

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

September 2005 Version 1.0



i n v e n t

Start Here

The *HP StorageWorks Enterprise Backup Solution (EBS) Compatibility Matrix* identifies tape automation solution details for Direct Attach SCSI (DAS), Direct Attach Fibre (DAF or point-to-point fibre) and Storage Area Network (SAN) connectivity with various software and hardware components and the associated version levels. This extensive matrix exhibits a very broad spectrum of fully tested and verified backup solutions to ensure interoperability and a high level of quality; however, this does not imply that the HP StorageWorks family of tape automation products will only work with these components. If you require support or information for a product not listed in this matrix, please contact your HP Sales Representative.

When reading this matrix, please note the following:

- The matrix does not imply product availability.
- Products **highlighted in yellow** will be removed in the next release of the matrix. Previous versions of the matrix are available on the web at www.hp.com/go/ebs.
- The **Sample Page Layout** identifies important information and special features.
- The **Customer Advisory Page** identifies additional information that may impact your implementation.
- 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.



Enterprise Backup Solution Compatibility Matrix Index

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Sample Page Layout

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HP-UX (IA-64)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
HP-UX 11.23 (11i v2)	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 May 2005 Quality Pack May 2005		HWE 11.23 May 2005 Quality Pack May 2005	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 May 2005 Quality Pack May 2005		HWE 11.23 May 2005 Quality Pack May 2005
Servers										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
Workstations										
HP xz series (IA)	✓									
Fibre Host Bus Adapters ⁴										
AB465A (2G Combo Card)										
FW										
fcd Driver	Native			Native		Native		Native		Native
A9782 (2G Combo Card)										
FW										
fcd Driver	Native	Native	Native	Native		Native		Native		Native
A9784 (2G Combo Card)										
FW										
fcd Driver	Native	Native	Native	Native		Native		Native		Native
A6795A (2G)										
FW	1.10			1.10		1.10	1.10	1.10		1.10
	Native			Native		Native	Native	Native		Native
A6826A (2G)										
FW	3.03.150	3.02.165	3.02.165	3.03.150		3.03.150		3.03.150		3.03.150
fcd Driver	Native	Native	Native	Native		Native		Native		Native
Disk Array Multipath Support ⁴										
AutoPath for HP-UX	2.01.02					2.01.02				
Secure Path for HP-UX	3.0F	3.0C	3.0C	3.0F		3.0F	3.0E	3.0F		3.0F
High Availability ⁵										
MC/ServiceGuard	✓ ³					✓ ³				

CLICK on product to go to product web page

CLICK cell to go to download page for this product

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.
- 5) 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.

September 2005, v1.0

Notes pertaining to unique configurations

Matrix version

Current page number and buttons to navigate to previous and next pages

Libraries - Application Support

DAS, DAF, and SAN Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Enterprise Libraries ¹⁰	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.										
ESL E-Series 712e/322e ¹											
Robot FW	4.10	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960 FC	L26W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 460 FC	K42W	✓			✓	✓	✓	✓	✓	✓	✓
ESL E-Series 630e/286e ¹											
Robot FW	4.10	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓ ⁶	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓ ⁶	✓
EML E-Series 245e/103e ¹											
Robot FW	1022	✓ ⁷			✓		✓ ⁵				✓
Drive FW Ultrium 960 FC	L29S	✓			✓		✓				✓
Drive FW Ultrium 460 FC	K480	✓			✓		✓				✓
ESL 9000 Series ¹											
Robot FW	3.60	✓	✓	✓	✓ ²	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G25W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 230	E38W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓ ⁶	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 110/220	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VLS 6000 Series ³	1.0.9	✓			✓		✓			✓ ⁶	✓
ESL E-Series Cross Link ⁴		✓			✓ ²		✓		✓		✓
ESL 9000 Multi-Unit Scalability ⁴		✓	✓	✓	✓ ²	✓	✓	✓	✓		✓
ESL Mixed Media		✓	✓ ⁹		✓ ²	✓ ⁹	✓		✓	✓ ⁸	✓
ESL Partitioning		✓			✓ ²		✓		✓	✓ ⁸	✓
EML Partitioning		✓					✓		✓	✓ ⁸	✓

NOTES:

- 1) The HP StorageWorks SDLT 600 and/or Ultrium 960 Tape Drives include support for WORM (Write-Once, Read-Many) functionality. WORM implementation is dependent on the backup application. For more information on which applications support WORM, go to: www.hp.com/go/connect.
- 2) NetWare is supported with ESL libraries in a homogeneous environment only.

- 3) Minimum supported version is 1.0.4.
- 4) Contact your ISV for scalability support.
- 5) Not supported with LINUX (IA-64) and AIX.
- 6) Windows support only.
- 7) Not supported with NetWare and OVMS.

- 8) Homogeneous Windows only.
- 9) Mixed Media using Partitioning not supported.
- 10) For each library/drive combination, check with your software vendor's hardware compatibility documentation to determine the minimum supported application version.

Libraries - Application Support - Continued

DAS, DAF, and SAN Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Mid-Range Libraries ⁵	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.										
MSL 6000 Series ¹											
Robot FW	5.12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G25W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓	✓
MSL 5000 Series ¹											
Robot FW	5.12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G25W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 230	E38W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 110/220	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL Multi-Unit Scalability ^{3, 4}		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSL Mixed Media Support		✓	✓		✓	✓	✓		✓	✓ ²	✓

NOTES:

- 1) The HP StorageWorks SDLT 600 and Ultrium 960 Tape Drives include support for WORM (Write-Once, Read-Many) functionality. WORM implementation is dependent on the backup application. For more information on which applications support WORM, go to: www.hp.com/go/connect.
- 2) Homogeneous Windows only.

- 3) MSL multi-unit scalability is with a vertical pass-through mechanism.
- 4) Contact your ISV for scalability support.
- 5) For each library/drive combination, check with your software vendor's hardware compatibility documentation to determine the minimum supported application version.

Libraries - Controller Support - Continued

DAF and SAN Support ¹	e2400-FC 2G Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E1200-160	NSR E2400 ³	NSR E1200	NSR M2402	NSR N1200
Enterprise Libraries							
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 (SDLT320)		✓					
ESL E-Series 630e/286e (SDLT600)		✓					
EML E-Series 245e/103e (Ultrium 960 FC)	✓						
EML E-Series 245e/103e (Ultrium 460 FC)	✓						
ESL 9595 (Ultrium 460)		✓				✓	
ESL 9595 (Ultrium 230)		✓		✓		✓	✓
ESL 9595 (SDLT600)		✓				✓	
ESL 9595 S2 (SDLT320)		✓		✓		✓	✓
ESL 9595 SL		✓		✓		✓	✓
ESL 9326 (SDLT600)		✓				✓	
ESL 9326 (SDLT320)		✓		✓		✓	✓
ESL 9326 SL		✓		✓		✓	✓
ESL 9322 (Ultrium 460)		✓				✓	
ESL 9322 (Ultrium 230)		✓		✓		✓	✓
ESL 9322 (SDLT600)		✓				✓	
ESL 9322 (SDLT320)		✓		✓		✓	✓
ESL 9198 (SDLT600)		✓				✓	
ESL 9198 S2 (SDLT320)		✓		✓		✓	✓
ESL 9198 SL		✓		✓		✓	✓
ESL E-Series Cross Link	✓	✓					
ESL Multi-Unit Scalability ²		✓		✓		✓	✓
Interface Manager	✓	✓					

NOTES:

- 1) For ISV compatibility information with the routers, refer to the [Interface Controllers](#) page within this document or [click here](#).
- 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.

Libraries - Controller Support - Continued

DAF and SAN Support ¹	e2400-FC 2G Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200
Mid-Range Libraries							
MSL 6060 (Ultrium 960)			✓			✓	
MSL 6060 (Ultrium 460)			✓			✓	
MSL 5060 (Ultrium 230)			✓		✓	✓	✓
MSL6052 (SDLT 600)			✓			✓	
MSL5052 (SDLT 600)			✓			✓	
MSL 5052 S2			✓		✓	✓	✓
MSL 5052 SL			✓		✓	✓	✓
MSL 6030 (Ultrium 960)			✓			✓	
MSL 6030 (Ultrium 460)			✓			✓	
MSL 5030 (Ultrium 230)			✓		✓	✓	✓
MSL 6026 (SDLT 600)			✓			✓	
MSL 5026 (SDLT 600)			✓		✓	✓	✓
MSL 5026 S2			✓		✓	✓	✓
MSL 5026 SL			✓		✓	✓	✓
MSL Multi-Unit Scalability			✓		✓	✓	✓

NOTES:

- 1) For ISV compatibility information with the routers, refer to the [Interface Controllers](#) page within this document or [click here](#).
- 2) Multi-unit configurations that include an Interface Manager card are restricted to two libraries

Interface Controllers and Serverless Support

DAF and SAN Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Fibre Channel Interface Controller											
Interface Manager	i160	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
e2400-FC 2G Interface Controller (FC-FC)	5.6.78	✓			✓		✓	✓	✓	✓	✓
e2400-160 Interface Controller (FC-SCSI)	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E1200-160	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E2400	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E1200	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR M2402	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR N1200	5.6.78	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Serverless Backup 1,2,6,8,9 (SAN Support Only)											
e2400-FC 2G Interface Controller (FC-FC)											
e2400-160 Interface Controller (FC-SCSI)		✓ ⁷									
NSR E2400				✓ ³						✓ ⁴	✓ ⁵
NSR E1200				✓ ³						✓ ⁴	✓ ⁵
NSR M2402		✓ ⁷		✓ ³						✓ ⁴	✓ ⁵
NSR N1200				✓ ³						✓ ⁴	✓ ⁵

	Interface Manager Firmware Required Minimum Component									
	i100	i110	i120	i130	i141	i142	i150	i155	i160	
e2400-FC 2G Interface Controller (FC-FC)	N/A	N/A	N/A	5.4.25	5.6.06	5.6.06	5.6.41	5.6.69	5.6.78	
e2400-160 Interface Controller (FC-SCSI)	5.1.08	5.3.0b	5.3.0b	5.4.25	5.6.06	5.6.06	5.6.41	5.6.69	5.6.78	
NSR E2400	N/A	5.3.0b	5.3.0b	5.4.25	5.6.06	5.6.06	5.6.41	5.6.69	5.6.78	
NSR E1200-160	N/A	5.3.0b	5.3.0b	5.4.25	5.6.06	5.6.06	5.6.41	5.6.69	5.6.78	
ESL 9595/9322	3.40	3.40	3.40	3.48	3.48	3.55	3.55	3.55	3.60	
ESL 9198/9326	N/A	3.40	3.40	3.48	3.48	3.55	3.55	3.55	3.60	
ESL E-Series 712e/630e	N/A	N/A	1.01	1.10	2.00	2.00	3.00	3.00	4.10	
ESL E-Series 322e/286e	N/A	N/A	N/A	1.10	2.00	2.00	3.00	3.00	4.10	
EML E-Series 245e/103e	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1016	1022	
JAVA Run Time	1.4.0	1.4.0	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	
Command View TL	1.0.00	1.1.00	1.2.00	1.3.00	1.4.01	1.4.02	1.50	1.5.05	1.6.00	

NOTES:

- 1) Serverless backup supported in single path configurations only.
- 2) Serverless backup not supported with 5.3.0b or 5.4.25 NSR firmware.
- 3) Windows 2000 and 2003 Serverless option with EVA, MSA1000, HSG only.
- 4) Windows 2000 ServerFree opt with HSG, EVA, MSA1000 only.
- 5) Supported with Solaris 8 & 9, VERITAS NetBackup 4.5 and 5.X, nbu_snap with HSG and EVA only (master router configuration not supported).

- 6) Serverless Backup functionality is not available with the e1200-160 interface controller.
- 7) Supported with XP128/1024 and version 5.1.08 of NSR firmware.
- 8) The LUN ID of the disk volume to be backed up must be the same for the host and the interface controller.
- 9) Serverless backup is restricted to Qlogic Windows driver version 8.2.0.73 or any version of Emulex HBA driver.

Autoloaders

DAS Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup	Native
AutoLoaders¹	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.											
1/8 Ultrium 960 Tape Autoloader	Component Firmware											
	Robot FW	1.40	1.40				1.40			1.40	1.40	1.40
	Drive FW Ultrium 960	G38W	G38W				G38W			G38W	G38W	G38W
	Operating System Support											
	HP-UX 11.0		✓								✓	
	HP-UX 11.11 (11i v1)		✓								✓	✓
	HP-UX 11.23 (11i v2)		✓									✓
	Windows 2000 Server/AS		✓				✓			✓	✓	✓
	Windows Server 2003 (32-bit)		✓				✓			✓	✓	✓
	Windows Server 2003 (64-bit)		✓									✓
	Tru64 5.1A											✓
	Tru64 5.1B											✓
	Red Hat Advanced Server 2.1 (32-bit)		✓				✓					✓
	Red Hat Advanced Server 2.1 (64-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (32-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (64-bit)		✓									✓
	Red Hat Enterprise Linux 4.0 (32-bit)											✓
	Red Hat Enterprise Linux 4.0 (64-bit)											✓
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓				✓					✓
	United Linux 1.0/SuSE SLES 8 (64-bit)		✓									✓
	SuSE SLES 9 (32-bit)						✓					✓
	SuSE SLES 9 (64-bit)											✓
	NetWare 5.1						✓			✓		
	NetWare 6.0						✓			✓		
	NetWare 6.5						✓			✓		
	Solaris 8						✓					✓
	Solaris 9						✓					✓
	AIX 5.1L (32-bit)						✓					✓
AIX 5.2 (32-bit)						✓					✓	
1/8 Ultrium 448 Tape Autoloader	Component Firmware											
	Robot FW	1.40	1.40				1.40			1.40	1.40	1.40
	Drive FW Ultrium 448	S38W	S38W				S38W			S38W	S38W	S38W
	Operating System Support											
	HP-UX 11.0		✓								✓	
	HP-UX 11.11 (11i v1)		✓								✓	✓
	HP-UX 11.23 (11i v2)		✓				✓					✓
	Windows 2000 Server/AS		✓				✓			✓	✓	✓
	Windows Server 2003 (32-bit)		✓				✓			✓	✓	✓
	Windows Server 2003 (64-bit)		✓									✓
	Tru64 5.1A											✓
	Tru64 5.1B											✓
	Red Hat Advanced Server 2.1 (32-bit)		✓				✓					✓
	Red Hat Advanced Server 2.1 (64-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (32-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (64-bit)		✓									✓
	Red Hat Enterprise Linux 4.0 (32-bit)											✓
	Red Hat Enterprise Linux 4.0 (64-bit)											✓
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓				✓					✓
	United Linux 1.0/SuSE SLES 8 (64-bit)		✓									✓
	SuSE SLES 9 (32-bit)						✓					✓
	SuSE SLES 9 (64-bit)											✓
	NetWare 5.1						✓			✓		
	NetWare 6.0						✓			✓		
	NetWare 6.5						✓			✓		
	Solaris 8						✓					✓
	Solaris 9						✓					✓
	AIX 5.1L (32-bit)						✓					✓
AIX 5.2 (32-bit)						✓					✓	

NOTE: 1) Autoloaders are only supported in Direct Attach SCSI configurations

Autoloaders - Continued

DAS Support		Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup	Native	
AutoLoaders¹	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.													
SSL1016 Ultrium 460 Tape Autoloader	Component Firmware													
	Robot FW	v20	v20	v20	v10	v20	v10	v20	v20	v20	v20	v20	v20	
	Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W	F59W	
	Operating System Support													
	HP-UX 11.0		✓					✓			✓		✓	
	HP-UX 11.11 (11i v1)		✓					✓			✓		✓	
	HP-UX 11.23 (11i v2)		✓					✓			✓		✓	
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Windows Server 2003 (32-bit)		✓				✓		✓	✓	✓	✓	✓	
	Windows Server 2003 (64-bit)		✓						✓	✓	✓	✓	✓	
	Tru64 5.1A								✓				✓	
	Tru64 5.1B								✓				✓	
	Red Hat Advanced Server 2.1 (32-bit)								✓				✓	
	Red Hat Advanced Server 2.1 (64-bit)		✓						✓				✓	
	Red Hat Enterprise Linux 3.0 (32-bit)												✓	
	Red Hat Enterprise Linux 3.0 (64-bit)								✓				✓	
	Red Hat Enterprise Linux 4.0 (32-bit)												✓	
	Red Hat Enterprise Linux 4.0 (64-bit)												✓	
	United Linux 1.0/SuSE SLES 8 (32-bit)								✓				✓	
	United Linux 1.0/SuSE SLES 8 (64-bit)			✓									✓	
	SuSE SLES 9 (32-bit)												✓	
	SuSE SLES 9 (64-bit)												✓	
	NetWare 5.1		✓				✓					✓		
	NetWare 6.0		✓				✓					✓		
	NetWare 6.5						✓							
	Solaris 8		✓						✓		✓		✓	
	Solaris 9		✓						✓				✓	
	AIX 5.1L (32-bit)										✓			
	AIX 5.2 (32-bit)													
	SSL1016 SDLT160/320 Tape Autoloader	Component Firmware												
		Robot FW	v40	v40		v35	v40	v31	v40	v40		v40	v40	v40
		Drive FW SDLT 160/320	v85	v85		v85	v85	v75	v85	v85		v85	v85	v85
Operating System Support														
HP-UX 11.0			✓					✓					✓	
HP-UX 11.11 (11i v1)			✓					✓					✓	
HP-UX 11.23 (11i v2)			✓					✓					✓	
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows Server 2003 (32-bit)			✓				✓		✓	✓	✓	✓	✓	
Windows Server 2003 (64-bit)			✓						✓	✓	✓	✓	✓	
Tru64 5.1A			✓						✓				✓	
Tru64 5.1B			✓						✓				✓	
Red Hat Advanced Server 2.1 (32-bit)			✓						✓				✓	
Red Hat Advanced Server 2.1 (64-bit)			✓						✓				✓	
Red Hat Enterprise Linux 3.0 (32-bit)													✓	
Red Hat Enterprise Linux 3.0 (64-bit)									✓				✓	
Red Hat Enterprise Linux 4.0 (32-bit)													✓	
Red Hat Enterprise Linux 4.0 (64-bit)													✓	
United Linux 1.0/SuSE SLES 8 (32-bit)				✓									✓	
United Linux 1.0/SuSE SLES 8 (64-bit)				✓									✓	
SuSE SLES 9 (32-bit)													✓	
SuSE SLES 9 (64-bit)													✓	
NetWare 5.1			✓				✓					✓		
NetWare 6.0			✓				✓					✓		
NetWare 6.5							✓							
Solaris 8			✓						✓				✓	
Solaris 9			✓						✓				✓	
AIX 5.1L (32-bit)									✓					
AIX 5.2 (32-bit)														

NOTE: 1) Autoloaders are only supported in Direct Attach SCSI configurations

Autoloaders - Continued

DAS Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup	Native	
AutoLoaders¹	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.												
1/8 Ultrium 460 Tape Autoloader	Component Firmware												
	Robot FW	N12r	N12r	N12r	N12r	N12r	N12r	N12r	N12r	N12r	N12r	N12r	
	Drive FW Ultrium 460	F7BP	F7BP	F78V	F78V	F7BP	F78V	F7BP	F7BP	F7BP	F7BP	F7BP	
	Operating System Support												
	HP-UX 11.0		✓					✓		✓		✓	
	HP-UX 11.11 (11i v1)		✓					✓		✓		✓	
	HP-UX 11.23 (11i v2)		✓					✓		✓		✓	
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓		✓	✓	✓	
	Windows Server 2003 (32-bit)		✓			✓	✓	✓	✓	✓	✓	✓	
	Windows Server 2003 (64-bit)		✓					✓	✓	✓		✓	
	Tru64 5.1A		✓					✓				✓	
	Tru64 5.1B		✓					✓				✓	
	Red Hat Advanced Server 2.1 (32-bit)		✓					✓				✓	
	Red Hat Advanced Server 2.1 (64-bit)		✓					✓				✓	
	Red Hat Enterprise Linux 3.0 (32-bit)		✓									✓	
	Red Hat Enterprise Linux 3.0 (64-bit)		✓									✓	
	Red Hat Enterprise Linux 4.0 (32-bit)											✓	
	Red Hat Enterprise Linux 4.0 (64-bit)											✓	
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓									✓	
	United Linux 1.0/SuSE SLES 8 (64-bit)		✓									✓	
	SuSE SLES 9 (32-bit)											✓	
	SuSE SLES 9 (64-bit)											✓	
	NetWare 5.1		✓			✓					✓		
	NetWare 6.0		✓			✓					✓		
	NetWare 6.5					✓							
	Solaris 8		✓					✓		✓		✓	
	Solaris 9		✓					✓		✓		✓	
	AIX 5.1L (32-bit)		✓					✓		✓		✓	
	AIX 5.2 (32-bit)		✓					✓		✓		✓	
	1/8 SDLT 160/320 Tape Autoloader	Component Firmware											
		Robot FW	L12r	L12r	L12r	L12r	L12r	L12r	L12r	L12r	L12r	L12r	L12r
		Drive FW SDLT 160/320	v85	v85	v75	v75	v85	v85	v85	v85	v85	v85	v85
Operating System Support													
HP-UX 11.0			✓					✓		✓		✓	
HP-UX 11.11 (11i v1)			✓					✓		✓		✓	
HP-UX 11.23 (11i v2)			✓					✓		✓		✓	
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓		✓	✓	✓	
Windows Server 2003 (32-bit)			✓			✓	✓	✓	✓	✓	✓	✓	
Windows Server 2003 (64-bit)			✓				✓	✓	✓	✓		✓	
Tru64 5.1A								✓				✓	
Tru64 5.1B								✓				✓	
Red Hat Advanced Server 2.1 (32-bit)			✓			✓		✓				✓	
Red Hat Advanced Server 2.1 (64-bit)			✓					✓				✓	
Red Hat Enterprise Linux 3.0 (32-bit)			✓									✓	
Red Hat Enterprise Linux 3.0 (64-bit)			✓									✓	
Red Hat Enterprise Linux 4.0 (32-bit)												✓	
Red Hat Enterprise Linux 4.0 (64-bit)												✓	
United Linux 1.0/SuSE SLES 8 (32-bit)			✓			✓						✓	
United Linux 1.0/SuSE SLES 8 (64-bit)			✓									✓	
SuSE SLES 9 (32-bit)												✓	
SuSE SLES 9 (64-bit)												✓	
NetWare 5.1			✓			✓					✓		
NetWare 6.0			✓			✓					✓		
NetWare 6.5			✓			✓					✓		
Solaris 8			✓					✓		✓		✓	
Solaris 9			✓					✓		✓		✓	
AIX 5.1L (32-bit)								✓		✓		✓	
AIX 5.2 (32-bit)								✓		✓		✓	

NOTE: 1) Autoloaders are only supported in Direct Attach SCSI configurations

Autoloaders - Continued

DAS Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup	Native
AutoLoaders¹	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.											
1/8 Ultrium 232 Tape Autoloader	Component Firmware											
	Robot FW	1.40	1.40				1.40			1.40	1.40	1.40
	Drive FW Ultrium 232	P32W	P32W				P32W			P32W	P32W	P32W
	Operating System Support											
	HP-UX 11.0		✓								✓	
	HP-UX 11.11 (11i v1)		✓								✓	✓
	HP-UX 11.23 (11i v2)		✓									✓
	Windows 2000 Server/AS		✓				✓			✓	✓	✓
	Windows Server 2003 (32-bit)		✓				✓			✓	✓	✓
	Windows Server 2003 (64-bit)		✓									✓
	Tru64 5.1A											✓
	Tru64 5.1B											✓
	Red Hat Advanced Server 2.1 (32-bit)		✓				✓					✓
	Red Hat Advanced Server 2.1 (64-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (32-bit)		✓				✓					✓
	Red Hat Enterprise Linux 3.0 (64-bit)		✓									✓
	Red Hat Enterprise Linux 4.0 (32-bit)											✓
	Red Hat Enterprise Linux 4.0 (64-bit)											✓
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓				✓					✓
	United Linux 1.0/SuSE SLES 8 (64-bit)		✓									✓
	SuSE SLES 9 (32-bit)						✓					✓
	SuSE SLES 9 (64-bit)											✓
	NetWare 5.1						✓				✓	
	NetWare 6.0						✓				✓	
	NetWare 6.5						✓				✓	
	Solaris 8						✓					✓
	Solaris 9						✓					✓
	AIX 5.1L (32-bit)						✓					✓
	AIX 5.2 (32-bit)						✓					✓
	1/8 Ultrium 230 Tape Autoloader	Component Firmware										
Robot FW		H43r	H43r	H43r	H43r	H43r	H43r	H43r	H43r	H43r	H43r	H43r
Drive FW Ultrium 230		E33P	E330P	E33P	E33P	E33P	E33P	E33P	E33P	E33P	E33P	E33P
Operating System Support												
HP-UX 11.0			✓							✓	✓	✓
HP-UX 11.11 (11i v1)			✓							✓	✓	✓
HP-UX 11.23 (11i v2)			✓									✓
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Windows Server 2003 (32-bit)			✓				✓	✓	✓	✓	✓	✓
Windows Server 2003 (64-bit)			✓						✓			✓
Tru64 5.1A												✓
Tru64 5.1B												✓
Red Hat Advanced Server 2.1 (32-bit)								✓			✓	✓
Red Hat Advanced Server 2.1 (64-bit)			✓					✓				✓
Red Hat Enterprise Linux 3.0 (32-bit)												✓
Red Hat Enterprise Linux 3.0 (64-bit)												✓
Red Hat Enterprise Linux 4.0 (32-bit)												✓
Red Hat Enterprise Linux 4.0 (64-bit)												✓
United Linux 1.0/SuSE SLES 8 (32-bit)								✓				✓
United Linux 1.0/SuSE SLES 8 (64-bit)			✓					✓				✓
SuSE SLES 9 (32-bit)												✓
SuSE SLES 9 (64-bit)												✓
NetWare 5.1			✓				✓				✓	
NetWare 6.0			✓				✓				✓	
NetWare 6.5							✓					
Solaris 8								✓		✓		✓
Solaris 9								✓		✓		✓
AIX 5.1L (32-bit)										✓		
AIX 5.2 (32-bit)										✓		

NOTE: 1) Autoloaders are only supported in Direct Attach SCSI configurations

Autoloaders - Continued

DAS Support	Supported Release	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup	Native	
AutoLoaders¹	IMPORTANT: See the Backup Application Details page for the latest supported versions of backup software.												
1/8 DLT vs80 Tape Autoloader	Component Firmware												
	Robot FW	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40		5E40	
	Drive FW vs80	v64	v64	v56	v56	v64	v56	v64	v56		v64	v64	
	Operating System Support												
	HP-UX 11.0		✓							✓			✓
	HP-UX 11.11 (11i v1)		✓							✓			✓
	HP-UX 11.23 (11i v2)		✓							✓			✓
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
	Windows Server 2003 (32-bit)		✓			✓		✓		✓	✓		✓
	Windows Server 2003 (64-bit)		✓							✓			
	Tru64 5.1A												
	Tru64 5.1B												
	Red Hat Advanced Server 2.1 (32-bit)										✓		✓
	Red Hat Advanced Server 2.1 (64-bit)		✓								✓		✓
	Red Hat Enterprise Linux 3.0 (32-bit)												✓
	Red Hat Enterprise Linux 3.0 (64-bit)												✓
	Red Hat Enterprise Linux 4.0 (32-bit)												✓
	Red Hat Enterprise Linux 4.0 (64-bit)												✓
	United Linux 1.0/SuSE SLES 8 (32-bit)								✓				✓
	United Linux 1.0/SuSE SLES 8 (64-bit)		✓						✓				✓
	SuSE SLES 9 (32-bit)												✓
	SuSE SLES 9 (64-bit)												✓
	NetWare 5.1		✓			✓					✓		
	NetWare 6.0		✓			✓					✓		
	NetWare 6.5												
	Solaris 8							✓		✓			
	Solaris 9							✓		✓			
	AIX 5.1L (32-bit)									✓			
	AIX 5.2 (32-bit)									✓			
	SSL1016 DLT1 Tape Autoloader	Component Firmware											
		Robot FW	v40	v40	v31	v31	v40	v13	v40	v31	v40	v40	v40
		Drive FW DLT 1	v64	v64	v53	v53	v64	v46	v64	v53	v64	v64	v64
Operating System Support													
HP-UX 11.0								✓		✓			
HP-UX 11.11 (11i v1)								✓		✓			
HP-UX 11.23 (11i v2)			✓										
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓	✓	✓	✓2	✓	
Windows Server 2003 (32-bit)										✓			
Windows Server 2003 (64-bit)			✓							✓			
Tru64 5.1A								✓					
Tru64 5.1B								✓					
Red Hat Advanced Server 2.1 (32-bit)								✓					
Red Hat Advanced Server 2.1 (64-bit)			✓					✓					
Red Hat Enterprise Linux 3.0 (32-bit)													
Red Hat Enterprise Linux 3.0 (64-bit)													
Red Hat Enterprise Linux 4.0 (32-bit)													
Red Hat Enterprise Linux 4.0 (64-bit)													
United Linux 1.0/SuSE SLES 8 (32-bit)								✓					
United Linux 1.0/SuSE SLES 8 (64-bit)			✓					✓					
SuSE SLES 9 (32-bit)													
SuSE SLES 9 (64-bit)													
NetWare 5.1						✓							
NetWare 6.0						✓							
NetWare 6.5													
Solaris 8								✓		✓			
Solaris 9								✓					
AIX 5.1L (32-bit)										✓			
AIX 5.2 (32-bit)										✓			

NOTES:

- 1) Autoloaders are only supported in Direct Attach SCSI configurations.
- 2) Supported with BE 9.0 and later only

HP-UX (PA-RISC)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
HP-UX 11.0	HWE 1100 March 2004	HWE 1100 March 2004	HWE 1100 March 2004	HWE 1100 March 2004	HWE 1100 Sept 2003	HWE 1100 March 2004	HWE 1100 Sept 2003	HWE 1100 March 2004		HWE 1100 March 2004
HP-UX 11.11 (11i v1)	HWE 11.11 Dec 2004 Gold Pack Dec 2004	HWE 11.11 Dec 2003	HWE 11.11 Dec 2003	HWE 11.11 Dec 2004 Gold Pack Dec 2004	HWE 11.11 Sept 2003	HWE 11.11 Dec 2004 Gold Pack Dec 2004	HWE 11.11 Dec 2004 Gold Pack Dec 2004	HWE 11.11 Dec 2004 Gold Pack Dec 2004		HWE 11.11 June 2005 Quality Pack June 2005
HP-UX 11.23 (11i v2)	Sept 2004						Sept 2004			
Servers										
HP 9000 Superdome and Mid-Range (rp7000-rp8000, PA-RISC)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP 9000 Entry-Level (rp1000-rp6000, PA-RISC)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP A, L, N, and V Class (pa-risc)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP R Class (pa-risc) ³	✓	✓	✓	✓	✓	✓	✓	✓		✓
Workstations										
HP B-Class (pa-risc)	✓									✓
HP C-Class (pa-risc)	✓									✓
HP J-Class (pa-risc)	✓									✓
Fibre Host Bus Adapters ⁵										
AB465A (2G Combo Card) FW										
fcd Driver	Native			Native		Native		Native		Native
A9782 (2G Combo Card) FW										
fcd Driver	Native			Native		Native		Native		Native
A9784 (2G Combo Card) FW										
fcd Driver	Native			Native		Native		Native		Native
A6826A (2G) fcd Driver	Native			Native		Native	Native	Native		Native
FW	3.03.150			3.03.150		3.03.150	3.02.165	3.03.150		3.03.150
A6795A (2G) td Driver	Native	Native	Native	Native	Native	Native	Native	Native		Native
A5158A (1G) td Driver	Native	Native	Native	Native	Native	Native	Native	Native		Native
Disk Array Multipath Support ⁵										
AutoPath for HP-UX	2.01.02					2.01.02				2.01.02
Secure Path for HP-UX	3.0F	3.0C	3.0C	3.0F	3.0C	3.0F	3.0E	3.0F		3.0F
High Availability ⁴										
MC/ServiceGuard	✓ ³					✓ ³				

NOTES:

- 1) Other Operating Systems not listed above 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 September 2005, v1.0

- 3) ATS is not supported.
- 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 [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance

HP-UX (IA-64)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
HP-UX 11.23 (11i v2)	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 May 2005 Quality Pack May 2005		HWE 11.23 May 2005 Quality Pack May 2005	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 May 2005 Quality Pack May 2005		HWE 11.23 May 2005 Quality Pack May 2005
Servers										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
Workstations										
HP xz series (IA)	✓									
Fibre Host Bus Adapters ⁴										
AB465A (2G Combo Card)										
FW										
fcd Driver	Native			Native		Native		Native		Native
A9782 (2G Combo Card)										
FW										
fcd Driver	Native	Native	Native	Native		Native		Native		Native
A9784 (2G Combo Card)										
FW										
fcd Driver	Native	Native	Native	Native		Native		Native		Native
A6795A (2G)										
FW	1.10			1.10		1.10	1.10	1.10		1.10
td Driver	Native			Native		Native	Native	Native		Native
A6826A (2G)										
FW	3.03.150	3.02.165	3.02.165	3.03.150		3.03.150		3.03.150		3.03.150
fcd Driver	Native	Native	Native	Native		Native		Native		Native
Disk Array Multipath Support ⁴										
AutoPath for HP-UX	2.01.02					2.01.02				
Secure Path for HP-UX	3.0F	3.0C	3.0C	3.0F		3.0F	3.0E	3.0F		3.0F
High Availability ⁵										
MC/ServiceGuard	✓ ³					✓ ³				

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

- 5) 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.

Windows (32-bit)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Windows 2000 Server/AS	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4
Windows Server 2003 (32-bit)	sp1	✓	✓	sp1	✓	sp1	✓	sp1	sp1	sp1
Servers										
HP ProLiant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HP ProLiant Blade Server	✓	✓		✓	✓	✓	✓	✓	✓	✓
HP NetServer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fibre Host Bus Adapters ^{5, 6}										
HP Branded / 3rd Party										
FC2242 / Emulex LPe1050 (4G)										
FW						2.50a2				2.50a2
WIN 2000/2003 SCSIport Driver						5-5.20a9				5-5.20a9
WIN 2003 StorPort Driver ^{3,4}						5-1.11a0				5-1.11a0
FC2142 / Emulex LPe11002 (4G)										
FW						2.50a2				2.50a2
WIN 2000/2003 SCSIport Driver						5-5.20a9				5-5.20a9
WIN 2003 StorPort Driver ^{3,4}						5-1.11a0				5-1.11a0
A7387A / Emulex LP1050DC										
FW	1.91a1			1.91a1		1.91a1		1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9			5-5.20a9		5-5.20a9		5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0		5-1.11a0	5-1.11a0	5-1.11a0
A7388A / Emulex LP1050										
FW	1.91a1			1.91a1		1.91a1		1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9			5-5.20a9		5-5.20a9		5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0		5-1.11a0	5-1.11a0	5-1.11a0
A7560A / Emulex LP1050EX-F2										
FW	1.91a1			1.91a1		1.91a1		1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9			5-5.20a9		5-5.20a9		5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0		5-1.11a0	5-1.11a0	5-1.11a0
FCA2355 / Emulex LP9002DC										
FW	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-5.10a11	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0		5-1.11a0	5-1.11a0	5-1.11a0

NOTES:

- 1) Other Operating Systems not listed above 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) Requires updated Storport.sys QFE891793 (minimum) or QFE903081 (recommended).

- 4) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 5) Refer to [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

- 6) 3rd Party adapters require HP drivers and firmware.

Windows (32-bit) - Continued

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Fibre Host Bus Adapters ^{1, 2} HP Branded / 3rd Party										
FCA2408 / Emulex LP982										
FW	1.91a1	1.81a2	1.81a2	1.91a1	1.81a2	1.91a1	1.01a2	1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-4.82a16	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
Emulex Mezzanine Card for HP p-Class BladeSystem (2G)										
FW	1.91a2			1.91a2		1.91a2		1.91a2	1.91a2	1.91a2
WIN 2000/2003 SCSIport Driver	5-5.20a9			5-5.20a9		5-5.20a9		5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
QLogic Mezzanine Card for BL20p G2/G3 (2G)										
FW	1.45	1.34		1.45	1.34	1.45	1.43	1.45	1.45	1.45
WIN 2000/2003 SCSIport Driver	9.0.2.11	9.0.0.13		9.0.2.11	9.0.0.13	9.0.2.11	9.0.0.13	9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{3,4}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
QLogic Balcony Card for BL25p (2G)										
FW	1.48			1.48		1.48		1.48	1.48	1.48
WIN 2000/2003 SCSIport Driver	9.0.2.11			9.0.2.11		9.0.2.11		9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{3,4}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
QLogic Balcony Card for BL30p (2G)										
FW	1.45	1.43		1.45	1.43	1.45	1.43	1.45	1.45	1.45
WIN 2000/2003 SCSIport Driver	9.0.2.11	9.0.0.14		9.0.2.11	9.0.0.14	9.0.2.11	9.0.0.14	9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{3,4}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
QLogic Balcony Card for BL35p (2G)										
FW	1.45			1.45		1.45		1.45	1.45	1.45
WIN 2000/2003 SCSIport Driver	9.0.2.11			9.0.2.11		9.0.2.11		9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{3,4}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
FCA2404 / Emulex LP9802										
FW	1.91a1	1.81a2	1.81a2	1.91a1	1.81a2	1.91a1	1.90a4	1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-5.10a11	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
FCA2404DC / Emulex LP9802DC										
FW	1.91a1	1.81a2	1.81a2	1.91a1	1.81a2	1.91a1	1.90a4	1.91a1	1.91a1	1.91a1
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-5.10a11	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0

NOTES:

1) Refer to [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at:
<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>
or consult with your hp solutions provider for assistance.

2) 3rd Party adapters require HP drivers and firmware.
3) Requires updated Storport.sys QFE891793 (minimum)
or QFE903081 (recommended).

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

Windows (32-bit) - Continued

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Fibre Host Bus Adapters ^{1, 6}										
HP Branded / 3rd Party										
FCA2101 / Emulex LP952										
FW	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-5.10a11	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{3,4}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
FCA2214DC / QLogic 2342										
FW	1.45	1.34		1.45	1.34	1.45	1.45	1.45	1.45	1.45
WIN 2000/2003 SCSIport Driver	9.0.2.11	9.0.0.13		9.0.2.11	9.0.0.13	9.0.2.11	9.0.2.11	9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{7,8}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
FCA2214 / QLogic 2340										
FW	1.45	1.34		1.45	1.34	1.45	1.45	1.45	1.45	1.45
WIN 2000/2003 SCSIport Driver	9.0.2.11	9.0.0.13		9.0.2.11	9.0.0.13	9.0.2.11	9.0.2.11	9.0.2.11	9.0.2.11	9.0.2.11
WIN 2003 StorPort Driver ^{7,8}	9.0.2.16			9.0.2.16		9.0.2.16			9.0.2.16	9.0.2.16
KGPSA-CB / Emulex LP8000										
FW	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2
WIN 2000/2003 SCSIport Driver	5-5.20a9	5-5.10a9	5-5.10a9	5-5.20a9	5-5.10a9	5-5.20a9	5-5.10a11	5-5.20a9	5-5.20a9	5-5.20a9
WIN 2003 StorPort Driver ^{7,8}	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
Fibre Host Bus Adapters ^{1,9}										
3rd Party Drivers										
Emulex LP982 (Full-Port Driver)										
FW	1.01a2									1.01a2
WIN 2000/2003 Full-Port Driver	2.21a0									2.21a0
Disk Array Multipath Support ¹										
Secure Path for Windows	4.0C SP2-1	4.0C	4.0C	4.0C SP2-1	4.0C	4.0C SP2-1	4.0C SP1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1
Windows MPIO ⁵	1.0			1.0		1.0		1.0	1.0	1.0
AutoPath for Windows 2000	2.01			2.01		2.01		2.01	2.01	2.01
AutoPath for Windows 2003				1.00		1.00			1.00	
High Availability ²										
Windows (MSCS)	✓ ³	✓	✓	✓	✓	✓	✓	✓ ¹⁰	✓ ⁴	✓

NOTES:

1) Refer to Heterogeneous Open SAN Design Reference Guide for configuration rules and guidelines located at:

<http://h18000.www1.hp.com/products/storageworks/san/documentation.html>

or consult with your hp solutions provider for assistance.

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 on Windows 2000 only.

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.

6) 3rd Party adapters require HP drivers and firmware.

7) Requires updated Storport.sys QFE891793 (minimum) or QFE903081 (recommended).

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

9) Supported for tape connections only.

10) Not supported with TSM 5.3.x.

Windows (IA-64)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Windows Server 2003 (64-bit)	sp1	✓		sp1	✓	sp1	✓	sp1		sp1
Servers										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓		✓	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓	✓		✓	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{4, 7}										
HP Branded / 3rd Party										
AB466A / Emulex LP1050DC										
FW	1.91a1			1.91a1		1.91a1		1.91a1		1.91a1
WIN 2003 SCSIport Driver	6-5.20a9			6-5.20a9		6-5.20a9		6-5.20a9		6-5.20a9
WIN 2003 StorPort Driver ^{5, 8}	6-1.10a4			6-1.10a4		6-1.10a4				6-1.10a4
AB467A / Emulex LP1050										
FW	1.91a1			1.91a1		1.91a1		1.91a1		1.91a1
WIN 2003 SCSIport Driver	6-5.20a9			6-5.20a9		6-5.20a9		6-5.20a9		6-5.20a9
WIN 2003 StorPort Driver ^{5, 8}	6-1.10a4			6-1.10a4		6-1.10a4				6-1.10a4
A7298A / Emulex LP982										
FW	1.91a1	1.81a2		1.91a1	1.81a2	1.91a1	1.90a4	1.91a1		1.91a1
WIN 2003 SCSIport Driver	6-5.20a9	6-5.10a9		6-5.20a9	6-5.10a9	6-5.20a9	6-5.10a11	6-5.20a9		6-5.20a9
WIN 2003 StorPort Driver ^{5, 8}	6-1.10a4			6-1.10a4		6-1.10a4				6-1.10a4
AB232A / Emulex LP9802										
FW	1.91a1	1.81a2		1.91a1	1.81a2	1.91a1		1.91a1		1.91a1
WIN 2003 SCSIport Driver	6-5.20a9	6-5.10a9		6-5.20a9	6-5.10a9	6-5.20a9		6-5.20a9		6-5.20a9
WIN 2003 StorPort Driver ^{5, 8}	6-1.10a4			6-1.10a4		6-1.10a4				6-1.10a4
Disk Array Multipath Support ⁴										
Secure Path for Windows	4.0C SP2-1	4.0C		4.0C SP2-1	4.0C	4.0C SP2-1	4.0B	4.0C SP2-1		4.0C SP2-1
Windows MPIO ⁶	1.0			1.0		1.0		1.0		1.0
AutoPath for Windows 2003						1.00				
High Availability ³										
Windows (MSCS)		✓			✓		✓	✓		✓

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.
- 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) Requires updated Storport.sys QFE891793 (minimum) or QFE903081 (recommended).

Windows (x64)

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Windows Server 2003 x64 Edition				sp1						
Servers										
HP ProLiant				✓						
HP ProLiant Blade Server				✓						
Fibre Host Bus Adapters ^{4,5}										
HP Branded / 3rd Party										
A7387A / Emulex LP1050DC										
FW				1.91a1						
WIN 2003 StorPort Driver ^{6,7}				7-1.11a0						
A7388A / Emulex LP1050										
FW				1.91a1						
WIN 2003 StorPort Driver ^{6,7}				7-1.11a0						
FCA2408 / Emulex LP982										
FW				1.91a1						
WIN 2003 StorPort Driver ^{6,7}				7-1.11a0						
FCA2404DC / Emulex LP9802DC										
FW				1.91a1						
WIN 2003 StorPort Driver ^{6,7}				7-1.11a0						
FCA2404 / Emulex LP9802										
FW				1.91a1						
WIN 2003 StorPort Driver ^{6,7}				7-1.11a0						
Disk Array Multipath Support ⁴										
Windows MPIO				1.0						
High Availability ³										
Windows (MSCS)										

NOTES:

- 1) Other Operating Systems not listed above 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 Heterogeneous Open SAN Design Reference Guide for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Requires updated Storport.sys QFE903081.
- 7) Please reference ISV application installation/support documents for specific driver and patch requirements.

LINUX (32-bit)⁴

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Red Hat Advanced Server 2.1 (32-bit)	✓	✓	✓	✓	✓	✓	✓	✓		✓
Red Hat Enterprise Linux 3.0 (32-bit)	✓	✓	✓	✓		✓	✓	✓		✓
Red Hat Enterprise Linux 4.0 (32-bit)				✓				✓		✓
United Linux 1.0/SuSE SLES 8 (32-bit)	✓	✓	✓	✓		✓	✓	✓		✓
SuSE SLES 9 (32-bit)	✓			✓				✓		✓
Servers										
HP ProLiant	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP ProLiant Blade Server	✓	✓		✓	✓	✓	✓	✓		✓
HP NetServer	✓	✓	✓	✓	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{3, 5}										
HP Branded / 3rd Party										
FCA2214DC / QLogic 2342 (2G)										
FW	1.45	1.34	1.34	1.45	1.34	1.45	1.45	1.45		1.45
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02
FCA2214 / QLogic 2340 (2G)										
FW	1.45	1.34	1.34	1.45	1.34	1.45	1.45	1.45		1.45
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.01.01	7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02
QLogic Mezzanine Card for BL20p G2/G3 (2G)										
FW	1.45	1.34	1.34	1.45	1.34	1.45	1.45	1.45		1.45
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03	7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance
- 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.

LINUX (32-bit)⁴ - Continued

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Fibre Host Bus Adapters^{3, 5}										
HP Branded / 3rd Party										
QLogic Balcony Card for BL25p (2G)										
FW	1.48			1.48				1.48		1.48
Red Hat Advanced Server 2.1 driver	7.05.00			7.05.00				7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00			7.05.00				7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00			7.05.00				7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02
QLogic Balcony Card for BL30p (2G)										
FW	1.45	1.34		1.45	1.34	1.45	1.45	1.45		1.45
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03		7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03		7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03		7.05.00	6.06.50	7.05.00	7.05.00	7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02
QLogic Balcony Card for BL35p (2G)										
FW	1.45			1.45				1.45		1.45
Red Hat Advanced Server 2.1 driver	7.05.00			7.05.00				7.05.00		7.05.00
Red Hat Enterprise Linux 3.0 driver	7.05.00			7.05.00				7.05.00		7.05.00
Red Hat Enterprise Linux 4.0 driver				8.00.02				8.00.02		8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00			7.05.00				7.05.00		7.05.00
SuSE SLES 9 driver	8.00.02			8.00.02				8.00.02		8.00.02
QLA2200 (1G)										
FW	1.76					1.76	1.76			
Linux Driver (Intel)	6.0.1c					6.0.1c	6.0.1			
Disk Array Multipath Support³										
Secure Path for Linux	3.0C	3.0A	3.0A			3.0Csp1	3.0Csp1	3.0Csp1		3.0C
QLogic Native Multi-Path for Linux (2.4 kernel)	7.05.00			7.05.00		7.05.00	7.05.00	7.05.00		7.05.00
QLogic Native Multi-Path for Linux (2.6 kernel)				8.00.02				8.00.02		8.00.02

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance

- 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.

LINUX (IA-64)³

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems^{1, 2}										
Red Hat Advanced Server 2.1 (64-bit)	✓	✓	✓			✓	✓			
Red Hat Enterprise Linux 3.0 (64-bit)	✓	✓	✓			✓	✓			
Red Hat Enterprise Linux 4.0 (64-bit)				✓						✓
United Linux 1.0/SuSE SLES 8 (64-bit)	✓	✓	✓	✓		✓	✓			
SuSE SLES 9 (64-bit)				✓						✓
Servers										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓			✓
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓	✓	✓	✓		✓	✓			✓
Fibre Host Bus Adapters⁴										
A6826A (2G)										
EFI	1.42	1.42	1.42	1.42		1.42	1.42			1.42
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
Red Hat Enterprise Linux 4.0 driver				8.00.02						8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03	7.05.00		7.05.00	7.05.00			
SuSE SLES 9 driver				8.00.02						8.00.02
A7538A (2G)										
EFI	1.42	1.42	1.42	1.42		1.42	1.42			1.42
Red Hat Advanced Server 2.1 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
Red Hat Enterprise Linux 3.0 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
Red Hat Enterprise Linux 4.0 driver				8.00.02						8.00.02
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03	7.05.00		7.05.00	7.05.00			
SuSE SLES 9 driver				8.00.02						8.00.02
Disk Array Multipath Support⁴										
Secure Path for Linux	3.0C	3.0A	3.0A			3.0C sp1	3.0C sp1			3.0C
QLogic Native Multi-Path for Linux (2.4 kernel)	7.05.00			7.05.00		7.05.00	7.05.00			
QLogic Native Multi-Path for Linux (2.6 kernel)				8.00.02						8.00.02

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance

Solaris

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Solaris 8	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 9	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 10				✓						✓
Servers										
Sun UltraSPARC	✓	✓	✓	✓	✓	✓	✓	✓		✓
Sun Sun Fire	✓	✓	✓	✓	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ³										
FCA2257P (2G - PCI)										
Fcode	2.00.05			2.00.05	2.00.05	2.00.05	2.00.05	2.00.05		2.00.05
Solaris Driver	4.13.01			4.13.01	4.11	4.13.01	4.13.01	4.13.01		4.13.01
FCA2257C (1G - PCI)										
Fcode	1.18.5			1.18.5	1.18.5	1.18.5	1.18.5	1.18.5		1.18.5
Solaris Driver	4.13.01			3.26	4.11	4.13.01	4.13.01	4.13.01		4.13.01
FCA2257S (1G - Sbus)										
Fcode	1.18.3			1.18.3	1.18.3	1.18.3	1.18.3	1.18.3		1.18.3
Solaris Driver	4.13.01			3.26	4.11	4.13.01	4.13.01	4.13.01		4.13.01
SG-XPCI2FC-QF2 (X6768A) (2G - PCI-X)										
Solaris Driver	Native ^{4,5}	Native	Native	Native	Native ⁴	Native		Native ⁴		Native
SG-XPCI1FC-QF2 (X6767A) (2G - PCI-X)										
Solaris Driver	Native ^{4,5}	Native	Native	Native	Native ⁴	Native		Native ⁴		Native
FCA2684DC/Emulex LP10000DC (2G - PCI-X)										
FW				1.90a4		1.90a4		1.90a4		1.90a4
Solaris Driver				6.01f		6.01f ⁴		6.01f ⁴		6.01f
FCA2684/Emulex LP10000 (2G - PCI-X)										
FW				1.90a4		1.90a4		1.90a4		1.90a4
Solaris Driver				6.01f		6.01f ⁴		6.01f ⁴		6.01f
Emulex LP9002L (2G - PCI)										
FW						3.92a2				3.92a2
Solaris Driver						6.01f				5.01E ⁶

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](http://h18000.www1.hp.com/products/storageworks/san/documentation.html) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

- 4) Supported with Solaris 9 only.
- 5) Not supported for robot control.
- 6) Solaris 8 support only.

Solaris - Continued

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Disk Array Multipath Support ¹										
Secure Path for Solaris	3.0D	3.0C SP1	3.0C	3.0D	3.0C	3.0D	3.0D	3.0D		3.0D
Solaris MpXIO ³										✓
High Availability ²										
VERITAS Cluster Server										✓

NOTES:

1) Refer to [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

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.

Tru64

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
Tru64 5.1A ⁹	5.1A pk6	5.1A pk6	5.1A pk6	5.1A pk6 ⁷	5.1A pk6	5.1A pk6	5.1A pk6			5.1A pk6
Tru64 5.1B ⁹	Tru64 V5.1B-2	Tru64 V5.1B-1	Tru64 V5.1B-1		Tru64 V5.1B-1	Tru64 V5.1B-2	Tru64 V5.1B-2			Tru64 V5.1B-3
Servers										
HP AlphaServer	✓	✓	✓	✓	✓	✓	✓			✓
Fibre Host Bus Adapters ^{3, 5}										
FCA2684 and FCA2684 DC (2G - PCI-X)										
FW	1.90a4	1.81a5				1.90a4				1.90a4
Tru64 Driver	2.14	2.14				2.14				2.14
FCA2354 (2G)										
FW	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2			3.92a2
Tru64 Driver	2.14	2.14	2.14	2.14	2.14	2.14	2.14			2.14
FCA2384 (2G - PCI-X)										
FW	1.90a4					1.90a4				1.90a4
Tru64 Driver	2.14					2.14				2.14
KGPSA -CA (1G)										
FW	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2			3.92a2
Tru64 Driver	2.14	2.14	2.14	2.14	2.14	2.14	2.14			2.14
Disk Array Multipath Support ⁵										
Tru64 Multipath		Native	Native	Native	Native	Native	Native			Native
High Availability ⁴										
Tru64 (TruCluster)		✓				✓	✓			✓
OVMS										
Operating Systems ^{1, 2}										
OpenVMS 7.3-1 ^{6, 8, 9, 10}	✓									
OpenVMS 7.3-2 ^{6, 9, 10}	✓									
Servers										
HP AlphaServer	✓									
Fibre Host Bus Adapters ⁵										
FCA2384 (2G - PCI-X)										
FW	1.90a4									
Driver	Native									

NOTES:

- 1) Other Operating Systems not listed above 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) Driver is included in Early Release Patch (ERP) kits for Tru64, problem description number BU040324_EW01.
- 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 [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance
- 6) Refer to <http://h71000.www7.hp.com/openvms/Storage.html> 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) Supported only with the original version 7.3-1 mk driver (SYSSMKDRIVER.EXE)
- 9) Ultrium 230 (LTO) not supported
- 10) OpenVMS supported in switched fabric configurations only.

AIX

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
AIX 5.1L	✓ ^{3, 6}	✓		✓	✓	✓ ⁵	✓	✓		✓
AIX 5.2	✓ ^{3, 6}	✓	✓	✓	✓	✓	✓	✓		✓
AIX 5.3	✓ ^{3, 6}			✓				✓		✓
Servers										
IBM RS/6000	✓	✓	✓	✓	✓	✓	✓	✓		✓
IBM pSeries	✓			✓				✓		✓
Fibre Host Bus Adapters ^{3, 4}										
A7539A (Cambex PC2000) (2G)										
AIX Driver w/o Secure Path	1.5.26.0	1.5.26.0	1.5.22.0	1.5.26.0	1.5.22.0 ⁷	1.5.26.0	1.5.26.0			1.5.26.0
AIX Driver w/ Secure Path	1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3 ⁷	1.5.25.3	1.5.25.3			1.5.25.3
IBM 6228 (2G)										
AIX Driver	Native	Native		Native	Native	Native	Native	Native		Native
IBM 6239 (2G)										
AIX Driver	Native ⁷			Native ⁸		Native ⁷		Native ⁸		Native ⁸
IBM 5716 (2G)										
AIX Driver	Native ⁹			Native ⁸				Native ⁸		Native ⁸
Cambex PC1000 (1G)										
AIX Driver w/o Secure Path	1.5.19		1.5.11.1		1.5.22.0	1.5.26.0	1.5.22.0	1.5.26.0		1.5.26.0
AIX Driver w/ Secure Path	1.5.25.3				1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3		1.5.25.3
Disk Array Multipath Support ⁴										
Secure Path for AIX	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2		2.0D SP2
AIX MPIO										✓

NOTES:

- 1) Other Operating Systems not listed above 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 Heterogeneous Open SAN Design Reference Guide for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance
- 5) DLT8000 products not supported

- 6) AIX devices must be manually configured.
- 7) Supported with AIX 5.2 only.
- 8) Supported with AIX 5.2 and 5.3 only.
- 9) Supported with AIX 5.3 only

NetWare

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Operating Systems ^{1, 2}										
NetWare 5.1	5.1 sp8		5.1 sp5	5.1 sp7 ³			5.1 sp6		5.1 sp8	
NetWare 6.0	6.0 sp5			6.0 sp5 ³	6.0 sp4		6.0 sp5		6.0 sp5	
NetWare 6.5	6.5 sp3			6.5 sp2 ³	6.5 sp1		6.5 sp2		6.5 sp3	
Servers										
HP ProLiant ⁵	✓		✓	✓	✓		✓		✓	
HP ProLiant Blade Server ⁵	✓			✓	✓		✓		✓	
HP NetServer	✓		✓	✓	✓		✓		✓	
Third Party X86	✓		✓	✓	✓		✓		✓	
Fibre Host Bus Adapters ^{3, 5}										
FCA2214 (FCA2210) (2G)										
FW	1.45			1.45	1.34		1.45		1.45	
NetWare Driver	6.80f ⁹			6.51b	6.51b		6.80f		6.80f	
64-bit / 66 MHz PCI to FC HBA (1G) ^{6, 7, 8}										
NetWare Driver	2.52 ⁹		2.52				2.52		2.52	
32-bit / 33 MHz HBA (1G) ^{6, 7, 8}										
NetWare Driver	2.52 ⁹						2.52		2.52	
Disk Array Multipath Support ⁵										
Secure Path for NetWare ¹⁰	3.0C SP2.1			3.0C SP2	3.0C SP2		3.0C SP2		3.0C SP2.1	
High Availability ⁴										
NetWare 5.1 (NWCS)									✓	
NetWare 6.0 (NWCS)					✓		✓		✓	
NetWare 6.5 (NWCS)					✓		✓		✓	

NOTES:

- 1) Other Operating Systems not listed above 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 [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance
- 6) COMPAQ HBAs
- 7) NetWare 5.1 and 6.0 support only.
- 8) Heterogeneous Windows and NetWare configurations require FCA-2210 HBA for access to shared tape.

- 9) Support is limited to single path configurations only
- 10) MSA1000 and EVA require FCA-2210 HBA with a minimum Secure Path version of 3.0c. HSG80 arrays with FCA-2210 HBA require a minimum Secure Path version of 3.0c SP2.

RAID Arrays

SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
RAID Arrays										
XP 12000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 10000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 1024/128 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 48/512 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Zero Downtime with XP	✓									
Instant Recovery with XP	✓									
Enterprise Virtual Array EVA 8000 ¹	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 6000 ¹	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 4000 ¹	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 5000 ^{1,3}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 3000 ^{1,3}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VA 7410/7110 ^{1,6}	✓			✓		✓			✓	✓
VA 7400/7100 ^{1,6}	✓			✓		✓			✓	✓
EMA 16000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EMA 12000/8000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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) VA7xxx arrays require separate HBA's for disk and tape.

Infrastructure

SAN Support	Supported Release	e2400-FC 2G Interface Controller	E2400-160 FC Interface Controller	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200
SAN Switches¹								
Director Switch 2/140	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/64	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/24	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/16	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/12	07.01.02-4	✓	✓	✓	✓	✓	✓	✓
SAN Director 4/256	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/32	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/16	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/8	5.0.1b	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	4.4.0f	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16N	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16V	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8V	4.4.0f	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16-EL	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8-EL	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 16	2.6.2d	✓	✓	✓	✓	✓	✓	✓
SAN Switch 8	2.6.2d	✓	✓	✓	✓	✓	✓	✓
SAN Switch 16EL	2.6.2d	✓	✓	✓	✓	✓	✓	✓
SAN Switch 8EL	2.6.2d	✓	✓	✓	✓	✓	✓	✓
FC Switch 16B	3.2.0	✓	✓	✓	✓	✓	✓	✓
FC Switch 8B	3.2.0	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.0	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9506	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9509	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9120	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9140	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216a	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216i	2.1(2b)	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Routers and Gateways¹								
Multi-Protocol Router ^{2,3}	7.4.0	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 ⁴	3.4.5	✓	✓	✓	✓	✓	✓	✓

NOTES:

1) Refer to [Heterogeneous Open SAN Design Reference Guide](#) for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance.

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.

ProLiant Storage Servers (NAS) and ProLiant Data Protection Storage Servers

DAS, DAF, and SAN Support	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
EFS Clustered Gateway	✓									
DL380 G4 Data Protection Storage Server	✓								✓	✓ ¹
DL100 G2 Data Protection Storage Server	✓								✓	✓ ¹
DL585 Storage Server	✓			✓					✓	
DL380 G4 Storage Server	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
ML370 G4 Storage Server	✓			✓			✓		✓	
ML350 G4p Storage Server	✓			✓					✓	✓ ¹
ML350 G4 Storage Server	✓			✓			✓		✓	✓ ¹
ML110 G2 Storage Server	✓			✓			✓		✓	
NAS 9000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
NAS 4000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
NAS 8000	✓						✓			
NAS e7000	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓
NAS 1500s	✓			✓			✓		✓	
NAS 500s	✓			✓			✓		✓	
NAS 2000s	✓	✓	✓	✓			✓		✓	
NAS 1200s	✓	✓	✓	✓			✓		✓	
NAS B3000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NAS B2000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTES:

1) Requires NetBackup 5.0 MP2 or later.

2) Supported with Backup Express v2.1.x and earlier

SCSI Host Bus Adapters

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

Windows	HP-UX	LINUX	Tru64	NetWare
268351-B21 Ultra320, LVD, Dual Channel, VHDCI	A7173A Ultra320, LVD, Dual Channel, VHDCI	268351-B21 Ultra320, LVD, Dual Channel, VHDCI	3X-KZPCA-AA Ultra80, LVD, Single Channel, HD68	268351-B21 Ultra320, LVD, Dual Channel, VHDCI
284688-B21 Ultra160, LVD, Dual Channel, VHDCI	A6829A Ultra160, LVD, Dual Channel, VHDCI	374654-B21 ⁴ Ultra320, LVD, Single Channel, VHDCI	3X-KZPCA-EA Ultra80, LVD, Dual Channel, HD68	284688-B21 Ultra160, LVD, Dual Channel, VHDCI
C7474A Ultra160, LVD, Single Channel, VHDCI	A6828A Ultra160, LVD, Single Channel, VHDCI	284688-B21 Ultra160, LVD, Dual Channel, VHDCI	3X-KZPCA-EB Ultra80, LVD, Dual Channel, HD68	129803-B21 Ultra160, LVD, Dual Channel, VHDCI
154457-B21 Ultra160, LVD, Single Channel, HD68	A5149A Ultra80, LVD, Single Channel, VHDCI	C7474A Ultra160, LVD, Single Channel, VHDCI		154457-B21 Ultra160, LVD, Single Channel, HD68
129803-B21 Ultra160, LVD, Dual Channel, VHDCI	A5150A Ultra80, LVD, Dual Channel, VHDCI	154457-B21 Ultra160, LVD, Single Channel, HD68		C7474A Ultra160, LVD, Single Channel, VHDCI
348757-B21 Ultra80, LVD, Dual Channel, VHDCI	A4974A ¹ Ultra, SE, Single Channel, HD68	129803-B21 Ultra160, LVD, Dual Channel, VHDCI		348757-B21 Ultra80, LVD, Dual Channel, VHDCI
374654-B21 ⁴ Ultra320, LVD, Single Channel, VHDCI	A4999A ¹ Ultra80, LVD, Single Channel, VHDCI			
	A5838A Ultra80, LVD, Dual Channel, VHDCI			
	A2679A Ultra80, LVD, Single Channel, 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) Autoloader support only

SCSI Host Bus Adapters - Continued

HP Branded Integrity SCSI Host Bus Adapters, IA-64 64-bit ¹

Windows	HP-UX	LINUX
A7059A Ultra160, LVD, Single Channel, VHDCI	A7173A Ultra320, LVD, Dual Channel, VHDCI	A7059A Ultra160, LVD, Single Channel, VHDCI
A7060A Ultra160, LVD, Dual Channel, VHDCI	A6829A Ultra160, LVD, Dual Channel, VHDCI	A7060A Ultra160, LVD, Dual Channel, VHDCI
A7173A Ultra 320, LVD, Dual Channel, VHDCI	A6828A Ultra160, LVD, Single Channel, VHDCI	A7173A Ultra 320, LVD, Dual Channel, VHDCI
	A5149A Ultra80, LVD, Single Channel, VHDCI	
	A5150A Ultra80, LVD, Dual Channel, VHDCI	
	A5838A Ultra80, LVD, Dual Channel, VHDCI	
	AB290A Ultra 320, LVD, Dual Channel, VHDCI	

NOTES:

1) Refer to the Server QuickSpecs to determine which SCSI HBAs are supported

SCSI Host Bus Adapters - Continued**Third Party SCSI HBA and Integrated SCSI Controllers^{2,3}**

Windows	Linux	NetWare
Adaptec 29320 Ultra320, LVD, Single Channel	Adaptec 29320 Ultra320, LVD, Single Channel	Adaptec 29320 Ultra320, LVD, Single Channel
Adaptec 29160 Ultra160, LVD, Single Channel	Adaptec 29160 Ultra160, LVD, Single Channel	Adaptec 29160 Ultra160, LVD, Single Channel
Adaptec 39160 Ultra160, LVD, Dual Channel	Adaptec 39160 Ultra160, LVD, Dual Channel	Adaptec 39160 Ultra160, LVD, Dual Channel
Symbios/LSI 22915 Ultra160, LVD, Dual Channel		
Symbios/LSI 22903 Ultra160, LVD, Dual Channel		
Symbios/LSI 8951 Ultra80, LVD, Single Channel		
Integrated Smart Array 5i/5i Plus ¹ Ultra160, LVD, Single Channel		
ProLiant Integrated SCSI Ultra160, LVD, Single and Dual Channel		

NOTES:

- 1) Supported only with Enterprise and Mid-Range Libraries, SSL1016 Ultrium 460, 1/8 Ultrium 460, 1/8 SDLT320, and 1/8 Ultrium 230 tape autoloaders. Does not support devices with multiple LUNs behind a single SCSI ID.
- 2) For Solaris and AIX configurations, EBS 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

Storage Software

	HP Data Protector	Atempo Time Navigator	BakBone NetVault	CA ARCserve	CommVault Galaxy	EMC Legato NetWorker	Syncsort Backup Express	Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
OpenView										
Storage Virtual Replicator				4.1.1		4.1.1		4.1.1	4.1.1	4.1.1
OV-SAM	3.2			3.2	3.1	3.2	3.1	3.2	3.2	3.2
Zero Downtime with XP	✓									
Instant Recovery with XP	✓									
StorageWorks										
Command View TL	1.6.00	1.2.00	1.2.00	1.6.00	1.2.00	1.6.00	1.6.00	1.6.00	1.6.00	1.6.00
Continuous Access				✓		✓		✓	✓	✓
Business Copy EVA	✓	✓		✓	✓	✓	✓	✓	✓	✓
Business Copy XP	✓									
Tools and Utilities										
Smart Start	7.30	7.00	7.00	7.30	7.00	7.30	7.20	7.30	7.30	7.30
Insight Manager Agents	7.30	7.00	7.00	7.30	7.00	7.30	7.20	7.30	7.30	7.30

Backup Application Details

Name	Latest Tested Version	Application Supported Devices List	Recommended Tape Driver
HP OpenView Storage Data Protector	5.5	Data Protector Supported Devices	Use Native Drivers
Atempo Time Navigator	3.7.0.3	www.atempo.com	No Recommendation
BakBone NetVault	7.3	www.bakbone.com	No Recommendation
Computer Associates BrightStor ARCserve	11.5	ARCserve Supported Devices	CABA Driver for Windows
Computer Associates BrightStor ARCserve (NetWare and Tru64)	11.1	ARCserve Supported Devices	
CommVault Systems QiNetix Galaxy	5	www.commvault.com	HP Driver for Windows
EMC Legato NetWorker	7.2	NetWorker Supported Devices	HP Driver for Windows
Syncsort Backup Express	2.3	www.syncsort.com	Use Native Drivers
Tivoli Storage Manager	5.3.1	TSM Supported Devices	Tivoli Driver for Windows
Symantec Backup Exec for Windows Servers	10.0.5484	Backup Exec Supported Devices	BE Driver for Windows
Symantec Backup Exec for NetWare	9.1.1152	Backup Exec Supported Devices	BE Driver for Netware
Symantec NetBackup	6.0	NetBackup Supported Devices	HP or NBU Tape Driver for Windows

IMPORTANT: You must refer to your backup vendor's supported devices list and compatibility guides to confirm that your current application version, build, patches and drivers support your HP tape automation product(s).

NOTES:

- 1) All ISV certifications have been completed with a minimum configuration of 16 servers by 16 drives. This does not imply any limitations of the backup and restore application or HP StorageWorks SAN products. Refer to the application vendor's website or representative for maximum configuration details.

Legacy Device Support

Device Name	Last EBS Compatibility Matrix Where Device Was Listed ¹
TL895	December 2002
TL891DLX	December 2002
ESL9326D	April 2002
TL891D	April 2002
DLT 35/70	April 2002
Modular Data Router (MDR)	February 2004
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

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
Tape Systems	http://www.hp.com/go/tape
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

Current EBS Configuration Advisories

Date	Description	Number
09/13/05	HP StorageWorks Tape Drives and Libraries May Experience Performance Issues and/or Failures with Windows 2003 OS (SP1)	OT050906_CW01
08/29/05	Enterprise Backup Solution (EBS) Configurations with Tivoli Storage Manager (TSM) 5.3.0.0 to 5.3.1.1 May Not Access All Tape Load Ports on ESL E-Series With Cross Link Kit	OT050822_CW01
07/11/05	Upgrade to ESL-e Library Firmware v3.40 Recommended for Robot 24-Day Unresponsive Issue	OT050701_CW02
06/20/05	Tape solutions with Tivoli Storage Manager (TSM) Server 5.3.0.0 to 5.3.1.1, Linux IA32 RHEL3 or SLES 8/9, and HP tape libraries with Ultrium 460 at 59W firmware fail on labeling, backup, and restore.	OT050526_CW02
06/08/05	HP SDLT and DLT Tape Drive Change Media Notification.	OT050606_CW01
05/12/05	Network Storage Routers (NSR)/Interface Controllers (IC) Switch Login Issue with M-Series Switches on 6.x Firmware	OT050324_CW01
04/22/05	Tape Backup In StorageWorks Enterprise Backup Solution (EBS) Environment From ProLiant Server May Not Complete If Insight Management Storage Agents Loaded	ES040611_CW01
04/07/05	HP-UX Tachlite HBA Driver Causes SAN Tape Backups to Fail with Bus Reset when Background Applications, Such as OV-SAM, are Running	OE041223_CW01
04/07/05	Enterprise Backup Solution (EBS) support for QLogic Serverless backup configurations is restricted to driver version 8.2.0.73	OA050126_CW01
03/29/05	File Library Issue on NetWare Agent	OS050322_CW01
02/15/05	SDLT 600 Drives Not Detected or Detected as Robotics with Interface Manager < 1142 and Command View ESL < 1.4.02	OT050127_CW07
02/03/05	Unload to source slot may not work after power-cycling the ESL-e	OT050124_CW02
01/21/05	Some tape devices may not be presented when the QLogic fibre channel HBA driver for Linux is installed in failover mode	OT050112_CW01
01/20/05	No Detected Fibre-Attached Tape Drive Devices, But Many Hidden	OT041223_CW01
01/05/05	Shared Tape Configurations in a SAN (EBS) with Legato Networker, Sun Solaris 9, and Sun SG-XPCI2FC-QF2 HBA's require Additional Manual Configuration Steps	OS040917_CW01

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.