✓	✓	✓		✓
SG-XPCI1FC-QF4 (4G, PCI-X 2.0)						
SG-XPCI2FC-QF4 (4G, PCI-X 2.0)						
Sun Native Driver	✓	✓	✓	✓		✓
QLogic QLA2460 (4G, PCI-X 2.0)						
QLogic QLA2462 (4G, PCI-X 2.0)						
Sun Native Driver	✓	✓	✓	✓		✓
<b>2Gb Fibre Channel Host Bus Adapters</b> 3						
SG-XPCI1FC-EM2 (2G, PCI-X)						
SG-XPCI2FC-EM2 (2G, PCI-X)						
Sun Native Driver	✓	✓	✓	✓		✓
SG-XPCI1FC-QF2 (X6767A) (2G, PCI-X)						
SG-XPCI2FC-QF2 (X6768A) (2G, PCI-X)						
Sun Native Driver	✓	✓	✓	✓		✓
SG-XPCI1FC-QL2 (2G, PCI-X)						
SG-XPCI2FC-QF2-Z (2G, PCI-X)						
Sun Native Driver	✓	✓	✓	✓		✓
QLogic QLA2340 (2G, PCI-X)						
QLogic QLA2342 (2G, PCI-X)						
Fcode			2.00.09	2.00.09		
QLogic Driver			4.20	4.20		
Sun Native Driver			✓	✓		
FCA2684/Emulex LP10000 (2G, PCI-X)						
FCA2684DC/Emulex LP10000DC (2G, PCI-X)						
FW	1.91a1	1.91a1	1.91a1	1.91a1		1.91a1
Emulex Driver	6.02h	6.02h	6.02h 4	6.02h 4		6.02h
Sun Native Driver		✓	✓	✓		✓
Emulex LP9002L (2G, PCI-X)						
FW			3.92a2			
Emulex Driver			6.01f			
FCA2257P (2G, PCI-X)						
Fcode	2.00.09	2.00.09	2.00.09	2.00.09		2.00.09
Driver	4.20	4.20	4.20	4.20		4.20

### NOTES:

1) Other Operating Systems may be supported within EBS by the respective ISVs as 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.

June 2008, v1.0

4) Supported with Solaris 9 only.

5) Supported with CA ARCserve 11.5 only

# 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
<b>Disk Array Multipath Support <sup>1</sup></b>						
Solaris MPxIO			✓	✓		✓
VERITAS DMP			✓ <sup>3</sup>			✓ <sup>3</sup>
<b>High Availability <sup>2</sup></b>						
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.

# HP StorageWorks EBS Compatibility Matrix

## Tru64 Unix

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>9</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
Tru64 5.1A <sup>8</sup>	5.1A pk6	5.1A pk6 <sup>7</sup>	5.1A pk6			5.1A pk6
Tru64 5.1B <sup>8</sup>	5.1B-3		5.1B-4			5.1B-4
<b>Servers</b>						
HP AlphaServer	✓	✓	✓			✓
<b>Fibre Host Bus Adapters</b> <sup>5</sup>						
FCA2684 (2G, PCI-X)						
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			3.93a0
Tru64 Driver	2.17	2.14	2.17			2.17
FCA2384 (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
<b>Disk Array Multipath Support</b> <sup>5</sup>						
Tru64 Multipath		Native	Native			Native
<b>High Availability</b> <sup>4</sup>						
Tru64 (TruCluster)			✓			✓

## OpenVMS

<b>Operating Systems</b> <sup>1, 2</sup>						
OpenVMS 8.2 <sup>3, 6, 8</sup>	✓					
OpenVMS 8.2-1 <sup>3, 6, 8</sup>	✓					
OpenVMS 8.3 <sup>3, 6, 8</sup>	✓					
<b>Servers</b>						
HP AlphaServer	✓					
HP Integrity	✓					
<b>Fibre Host Bus Adapters</b> <sup>5</sup>						
FCA2684 (2G, PCI-X)						
FCA2684 DC (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
FCA2354 (2G, PCI-X)						
FW	3.93a0					
OVMS Driver	Native					
FCA2384 (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
A6826A (2G, PCI-X)						
EFI	1.47					
OVMS Driver	Native					

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application 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) Supported with CA ARCserve 11.5 only

# HP StorageWorks EBS Compatibility Matrix

## AIX

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

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as 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 CA ARCserve 11.5 only

## NetWare

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve <sup>6</sup>	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
NetWare 6.5	6.5 sp5	6.5 sp2 <sup>3</sup>			6.5 sp6	
<b>Servers</b>						
HP ProLiant <sup>5</sup>	✓	✓			✓	
HP ProLiant p-Class Blade Server <sup>5</sup>	✓	✓			✓	
Third Party X86	✓	✓			✓	
<b>Fibre Host Bus Adapters</b> <sup>3, 5</sup>						
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	
<b>Disk Array Multipath Support</b> <sup>5</sup>						
MPIO	✓				✓	
<b>High Availability</b> <sup>4</sup>						
NetWare 6.5 (NWCS)	✓				✓	

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 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) Supported with CA ARCserve 11.5 only

**RAID Arrays**

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

**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 [Infrastructure](#) 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.



**Infrastructure**

SAN Support	Supported Release	Native Fibre Channel Drives			Virtual Library Systems			Interface Controllers							
		Ultraium 1840 FC Drive (4Gb)	Ultraium 960 FC Drive (4Gb)	Ultraium 960 FC Drive (2Gb)	VLS 12000/300 EVA	VLS 9000 Series	VLS 6000 Series	e2400-FC 4Gb	e2400-FC 2Gb	e2400-160	e1200-320 4Gb	NSR E1200-160	NSR M2402	NSR N1200-320 4Gb	NSR N1200
<b>SAN Switches <sup>1</sup></b>															
<b>B-Series</b>															
SAN Director 4/256	6.0.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/64, 4/32B, 4/32, 4/16, 4/8	6.0.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP c-Class BladeSystem (4/12 and 4/24)	6.0.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	6.0.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	5.3.1a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	5.0.5f	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32, 2/8V, 2/16V, 2/16N	5.3.1a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>C-Series</b>															
Cisco MDS 9513, 9509, 9506, 9222i, 9216i, 9216A, 9216, 9124, 9124e, 9140, 9134, 9120	3.3(1a)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9020	2.1(3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>M-Series</b>															
McData 4Gb SAN Switch for HP p-Class BladeSystem	6.4.0.13.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
McData Spheron 4700, 4400	09.06.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/140, 2/64	09.06.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32, 2/24, 2/16, 2/12	09.06.02	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>8Gb Simple SAN Connection</b>															
HP StorageWorks 8/20q Fibre Channel Switch <sup>6</sup>	6.9.0.15.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Multi-Protocol Routers, Gateways, and Virtual Connect <sup>1</sup></b>															
<b>HP 4Gb Virtual Connect FC Module (VC-FC) <sup>7</sup></b>	<b>1.24</b>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks 400 Multi-Protocol Router <sup>2,5</sup>	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks Multi-Protocol Router Blade <sup>2,5</sup>	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Router <sup>2,3</sup>	7.4.1e	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 <sup>4</sup>	3.4.5c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**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) Supports connection to Brocade fabrics.**

# HP StorageWorks EBS Compatibility Matrix

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

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
<b>HP StorageWorks Enterprise File Services (EFS) Clustered Gateway is a file server gateway. Based on a truly symmetrical cluster file system</b>						
EFS Clustered Gateway (PolyServe) Windows	✓	✓	✓ <sup>3</sup>	✓	✓	✓
EFS Clustered Gateway (PolyServe) Linux	✓		✓	✓	✓	✓
<b>HP All-in-One (AiO) Storage, single integrated solution providing shared storage for application servers (iSCSI Target), enhanced file serving (NAS), backup target services and data protection software</b>						
AiO1200 <sup>2</sup>	✓	✓	✓	✓	✓	✓
AiO600 <sup>2</sup>	✓	✓	✓	✓	✓	✓
AiO400t <sup>2</sup>	✓	✓	✓	✓	✓	✓
AiO400r <sup>2</sup>	✓	✓	✓	✓	✓	✓
<b>HP ProLiant Storage Server is a powerful file and print solution that enables environments to centralized Network Attached Storage (NAS).</b>						
DL585G2 Storage Server	✓	✓	✓	✓	✓	✓ <sup>1</sup>
DL380 G5 Storage Server	✓	✓	✓	✓	✓	✓ <sup>1</sup>
DL320s Storage Server <sup>2</sup>	✓	✓	✓	✓	✓	✓ <sup>1</sup>
DL160 G5 Storage Server <sup>2</sup>	✓	✓	✓	✓	✓	✓ <sup>1</sup>
ML350 G5 Storage Server	✓	✓	✓	✓	✓	✓ <sup>1</sup>
ML350 G4 Storage Server	✓	✓	✓	✓	✓	✓ <sup>1</sup>
ML110 G5 Storage Server <sup>2</sup>	✓	✓	✓	✓	✓	✓ <sup>1</sup>

**NOTES:**

1) Requires NetBackup 5.0 MP2 or later.

2) Tape connectivity via direct-attach SCSI only.

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

## SAS Host Bus Adapters

### HP Branded ProLiant SAS Host Bus Adapters <sup>2, 3, 4</sup>

Windows					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP SC44Ge (416096-B21)	PCIe	3Gb	4	SAS	SFF-8470

Linux					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP SC44Ge (416096-B21)	PCIe	3Gb	4	SAS	SFF-8470

### HP Branded Integrity SAS Host Bus Adapters, Integrity 64-bit <sup>2</sup>

HP-UX					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP SC44Ge (AH303A) <sup>1</sup>	PCIe	3Gb	4	SAS	SFF-8470

### HP BladeSystem c-Class PCI Expansion Blade with SAS Host Bus Adapters <sup>5</sup>

Windows					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP SC44Ge (416096-B21)	PCIe	3Gb	4	SAS	SFF-8470

Linux					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP SC44Ge (416096-B21)	PCIe	3Gb	4	SAS	SFF-8470

**NOTES:**

- 1) HP-UX 11.31 supported only with HWE0803 (Hardware Enablement Package) installed.
- 2) Refer to the Server QuickSpecs to determine which SCSI HBAs are supported
- 3) Third party X86 servers supported with HP-Branded adapters only.
- 4) SMART Array Controllers do not support attachment to tape automation products.

- 5) Tape automation device attached to SC44Ge (416096-B21) residing in a PCI Expansion Blade (448018-B21)

## SCSI Host Bus Adapters

(page 1 of 2)

### HP Branded ProLiant, HP-9000, and HP Alpha SCSI Host Bus Adapters <sup>2, 3, 4</sup>

Windows					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP U320e (AH627A)	PCI-e	Ultra320	2	SCSI-LVD	VHDCI
HP SC11Xe (412911-B21)	PCI-e	Ultra320	1	SCSI-LVD	VHDCI
374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI
268351	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
284688	PCI	Ultra160	2	SCSI-LVD	VHDCI
129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
154457	PCI-X	Ultra160	1	SCSI-LVD	HD68

Linux					
Product # (Part #)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
HP U320e (AH627A)	PCI-e	Ultra320	2	SCSI-LVD	VHDCI
HP SC11Xe (412911-B21)	PCI-e	Ultra320	1	SCSI-LVD	VHDCI
374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI
268351	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
284688	PCI	Ultra160	2	SCSI-LVD	VHDCI
129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
154457	PCI-X	Ultra160	1	SCSI-LVD	HD68

Netware					
Product # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI
284688	PCI	Ultra160	2	SCSI-LVD	VHDCI
129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
154457	PCI-X	Ultra160	1	SCSI-LVD	HD68

HP-UX					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
AB290A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A6829A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
A6828A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
A4999A <sup>1</sup>	PCI	Ultra80	1	SCSI-LVD	HD68

Tru64					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
3X-KZPEA-DB	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
3X-KZPCA-AA	PCI-X	Ultra80	1	SCSI-LVD	HD68

**NOTES:**

- 1) Supported on HP-UX Workstations only
- 2) Refer to the Server QuickSpecs to determine which SCSI HBAs are supported
- 3) Third party X86 servers supported with HP-Branded adapters only.
- 4) SMART Array Controllers do not support attachment to tape automation products.

## SCSI Host Bus Adapters

(page 2 of 2)

### HP Branded Integrity SCSI Host Bus Adapters, Integrity 64-bit <sup>1</sup>

Windows					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
A7059A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI

Linux					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
A7059A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI

HP-UX					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
AB290A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A6829A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
A6828A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI

### Third Party SCSI HBA and Integrated SCSI Controllers <sup>2,3,4</sup>

Windows					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68
Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
LSI 22915	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
ATTOTech UL4D	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
ATTOTech UL5D	PCI-e	Ultra320	2	SCSI-LVD	VHDCI

Linux					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68
Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
ATTOTech UL4D	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
ATTOTech UL5D	PCI-e	Ultra320	2	SCSI-LVD	VHDCI

Netware					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68
Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI

#### NOTES:

- 1) Refer to the Server QuickSpecs to determine which SCSI HBAs are supported
- 2) For Solaris and AIX configurations, HP supports all SCSI HBA's supported by the server hardware manufacturer.  
Refer to the server manufacturer's web site for supported HBA/server platform/operating system combinations.
- 3) Third Party SCSI HBA support is for HP servers only
- 4) See vendor website for additional details:  
<http://www.adaptec.com/>  
<http://www.attotech.com/hp.html>  
<http://www.lsilogic.com/>

## Storage Software

	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Command View TL	2.3.01	2.3.01	2.3.01	2.3.01	2.3.01	2.3.01
Continuous Access	✓	✓	✓	✓	✓	✓
Insight Manager Agents	7.70	7.70	7.70	7.70	7.70	7.70
PolyServe	✓	✓ <sup>2</sup>	✓ <sup>1</sup>	✓	✓	✓
Smart Start	7.90	7.90	7.90	7.90	7.90	7.90
Storage Essentials	6.0	6.0	6.0	6.0	6.0	6.0
Systems Insight Manager (SIM)	5.2	5.2	5.2	5.2	5.2	5.2

### 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 <sup>1</sup>
1/8 Autoloaders	December 2007
ESL9000 series libraries	September 2007
ESL E-Series SDLT 160/320	July 2007
ESL 9000 Series SDLT 160/320	July 2007
1/8 Tape Autoloader (SDLT 160/320)	July 2007
MSL5000 Series	March 2006
SSL1016 Tape Autoloaders	March 2006
ESL9000 Series (Ultrium 230 and SDLT 110/220)	March 2006
1/8 Tape Autoloaders (Ultrium 230 and Ultrium 460)	March 2006
ESL 9326 DX	March 2005
ESL 9198 DLX	March 2005
MSL 5026 DLX	March 2005
SSL 2020 TL	March 2005
DLT 40/80	March 2005
Modular Data Router (MDR)	February 2004
TL895	December 2002
TL891DLX	December 2002
ESL9326D	April 2002
TL891D	April 2002
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.

## Useful Links

Product Family	URL
EBS Home Webpage	<a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a>
EBS Design Guide	<a href="http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00775232/c00775232.pdf">http://h20000.www2.hp.com/bc/docs/support/SupportManual/c00775232/c00775232.pdf</a>
EBS 1-2-3	<a href="http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html">http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html</a>
EBS Example Configurations	<a href="http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf">http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf</a>
Library and Tape Tools (LTT)	<a href="http://h18006.www1.hp.com/products/storageworks/ltt/index.html">http://h18006.www1.hp.com/products/storageworks/ltt/index.html</a>
Interconnects	<a href="http://h18006.www1.hp.com/storage/saninfrastructure.html">http://h18006.www1.hp.com/storage/saninfrastructure.html</a>
RAID Arrays	<a href="http://h18006.www1.hp.com/storage/arrayssystems.html">http://h18006.www1.hp.com/storage/arrayssystems.html</a>
OpenView Storage	<a href="http://h18006.www1.hp.com/storage/software.html">http://h18006.www1.hp.com/storage/software.html</a>
Data Protector	<a href="http://www.hp.com/go/dataprotector">http://www.hp.com/go/dataprotector</a>
Storage Media	<a href="http://h18006.www1.hp.com/storage/storagemedia.html">http://h18006.www1.hp.com/storage/storagemedia.html</a>
Firmware & Driver Downloads	<a href="http://welcome.hp.com/country/us/en/support.html">http://welcome.hp.com/country/us/en/support.html</a>
Windows OS/ProLiant Server Support Matrix	<a href="http://h10018.www1.hp.com/wwsolutions/windows/index-all.html">http://h10018.www1.hp.com/wwsolutions/windows/index-all.html</a>
Linux OS/ProLiant Server Support Matrix	<a href="http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html">http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html</a>
NetWare OS/ProLiant Server Support Matrix	<a href="http://h10018.www1.hp.com/wwsolutions/novell/index-all.html">http://h10018.www1.hp.com/wwsolutions/novell/index-all.html</a>
IT Resource Center Website	<a href="http://itrc.hp.com">http://itrc.hp.com</a>
Performance and Troubleshooting Support	<a href="http://www.hp.com/support/pat">http://www.hp.com/support/pat</a>
Network Services - Backup and Recovery	<a href="http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx">http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx</a>
Tape Systems	<a href="http://www.hp.com/go/tape">http://www.hp.com/go/tape</a>
HP StorageWorks SAN Design Reference Guide	<a href="http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&amp;locale=en_US&amp;docIndexId=179911&amp;taskId=101&amp;prodTypeId=12169&amp;prodSeriesId=406734">http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&amp;locale=en_US&amp;docIndexId=179911&amp;taskId=101&amp;prodTypeId=12169&amp;prodSeriesId=406734</a>



## Advisories

Date	Problem Description	Number
<b>Tape Libraries Advisories</b>		
03/13/08	HP StorageWorks ESL E-Series libraries will post an error message when upgrading from 6.20 to 6.22 firmware	<a href="#">c01387942</a>
03/12/08	HP StorageWorks D2D Backup Systems using HP Data Protector 6.0 (A.06.00) cannot import media containing spanned backup sessions	<a href="#">c01214249</a>
03/07/08	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	<a href="#">c01377519</a>
02/27/08	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	<a href="#">c01369226</a>
01/02/08	HP StorageWorks Virtual Library System (VLS) is not functional after entering or modifying the network configuration settings	<a href="#">c01292136</a>
11/30/07	Error F5 during an HP L&TT drive or media assessment test on an HP StorageWorks 1/8 G2 Tape Autoloader or HP StorageWorks MSL2024, 4048, or 8096 Tape Libraries.	<a href="#">c01273166</a>
11/12/07	HP Secure Key Manager (SKM) - Data Protection Application behavior when SKM is unavailable	<a href="#">c01269477</a>
10/1/07	(Revised) HP StorageWorks Ultrium 230/460/960 Tape Drives - tape unload instructions for tapes stuck in Ultrium 230/460/960 tape drives	<a href="#">c00795203</a>
10/05/07	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.	<a href="#">c01181673</a>
09/01/07	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	<a href="#">c01154679</a>
05/31/07	HP StorageWorks MSL5000 and MSL6000 Libraries - potential for CRC or Parity Errors when SCSI Termination is on the Controller	<a href="#">c00659626</a>
<b>Application Advisories</b>		
04/04/08	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	<a href="#">c01413689</a>
04/04/08	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	<a href="#">c01413680</a>
12/05/07	EMC NetWorker not recognizing the HP PolyServe clustered file system (PSFS)	<a href="#">c01290486</a>
08/23/06	HP Data Protector Express Version 3.1 may generate a tape mount request (alert message number 1401) when using two drive versions of HP StorageWorks MSL 2024.	<a href="#">c00743086</a>
07/06/06	EMC NetWorker backup jobs failing with 10 second timeout may occur while running on either Redhat Linux v2.1 or v3.0 and any tape library or tape drive	<a href="#">c00707628</a>
<b>Operating System Advisories</b>		
11/21/07	Solaris – ESL E-Series and EML E-Series Library Reboots Causing Device Access Issues on Servers Running Sun Native HBA Drivers	<a href="#">c00965686</a>
05/31/07	Microsoft Windows Server 2003 - Interoperability Issues with Persistent Binding of Symbolic Tape Names in an Enterprise Backup Solution (EBS) Configuration	<a href="#">c01064312</a>
03/26/07	Emulex StorPort Driver - Targets Cannot be Persistently Bound when Running with the Emulex StorPort Driver	<a href="#">c00871551</a>
03/07/07	Microsoft Windows SAN - How to Disable Tape Drive Polling on Microsoft Windows SAN-Attached Servers Running hpilo.sys	<a href="#">c00718488</a>
03/01/07	HP-UX 11.11 - Running Get All Elements Details on HP-UX 11.11 Hosts Can Cause Tape Backups to Abort	<a href="#">c00869191</a>
<b>Miscellaneous Advisories</b>		

To view these advisories do the following:

- 1) Click on the advisory number above or go to the IT Resource Center at <http://itrc.hp.com> (NOTE: To review these 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.

**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.