

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

March 2008 Version 1.0

Start Here

Key Updates:

- New – Separated TAC and ESI pages for HP Virtual Library Systems and HP Tape Libraries
- New version of Symantec Backup Exec for Windows Servers (12.0)
- New 8GB SAN switch - HP StorageWorks 8/20q Fibre Channel Switch
- New 8GB FC HBA - QLogic QLE2560
- New MSA2000fc storage array
- New Firmware for HP MSL tape libraries
- Interoperability updates throughout



Enterprise Backup Solution Compatibility Matrix Index

(Click on topic to jump to that page)

The () icon indicates a hotlink. [See Sample Page Layout.](#)

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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.

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. For information on stand-alone tape products and compatibility, go to www.hp.com/go/connect.

Sample Page Layout

Index menu system, click to navigate to other pages

Yellow Box indicates current page selection

HP StorageWorks Index VLS Libraries (ESI) VLS Libraries (TAC) Tape Libraries (ESI) Tape Libraries (TAC) Backup App. Advanced Library Features Interface Controllers **HP-UX**
EBS Compatibility Matrix Windows Linux Solaris Tru64/OVMS AIX NetWare RAID Arrays Infrastructure NAS SAS/SCSI HBAs Storage Software Legacy Links Advisories

HP-UX (Integrity)⁵
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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
Operating Systems ^{1, 2}						
HP-UX 11.23 (11i v2)	HWE 11i v2 March 2006 Quality Pack March 2006	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11i v2 Sept 2006 Quality Pack Dec 2007	HWE 11.23 Dec 2007 Quality Pack Dec 2007		HWE 11i v2 June 2007 Quality Pack June 2007
HP-UX 11.31 (11i v3)			HWE 11i v3 Sept 2007 ⁷ Quality Pack Sept 2007 ⁷			
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem						✓
Fibre Host Bus Adapters ⁴						
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW				4.0.91		
fcid Driver				Native		
AD300A / QLogic QLE2462 (4G, PCI-e)						
FW				4.0.91		
fcid Driver				Native		
AD299A / AD355A (4G, PCI-e)						
FW				2.70X5		
fcid Driver				Native		
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem (403619-B21)						
FW	1.26	1.26	1.26	1.26		1.26
fcid Driver	Native	Native	Native	Native		Native
A8379A / A8379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcid Driver	Native		Native	Native		Native
A8378A / A8378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcid Driver	Native		Native	Native		Native
A8465A (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)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid 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
fcid Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
FW	1.10	1.10	1.10	1.10		1.10
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
Disk Array Multipath Support ⁴						
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
High Availability ⁶						
MC/ServiceGuard	✓ ³		✓ ³			

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

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Virtual Library Systems and Extended Solution Interoperability (ESI) Partner Products

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support ¹		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) ¹					
VLS 12000 EVA Gateway EVA 4x00/6x00/8x00 EVA 3000/5000 ²	2.1.0 6.110 ⁸ 4.100	✓	✓ ³	✓	✓	✓	✓
VLS 300 EVA Gateway EVA 4x00/6x00/8x00 EVA 3000/5000 ²	1.2.0 6.110 ⁸ 4.100	✓	✓ ³	✓	✓	✓	✓
VLS 9000 Series	2.1.0	✓	✓ ³	✓	✓	✓	✓
VLS 6800 Series	1.2.0	✓	✓ ³	✓	✓	✓	✓
VLS 6600 Series	2.1.0	✓	✓ ³	✓	✓	✓	✓
VLS 6500 Series	1.2.0	✓	✓ ³	✓	✓	✓	✓
VLS 6200 Series	2.1.0	✓	✓ ³	✓	✓	✓	✓
VLS 6100 Series	1.2.0	✓	✓ ³	✓	✓	✓	✓
VLS 1000i Series ⁵ (iSCSI)	2.6.0.228	✓	✓	✓	✓ ⁹	✓ ⁴	✓
D2D Backup System ⁷		✓	✓	✓	✓ ⁶	✓	✓

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.

Virtual Library Systems and Tape Automation Compatibility (TAC) Partner Products

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support ¹		Virtual Library Systems																Tape Automation Compatibility (TAC) Partner Products									
Virtual Library Systems	Firmware	Software TAC Partners ¹																Hardware TAC Partners ¹									
		HP Data Protector Express	HP NonStop Servers	HP File System Extender	Atempo Time Navigator	BakBone NetVault	Bridghead HT ISM Suite	EMC Retrospect	Front Porch Digital DIVArchive	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 TapeSentry	Decru DataFort	FalconStor VTL	NetApp NearStore VTL Series	
VLS 12000 EVA Gateway EVA 4x00/6x00/8x00 EVA 3000/5000 ²	2.1.0 6.110 ³ 4.100		✓	✓	✓		✓					✓	✓ ⁶		✓					✓	✓						
VLS 300 EVA Gateway EVA 4x00/6x00/8x00 EVA 3000/5000 ²	1.2.0 6.110 ³ 4.100		✓	✓	✓		✓					✓	✓ ⁶		✓					✓	✓						
VLS 9000 Series	2.1.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 6800 Series	1.2.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 6600 Series	2.1.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 6500 Series	1.2.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 6200 Series	2.1.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 6100 Series	1.2.0		✓	✓	✓	✓	✓					✓	✓ ⁶		✓					✓	✓						
VLS 1000i Series ⁵ (iSCSI)	2.6.0.228	✓				✓		✓							✓					✓							
D2D Backup System ⁴		✓			✓	✓		✓												✓							

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"

- 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.

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

Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN) Support ¹		HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Enterprise Class Libraries	Firmware	Extended Solution Interoperability (ESI) Partners ¹					
HP Secure Key Manager ^{10,11}	4.7.1	✓	✓	✓	✓	✓	✓
ESL E-Series	6.20	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶	H36W ¹¹	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L63W	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K48W	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓
EML E-Series	1222	✓	✓	✓	✓	✓	✓
Ultrium 1840 FC ⁶	H36S ¹¹	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L63S	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K710	✓	✓	✓	✓	✓	✓
Business Class Libraries	Firmware						
MSL 8096 ²	8.50	✓	✓	✓	✓	✓ ⁹	✓
MSL 4048 ²	6.00	✓	✓	✓	✓	✓ ⁹	✓
MSL 2024 ²	3.70	✓	✓	✓	✓	✓ ⁹	✓
Ultrium 1840 FC ⁶	H36W	✓	✓	✓	✓	✓	✓
Ultrium 1840 SCSI ⁶	B34W	✓	✓	✓	✓	✓	✓
Ultrium 1760 SAS	U24W	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M63W	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L63W	✓	✓	✓	✓	✓	✓
Ultrium 960 SCSI	G63W	✓	✓	✓	✓	✓	✓
Ultrium 448 SCSI	S63W	✓	✓	✓	✓	✓	✓
Ultrium 920 SCSI	D22W	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS ³	C24W	✓	✓	✓	✓	✓	✓
MSL 6000 Series	5.20	✓	✓	✓	✓	✓	✓
Ultrium 1840 ⁶	B34W	✓	✓	✓	✓	✓	✓
Ultrium 960	G63W	✓	✓	✓	✓	✓	✓
Ultrium 460	F6AW	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓
Tape Autoloaders ^{2,4,5}	Robot (Drive)						
1/8 G2 (Ultrium 1760 SAS)	1.80 (U24W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 920 SAS) ³	1.80 (C24W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 920)	1.80 (D22W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 448)	1.80 (S63W)	✓	✓	✓	✓	✓	✓
1/8 G2 (Ultrium 232)	1.80 (P63W)	✓	✓	✓	✓	✓	✓
Advanced Drive and Media Features							
Ultrium LTO4 Software 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 (part #: 416096-B21).
- 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) drives support AES hardware encryption. Refer to the backup/restore application vendor for hardware encryption support details.
- 7) Support is with the Decru DataFort FC-Series and S-Series for Tape only.
- 8) Support with Decru DataFort S-Series in a direct attach SCSI configuration only.
- 9) Not supported with Symantec Backup Exec for NetWare (BENW).

- 10) Please refer to Customer Advisory "c01269477" for operational details.
- 11) Using ESLe and EMLe tape libraries with HP Secure Key Manager requires that the libraries use firmware package I230 or later. See the Interface Controller table on page 12 for the full list of I230 firmware requirements.

Backup Application Details ¹

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

Lastest and Minimum Application Version Support

	HP Data Protector		CA ARCserve		EMC NetWorker		IBM Tivoli Storage Manager		Symantec Backup Exec (Windows)		Symantec Backup Exec (NetWare)		Symantec Veritas NetBackup	
Enterprise Class Libraries	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum
ESL E-Series	6.0	5.0	12.0	9.0	7.4	6.0	5.4	5.2	12.0	9.0	9.2	9.0	6.5	4.5
EML E-Series	6.0	5.1	12.0	9.0	7.4	7.0	5.4 ⁸	5.3	12.0	10.0			6.5	5.0
Virtual Library Systems														
VLS 12000/300 EVA Gateway	6.0	5.5	12.0 ⁷	11.1 ⁷	7.4	7.0	5.4	5.3	12.0	10.0			6.5	5.0
VLS 9000 Series	6.0	5.5	12.0 ⁷	11.1 ⁷	7.4	7.0	5.4	5.3	12.0	10.0			6.5	5.0
VLS 6000 Series	6.0	5.1	12.0 ⁷	11.1 ⁷	7.4	7.0	5.4	5.3	12.0	10.0			6.5	5.0
VLS 1000i Series (iSCSI)	6.0	5.5	12.0	11.5	7.4	7.0	5.4 ⁵	5.3 ⁵	12.0 ⁵	10d ⁵			6.5	5.0
Business Class Libraries														
MSL 6000 Series	6.0	5.0	12.0	9.0	7.4	6.0	5.4	5.2	12.0	9.0	9.2	9.0	6.5	4.5
MSL 8096	6.0	5.5	12.0	11.1	7.4	7.0	5.4	5.3	12.0	10d ^{2,4}			6.5	6.0
MSL 4048	6.0	5.1	12.0	11.1	7.4	7.0	5.4	5.3	12.0	10d ^{2,4}			6.5	6.0
MSL 2024	6.0	5.1	12.0	11.1	7.4	7.0	5.4	5.3	12.0	10d ^{2,4}			6.5	6.0
Autoloaders														
1/8 G2 Tape Autoloader (Ultrium 920)	6.0	5.5	12.0	11.5	7.4	7.0	5.4	5.3	12.0	10d ³	9.2	9.0	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 920 SAS)	6.0	5.5	12.0	11.5	7.4	7.0	5.4	5.3	12.0	11d ⁴			6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 448)	6.0	5.5	12.0	11.5	7.4	7.0	5.4	5.3	12.0	10d ³	9.2 ⁶	9.0 ⁶	6.5	6.0
1/8 G2 Tape Autoloader (Ultrium 232)	6.0	5.5	12.0	11.5	7.4	7.0	5.4	5.3	12.0	10d ³	9.2 ⁶	9.0 ⁶	6.5	6.0
1/8 Tape Autoloader (Ultrium 960)	6.0	5.1	12.0	9.0	7.4	7.0	5.4	5.3	12.0	10.0	9.2	9.0	6.5	5.0
1/8 Tape Autoloader (Ultrium 448)	6.0	5.1	12.0	11.1	7.4	7.0	5.4	5.3	12.0	10.0	9.2	9.0	6.5	5.0
1/8 Tape Autoloader (Ultrium 232)	6.0	5.1	12.0	11.1	7.4	7.0	5.4	5.3	12.0	10.0	9.2	9.0	6.5	5.0
1/8 DLT Tape Autoloader (vs80)	6.0	5.0	12.0	9.0	7.4	6.0	5.4	5.1	12.0	9.0	9.2	9.0	6.5	4.5

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

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
Enterprise Libraries	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.					
ESL E-Series 2 Unit Cross Link ¹	✓	✓ ³	✓	✓		✓
ESL E-Series 3-5 Unit Cross Link ¹	✓			✓		✓
ESL Mixed Media	✓	✓ ³	✓	✓	✓ ⁴	✓
ESL Partitioning	✓	✓ ³	✓	✓	✓ ⁴	✓
EML Partitioning	✓		✓	✓	✓ ⁴	✓
Midrange Libraries						
MSL 6000 Multi-Unit Scalability ^{1,2}	✓	✓	✓	✓	✓	✓
MSL 6000 Mixed Media Support	✓	✓	✓	✓	✓ ⁴	✓

NOTES:

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

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)					✓	✓	✓		
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) ¹				✓					
MSL 8096 (Ultrium 1840 SCSI)								✓	✓
MSL 8096 (Ultrium 960 4Gb FC) ¹				✓					
MSL 8096 (Ultrium 960 SCSI)								✓	✓
MSL 4048 (Ultrium 1840 FC) ¹				✓					
MSL 4048 (Ultrium 1840 SCSI)								✓	✓
MSL 4048 (Ultrium 960 4Gb FC) ¹				✓					
MSL 4048 (Ultrium 960 FC) ¹				✓					
MSL 4048 (Ultrium 960 SCSI)								✓	✓
MSL 4048 (Ultrium 920 SCSI)								✓	✓
MSL 4048 (Ultrium 448 SCSI)								✓	✓
MSL 2024 (Ultrium 1840 FC) ¹				✓					
MSL 2024 (Ultrium 1840 SCSI)								✓	✓
MSL 2024 (Ultrium 960 4Gb FC) ¹				✓					
MSL 2024 (Ultrium 960 FC) ¹				✓					
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.
- 2) Multi-unit configurations that include an Interface Manager card are restricted to two libraries.
- 3) E2400 interface controller is comprised of (2) E1200 interface controllers.

Interface Controllers

(page 2 of 2)

Interface Manager Firmware Required Minimum Component	i160	i161	i170	i171	i180	i182	i200	i220	i230 ¹
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
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
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
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
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
ESL E-Series	4.10	4.10	4.60	4.60	4.86		5.10	6.00	6.20
EML E-Series	1022	1022	1022	1022	1070		1126	1200	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
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

Interface Controller Firmware (non-Interface Manager)	
e1200-320 4Gb (MSL6000)	5.9.36
N1200-320 4Gb	5.9.36

NOTES:

1) ESLe LTO4 drive firmware version H36W and EMLe LTO4 drive firmware version H36S or later is required to support I230 and the HP Secure Key Manager (SKM).

HP-UX (PA-RISC) ⁶

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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
Operating Systems ^{1, 2}						
HP-UX 11.11 (11i v1)	HWE 11.11, June 2005 Quality Pack. June 2005	HWE 11.11, Dec 2004 Gold Pack, Dec 2004	HWE 11.11, June 2005 Quality Pack. June 2005	HWE 11.11, Dec 2004 Gold Pack, Dec 2004		HWE 11.11, Dec 2006 Quality Pack. Dec 2006
HP-UX 11.23 (11i v2)	HWE 11i v2 March 2006 Quality Pack March 2006		HWE 11iv2 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 (11iv3)	✓ ⁷		HWE 11iv3 Sept 2007 ⁸ Quality Pack Sept 2007 ⁸			
Servers						
HP 9000 Superdome and Mid-Range (rp7000-rp8000 Series, PA-RISC)	✓	✓	✓	✓		✓
HP 9000 Entry-Level (rp2000-rp5000 Series, PA-RISC)	✓	✓	✓	✓		✓
HP A, L, N, and V Class (PA-RISC)	✓	✓	✓	✓		✓
HP R Class (PA-RISC) ³	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ⁵						
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW	4.0.91		4.0.91	4.0.91		4.0.91
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
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
Disk Array Multipath Support ⁵						
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
High Availability ⁴						
MC/ServiceGuard	✓ ³		✓ ³			

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 HPUX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver.

HP-UX (Integrity)⁵
(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
Operating Systems ^{1, 2}						
HP-UX 11.23 (11i v2)	HWE 11i v2 March 2006 Quality Pack March 2006	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11i v2 Dec 2007 Quality Pack Dec 2007	HWE 11.23 Dec 2007 Quality Pack Dec 2007		HWE 11i v2 June 2007 Quality Pack June 2007
HP-UX 11.31 (11i v3)			HWE 11i v3 Sept 2007 ⁷ Quality Pack Sept 2007 ⁷			
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem						✓
Fibre Host Bus Adapters ⁴						
AD193A / AD194A (4G, PCI-X 2.0, Combo Card)						
FW				4.0.91		
fcd Driver				Native		
AD300A / QLogic QLE2462 (4G, PCI-e)						
FW				4.0.91		
fcd Driver				Native		
AD299A / AD355A (4G, PCI-e) ⁸						
FW				2.70X5		
fcd Driver				Native ⁸		
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem (403619-B21)						
FW	1.26		1.26	1.26		1.26
fcd Driver	Native		Native	Native		Native
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
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
A6795A (2G, PCI)						
FW	1.10	1.10	1.10	1.10		1.10
td 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
Disk Array Multipath Support ⁴						
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
High Availability ⁶						
MC/ServiceGuard	✓ ³		✓ ³			

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 pending HPUX 11.31 PHKL_36312 patch is required to support the NetWorker 7.4 CDI driver
- 8) **Requires FibrChan1-02 driver**

Windows (x86)

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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
Operating Systems ^{1, 2}						
Windows Server 2003 Release 2 (32-bit)	sp2	sp2	sp2	sp2	sp2	sp2
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓
Fibre Host Bus Adapters ^{5, 6}						
HP Branded / 3rd Party						
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
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
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
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
FC2142SR / Emulex LPe1150 (4G, PCI-e) FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	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
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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
A7560A / Emulex LP1050EX-F2 (2G, PCI-e)						
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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12

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 KB932755.
- 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)

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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
Fibre Host Bus Adapters^{1, 2}						
HP Branded / 3rd Party						
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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
FCA2408 / Emulex LP982 (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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{3,4}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
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
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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver ^{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
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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
FCA2101 / Emulex LP952 (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 ^{3,4}	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12	5-2.00a12
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (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 ^{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

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 KB932755.

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

Windows (x86)

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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
Disk Array Multipath Support ¹						
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 ⁵	✓	✓	✓	✓	✓	✓
High Availability ²						
Windows (MSCS)	✓	✓	✓	✓ ³	✓ ⁴	✓

NOTES:

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

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

3) Not supported with TSM 5.3.x.

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)

(page 4 of 5)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
Windows Server 2003 (64-bit)	sp2	sp2	sp2	sp2		sp2
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{4, 7}						
HP Branded / 3rd Party						
A8002A / Emulex LPe1150 (4G, PCI-e)						
A8003A / Emulex PLe11002 (4G, PCI-e)						
FW						2.70a5
WIN 2003 StorPort Driver ^{5, 8}						6-1.20a7
AE311A / QLogic QLE2460 (4G, PCI-e)						
AD300A / QLogic QLE2462 (4G, PCI-e)						
EFI						1.09
WIN 2003 StorPort Driver ^{5, 8}						9.1.3.16
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 ^{5, 8}	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16		9.1.3.16
AD167A / Emulex LP1150 (4G, PCI-X 2.0)						
AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.70a5	2.70a5	2.70a5	2.70a5		2.70a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5, 8}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
AB467A / Emulex LP1050 (2G, PCI-X)						
AB466A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5, 8}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
A7298A / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver ^{5, 8}	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 ^{5, 8}	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
Disk Array Multipath Support ⁴						
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 ⁶	✓	✓	✓	✓		✓
High Availability ³						
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) 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 KB891793 (minimum) or KB916048 (recommended); systems running Tivoli require Storport.sys KB901371. All sp2 systems are required to run Storport.sys KB932755.

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
Operating Systems ^{1, 2}						
Windows Server 2003 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Windows Server 2003 R2 x64 Edition	sp2	sp2	sp2	sp2	sp2	sp2
Servers						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Fibre Host Bus Adapters ^{4,5}						
HP Branded / 3rd Party						
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
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 ^{6,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
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 ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2	2.72a2
WIN 2003 StorPort Driver ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	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 ^{6,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
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 ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
FCA2408 / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 StorPort Driver ^{6,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
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 ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
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 StorPort Driver ^{6,7}	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18	9.1.3.18
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 ^{6,7}	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12	7-2.00a12
Disk Array Multipath Support ⁴						
Windows MPIO	✓	✓	✓	✓	✓	✓
High Availability ³						
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 KB932755.

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

LINUX (x86) ^{4,6}
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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
Operating Systems ^{1, 2}						
Red Hat Enterprise Linux [AS/ES/WS] 3.0 (32-bit)	✓	✓	✓	✓		✓
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (32-bit)	✓	✓	✓	✓		✓
SUSE SLES 9 (32-bit)	✓	✓	✓	✓		✓
SUSE SLES 10 (32-bit)	✓		✓			✓
Servers						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{3, 5}						
HP Branded / 3rd Party						
QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00		2.00			2.00
SUSE SLES 10 driver	8.02.03		8.02.03			8.02.03
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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
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
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
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
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06

NOTES:

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- 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.

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

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Fibre Host Bus Adapters ^{3, 5}						
HP Branded / 3rd Party						
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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
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
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
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
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
Disk Array Multipath Support ³						
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)	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
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.

LINUX (Integrity) ^{3,5}

(page 3 of 4)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
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)	✓					✓
Servers						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓			✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓			✓
Fibre Host Bus Adapters ⁴						
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
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
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
AD167A / Emulex LP1150 (4G, PCI-X 2.0)						
AD168A / Emulex LP11002 (4G, PCI-X 2.0)						
FW	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			8.0.16.32
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
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
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
Disk Array Multipath Support ⁴						
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.

LINUX (x64) ^{4,6}
(page 4 of 4)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (x64)	✓	✓	✓	✓		✓
SUSE SLES 9 (x64)	✓	✓	✓	✓		✓
SUSE SLES 10 (x64)	✓		✓			✓
Servers						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
HP NetServer	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{3, 5}						
HP Branded / 3rd Party						
QLogic QLE2560 (8G, PCI-e)						
BIOS	2.00		2.00	2.00		2.00
SUSE SLES 10 driver	8.02.03		8.02.03	8.02.03		8.02.03
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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
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
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
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
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
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
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
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
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
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	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SUSE SLES 10 driver	8.01.06		8.01.06			8.01.06
Disk Array Multipath Support ³						
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)	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06

NOTES:

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

Solaris

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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
Operating Systems 1, 2						
Solaris 9	✓	✓	✓	✓		✓
Solaris 10 SPARC	✓	✓	✓	✓		✓
Solaris 10 x86/x64				✓		✓
Servers						
Sun UltraSPARC	✓	✓	✓	✓		✓
Sun Sun Fire	✓	✓	✓	✓		✓
HP ProLiant				✓		✓
Fibre Host Bus Adapters 3						
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	✓	✓	✓	✓		✓
SG-XPCI1FC-EM4-Z (4G, PCI-X 2.0)						
SG-XPCI2FC-EM4-Z (4G, PCI-X 2.0)						
Sun Native Driver				✓ ⁵		
Emulex LP11000 (4G, PCI-X 2.0)						
Emulex LP11002 (4G, PCI-X 2.0)						
Sun Native Driver				✓ ⁵		
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	✓	✓	✓	✓		✓
SG-XPCI1FC-EM2 (2G, PCI-X)						
SG-XPCI2FC-EM2 (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			✓	✓		
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
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			

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.
- March 2008, v1.0

- 4) Supported with Solaris 9 only.
- 5) Supported with Solaris 10 only.

Solaris

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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
Disk Array Multipath Support ¹						
Solaris MPxIO			✓ ⁴	✓ ⁴		✓ ³
VERITAS DMP			✓ ⁵			✓ ⁵
High Availability ²						
VERITAS Cluster Server						✓

NOTES:

- 1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 2) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 3) Supported with Solaris 9 only.
- 4) Supported with Solaris 9 and 10.
- 5) Supported with Solaris 10.

Tru64 Unix

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
Tru64 5.1A ⁸	5.1A pk6	5.1A pk6 ⁷	5.1A pk6			5.1A pk6
Tru64 5.1B ⁸	5.1B-3		5.1B-4			5.1B-4
Servers						
HP AlphaServer	✓	✓	✓			✓
Fibre Host Bus Adapters ⁵						
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
Disk Array Multipath Support ⁵						
Tru64 Multipath		Native	Native			Native
High Availability ⁴						
Tru64 (TruCluster)			✓			✓

OpenVMS

Operating Systems ^{1, 2}						
OpenVMS 8.2 ^{3, 6, 8}	✓					
OpenVMS 8.2-1 ^{3, 6, 8}	✓					
OpenVMS 8.3 ^{3, 6, 8}	✓					
Servers						
HP AlphaServer	✓					
HP Integrity	✓					
Fibre Host Bus Adapters ⁵						
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

AIX

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
AIX 5.2	✓ ³	✓	✓	✓		✓
AIX 5.3	✓ ³	✓	✓	✓		✓
Servers						
IBM RS/6000	✓	✓	✓	✓		✓
IBM pSeries	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ⁴						
IBM 1905 (4G, PCI-X 2.0) IBM 1910 (4G, PCI-X 2.0) AIX Driver			Native ⁶	Native⁶		Native⁶
IBM 5758 (4G, PCI-X 2.0) IBM 5759 (4G, PCI-X 2.0) AIX Driver			Native ⁶	Native⁶		Native⁶
IBM 5716 (2G, PCI-X) AIX Driver	Native ⁶	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
A7539A (Cambex PC2000) (2G, PCI-X)						
AIX Driver w/o Secure Path	1.5.26.0	1.5.26.0	1.5.26.0			1.5.26.0
AIX Driver w/ Secure Path	1.6.5.1	1.6.5.1	1.6.5.1			1.6.5.1
Disk Array Multipath Support ⁴						
Secure Path for AIX	2.0D SP3	2.0D SP3	2.0D SP3	2.0D SP3		2.0D SP3
AIX MPIO	✓ ⁵		✓	✓		✓

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.

NetWare

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
Operating Systems ^{1, 2}						
NetWare 6.0	6.0 sp5	6.0 sp5 ³			6.0 sp5	
NetWare 6.5	6.5 sp5	6.5 sp2 ³			6.5 sp6	
Servers						
HP ProLiant ⁵	✓	✓			✓	
HP ProLiant p-Class Blade Server ⁵	✓	✓			✓	
Third Party X86	✓	✓			✓	
Fibre Host Bus Adapters ^{3, 5}						
FCA2214 (FCA2210) / QLA2340 (2G, PCI-X) FCA2214DC / QLA2342 (2G, PCI-X)						
FW	1.45	1.45			1.45	
NetWare Driver	6.90m	6.51b			6.90m	
Disk Array Multipath Support ⁵						
MPIO	✓				✓	
High Availability ⁴						
NetWare 6.0 (NWCS)	✓				✓	
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.

RAID Arrays

SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
RAID Arrays						
XP 24000/20000 ¹	✓	✓	✓	✓	✓	✓
XP 12000/10000 ¹	✓	✓	✓	✓	✓	✓
XP 1024/128 ¹	✓	✓	✓	✓	✓	✓
XP 48/512 ¹	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ¹ EVA 4x00/6x00/8x00	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array ^{1, 3, 6} EVA 3000/5000	✓	✓	✓	✓	✓	✓
MSA2000fc	✓	✓	✓	✓	✓	✓
MSA1500 ¹	✓	✓	✓	✓	✓	✓
MSA1000 Small Business SAN Kit	✓ ⁴	✓ ⁵			✓ ⁵	
MSA1000 ²	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Consult with your hp solutions provider for disk array SAN compatibility information
- 2) For compatibility information about the optional MSA SAN Switch, refer to the [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							
		Ultrium 1840 FC Drive (4Gb)	Ultrium 960 FC Drive (4Gb)	Ultrium 960 FC Drive (2Gb)	VLS 12000/300 EVA Gateway	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
SAN Switches¹															
B-Series															
SAN Director 4/256	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/64, 4/32B, 4/32, 4/16, 4/8	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP c-Class BladeSystem (4/12 and 4/24)	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	5.0.5f	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32, 2/8V, 2/16V, 2/16N	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16, 2/8, 2/8-EL, 2/16-EL	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FC Switch 16B, 8B	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.1c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
C-Series															
Cisco MDS 9513, 9509, 9506, 9222i, 9216i, 9216A, 9216, 9124, 9124e, 9140, 9120	3.2(3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9020	2.1(3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
M-Series															
McData 4Gb SAN Switch for HP p-Class BladeSystem	6.4.0.11.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
McData Spheron 4700, 4400	09.03.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/140, 2/64	09.03.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32, 2/24, 2/16, 2/12	09.03.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8Gb Simple SAN Connection															
HP StorageWorks 8/20q Fibre Channel Switch⁶	6.9.0.14.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Routers and Gateways¹															
StorageWorks 400 Multi-Protocol Router ^{2,5}	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks Multi-Protocol Router Blade ^{2,5}	5.3.0d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Router ^{2,3}	7.4.1e	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 ⁴	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.

ProLiant Storage Servers (NAS), All-in-One (AiO) Storage Servers and ProLiant Data Protection Storage Servers (DPM)

DAS, DAF, and SAN Support	HP Data Protector	CA ARCserve	EMC NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec Veritas NetBackup
HP StorageWorks Enterprise File Services (EFS) Clustered Gateway is a file server gateway. Based on a truly symmetrical cluster file system						
EFS Clustered Gateway (PolyServe) Windows	✓	✓	✓ ³	✓	✓	✓
EFS Clustered Gateway (PolyServe) Linux	✓		✓	✓	✓	✓
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						
AiO1200 ²	✓	✓	✓	✓	✓	✓
AiO600 ²	✓				✓	
AiO400 ²	✓				✓	
Data Protection Storage Server is a network attached storage (NAS) appliance that utilizes Microsoft System Center Data Protection Manager (DPM)						
DL380 G5 Data Protection Storage Server	✓				✓	✓ ¹
DL380 G4 Data Protection Storage Server	✓				✓	✓ ¹
DL100 G2 Data Protection Storage Server ²	✓				✓	✓ ¹
ML310 G2 Data Protection Storage Server	✓				✓	✓ ¹
HP ProLiant Storage Server is a powerful file and print solution that enables environments to centralized Network Attached Storage (NAS).						
DL585G2 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL585 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL380 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL380 G4 Storage Server	✓	✓	✓	✓	✓	✓ ¹
DL320s Storage Server ²	✓	✓	✓	✓	✓	✓
DL100G2 Storage Server ²	✓				✓	✓ ¹
ML370 G4 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML350 G5 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML350 G4p Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML350 G4 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML310 G4 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML310 G3 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML310 G2 Storage Server	✓	✓	✓	✓	✓	✓ ¹
ML110 G2 Storage Server ²	✓	✓			✓	

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, HP-9000, and HP Alpha SCSI Host Bus Adapters ^{2, 3, 4}

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

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

HP Branded Integrity SAS Host Bus Adapters, Integrity 64-bit ²

HP-UX					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
416096 ¹	PCI-e	3Gb	4	SAS	SFF-8470

NOTES:

1) HPUX 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.

SCSI Host Bus Adapters

(page 1 of 2)

HP Branded ProLiant, HP-9000, and HP Alpha SCSI Host Bus Adapters ^{2, 3, 4}

Windows					
Product # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
AH627A	PCI-e	Ultra320	2	SCSI-LVD	VHDCI
412911	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 # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
AH627A	PCI-e	Ultra320	2	SCSI-LVD	VHDCI
412911	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 ¹	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 ¹

Windows						Linux						HP-UX					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	AB290A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7059A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	A7059A	PCI-X	Ultra160	1	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 ^{2,3,4}

Windows						Linux						Netware					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68	Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68	Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68
Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	Adaptec 39160	PCI-X	Ultra160	2	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 UL4D	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	ATTOTech UL5D	PCI-e	Ultra320	2	SCSI-LVD	VHDCI						
ATTOTech UL5D	PCI-e	Ultra320	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	2.2.00	2.2.00	2.2.00	2.2.00	2.2.00	2.2.00
Continuous Access	✓	✓	✓	✓	✓	✓
Insight Manager Agents	7.70	7.70	7.70	7.70	7.70	7.70
PolyServe	✓	✓ ²	✓ ¹	✓	✓	✓
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)	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5

NOTES:

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

2) **Supported with CA ARCserve for Windows.**

Legacy Device Support

Device Name	Last EBS Compatibility Matrix Where Device Was Listed ¹
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 year can be found on <http://www.hp.com/go/ebs>.
For matrices older than one year, consult your HP Account Representative.

Useful Links

Product Family	URL
EBS Home Webpage	http://www.hp.com/go/ebs
EBS Design Guide	http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00190922/c00190922.pdf
EBS 1-2-3	http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html
EBS Example Configurations	http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf
Library and Tape Tools (LTT)	http://h18006.www1.hp.com/products/storageworks/ltt/index.html
Interconnects	http://h18006.www1.hp.com/storage/saninfrastructure.html
RAID Arrays	http://h18006.www1.hp.com/storage/arrayssystems.html
OpenView Storage	http://h18006.www1.hp.com/storage/software.html
Data Protector	http://www.hp.com/go/dataprotector
Storage Media	http://h18006.www1.hp.com/storage/storagemedia.html
Firmware & Driver Downloads	http://welcome.hp.com/country/us/en/support.html
Windows OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/windows/index-all.html
Linux OS/ProLiant Server Support Matrix	http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html
NetWare OS/ProLiant Server Support Matrix	http://h10018.www1.hp.com/wwsolutions/novell/index-all.html
IT Resource Center Website	http://itrc.hp.com
Performance and Troubleshooting Support	http://www.hp.com/support/pat
Network Services - Backup and Recovery	http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx
Tape Systems	http://www.hp.com/go/tape
HP StorageWorks SAN Design Reference Guide	http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&locale=en_US&docIndexId=179911&taskId=101&prodTypeld=12169&prodSeriesId=406734

Advisories

Date	Problem Description	Number
Tape Libraries Advisories		
01/02/08	HP StorageWorks Virtual Library System (VLS) is not functional after entering or modifying the network configuration settings	c01292136
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.	c01273166
11/12/07	HP Secure Key Manager (SKM) - Data Protection Application behavior when SKM is unavailable	c01269477
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	c00795203
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.	c01181673
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	c01154679
05/31/07	HP StorageWorks MSL5000 and MSL6000 Libraries - potential for CRC or Parity Errors when SCSI Termination is on the Controller	c00659626
06/16/06	Interface Controller/NSR and Storport Drivers - Library and Tape Tools Hardware Scan unresponsive when using Storport Drivers and Interface Controller/NSR with Fibre LUN Target/Active Fabric Enabled.	c00683746
05/09/06	Network Storage Router (NSR) or Interface Controller (IFC) - have a Maximum Limit for the Number of Initiators That Can Be Seen Through One or Two External Fibre Channel Port Routers	c00492083
Application Advisories		
12/05/07	EMC NetWorker not recognizing the HP PolyServe clustered file system (PSFS)	c01290486
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.	c00743086
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	c00707628
12/12/05	Symantec Backup Exec May Report "Drive Serialization" for HP EML and ESL E Tape Libraries Configured for SCSI-over-Internet Protocol (SIPP) - Requires HP Secure Manager Partitioning	c00571560
Operating System Advisories		
11/21/07	Solaris - ESL E-Series and EML E-Series Library Reboots Causing Device Access Issues on Servers Running Sun Native HBA Drivers	c00965686
05/31/07	Microsoft Windows Server 2003 - Interoperability Issues with Persistent Binding of Symbolic Tape Names in an Enterprise Backup Solution (EBS) Configuration	c01064312
03/26/07	Emulex StorPort Driver - Targets Cannot be Persistently Bound when Running with the Emulex StorPort Driver	c00871551
03/07/07	Microsoft Windows SAN - How to Disable Tape Drive Polling on Microsoft Windows SAN-Attached Servers Running hplto.sys	c00718488
03/01/07	HP-UX 11.11 - Running Get All Elements Details on HP-UX 11.11 Hosts Can Cause Tape Backups to Abort	c00869191
12/21/06	Linux - Tape Drives in an HP StorageWorks Enterprise Backup Solution (EBS) Shared Tape Configuration are being Issued Rewind Commands by Rebooted Linux Hosts	c00823270
10/11/06	Linux - Driver Kit Installation Procedures for HP StorageWorks Enterprise Backup Solution Shared Tape Configurations	c00788781
Miscellaneous Advisories		

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.