

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

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

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



## Enterprise Backup Solution Compatibility Matrix Index

(Click on topic to jump to that page)

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

<b>Topic</b>	<b>Page</b>
Sample Page Layout	3
Libraries	4
Interface Controllers	7
Autoloaders	9
HP-UX (PA-RISC)	14
HP-UX (IA-64)	15
Windows (32-bit)	16
Windows (IA-64)	19
Windows (x64)	20
Linux (32-bit)	21
Linux (IA-64)	23
Solaris	24
Tru64/OVMS	26
AIX	27
NetWare	28
RAID Arrays	29
Infrastructure	30
ProLiant Storage Servers (NAS)	31
ProLiant Data Protection Storage Servers	31
SCSI HBAs	32
Storage Software	35
Backup Application Details	36
Legacy Component Details	37
Useful Links	38
Advisories	39

# Sample Page Layout

Black bar shows title of current page

Index menu, click to navigate to other sections  
Yellow box indicates current section

HP StorageWorks EBS  
Compatibility Matrix

Index Libraries Interface Controller Autoloaders **HP-UX** Windows Linux Solaris Tru64/OVMS AIX NetWare  
RAID Arrays Infrastructure NAS SCSI HBAs Storage Software Backup App. Legacy Links Advisories

**HP-UX (IA-64)**<sup>5</sup>

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
<b>Operating Systems</b> <sup>1, 2</sup>										
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
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx5000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
<b>Workstations</b>										
HP xz series (IA)	✓									
<b>Fibre Host Bus Adapters</b> <sup>4</sup>										
AB465A (2G Combo Card)										
FW										
fcid Driver	Native			Native		Native		Native		Native
A9782 (2G Combo Card)										
FW										
fcid Driver	Native	Native	Native	Native		Native		Native		Native
A9784 (2G Combo Card)										
FW										
fcid Driver	Native	Native	Native	Native		Native		Native		Native
A6795A (2G)										
FW	1.10			1.10		1.10	1.10	1.10		1.10
A6826A (2G)	Native			Native		Native	Native	Native		Native
FW	3.03.150	3.02.165	3.02.165	3.03.150		3.03.150		3.03.150		3.03.150
fcid Driver	Native	Native	Native	Native		Native		Native		Native
<b>Disk Array Multipath Support</b> <sup>4</sup>										
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
<b>High Availability</b> <sup>6</sup>										
MC/ServiceGuard	✓ <sup>3</sup>					✓ <sup>3</sup>				

**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](#) 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) For Boot from Tape support, refer to: <http://www.hp.com/products1/storage/compatibility/tapebackup/software/index.html> 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.

November 2005, v1.0

Page 15 of 39

CLICK on product to go to product web page

CLICK cell to go to download page for this product

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
<b>Enterprise Libraries</b> <sup>10</sup>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.										
<b>ESL E-Series 712e/322e</b> <sup>1</sup>											
Robot FW	4.10	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960 FC	L26W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 460 FC	K42W	✓			✓	✓	✓	✓	✓	✓	✓
<b>ESL E-Series 630e/286e</b> <sup>1</sup>											
Robot FW	4.10	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓ <sup>6</sup>	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>6</sup>	✓
<b>EML E-Series 245e/103e</b> <sup>1</sup>											
Robot FW	1022	✓ <sup>7</sup>			✓		✓ <sup>5</sup>			✓ <sup>6</sup>	✓
Drive FW Ultrium 960 FC	L29S	✓			✓		✓			✓ <sup>6</sup>	✓
Drive FW Ultrium 460 FC	K4B0	✓			✓		✓			✓ <sup>6</sup>	✓
<b>ESL 9000 Series</b> <sup>1</sup>											
Robot FW	3.60	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G25W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 230	E38W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓ <sup>6</sup>	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 110/220	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>ESL E-Series Cross Link</b> <sup>4</sup>		✓			✓ <sup>2</sup>		✓		✓		✓
<b>ESL 9000 Multi-Unit Scalability</b> <sup>4</sup>		✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓		✓
<b>ESL Mixed Media</b>		✓	✓ <sup>9</sup>		✓ <sup>2</sup>	✓ <sup>9</sup>	✓		✓	✓ <sup>8</sup>	✓
<b>ESL Partitioning</b>		✓			✓ <sup>2</sup>		✓		✓	✓ <sup>8</sup>	✓
<b>EML Partitioning</b>		✓					✓			✓ <sup>8</sup>	✓
<b>Virtual Libraries</b>											
<b>VLS 6000 Series</b> <sup>3</sup>	1.0.9	✓			✓		✓		✓	✓ <sup>6</sup>	✓

**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.
- 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
<b>Mid-Range Libraries</b> <sup>5</sup>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.										
<b>MSL 6000 Series</b> <sup>1</sup>											
Robot FW	5.13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G25W	✓			✓		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓		✓	✓	✓	✓	✓
<b>MSL 5000 Series</b> <sup>1</sup>											
Robot FW	5.13	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL Multi-Unit Scalability</b> <sup>3, 4</sup>		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL Mixed Media Support</b>		✓	✓		✓	✓	✓		✓	✓ <sup>2</sup>	✓

**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.
- 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 <sup>1</sup>	e2400-FC 2G Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E1200-160	NSR E2400 <sup>3</sup>	NSR E1200	NSR M2402	NSR N1200
<b>Enterprise Libraries</b>							
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 960)		✓				✓	
ESL 9595 (Ultrium 460)		✓				✓	
ESL 9595 (Ultrium 230)		✓		✓		✓	✓
ESL 9595 (SDLT600)		✓				✓	
ESL 9595 S2 (SDLT320)		✓		✓		✓	✓
ESL 9595 SL		✓		✓		✓	✓
ESL 9326 (Ultrium 960)		✓				✓	
ESL 9326 (SDLT600)		✓				✓	
ESL 9326 (SDLT320)		✓		✓		✓	✓
ESL 9326 SL		✓		✓		✓	✓
ESL 9322 (Ultrium 960)		✓				✓	
ESL 9322 (Ultrium 460)		✓				✓	
ESL 9322 (Ultrium 230)		✓		✓		✓	✓
ESL 9322 (SDLT600)		✓				✓	
ESL 9322 (SDLT320)		✓		✓		✓	✓
ESL 9198 (Ultrium 960)		✓				✓	
ESL 9198 (SDLT600)		✓				✓	
ESL 9198 S2 (SDLT320)		✓		✓		✓	✓
ESL 9198 SL		✓		✓		✓	✓
ESL E-Series Cross Link	✓	✓					
ESL Multi-Unit Scalability <sup>2</sup>		✓		✓		✓	✓
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**

<b>DAF and SAN Support <sup>1</sup></b>	e2400-FC 2G Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200
<b>Mid-Range Libraries</b>							
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
<b>Fibre Channel Interface Controller</b>											
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	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Serverless Backup 1,2,6,8,9 (SAN Support Only)</b>											
e2400-FC 2G Interface Controller (FC-FC)											
e2400-160 Interface Controller (FC-SCSI)		✓ <sup>7</sup>									
NSR E2400				✓ <sup>3</sup>						✓ <sup>4</sup>	✓ <sup>5</sup>
NSR E1200				✓ <sup>3</sup>						✓ <sup>4</sup>	✓ <sup>5</sup>
NSR M2402		✓ <sup>7</sup>		✓ <sup>3</sup>						✓ <sup>4</sup>	✓ <sup>5</sup>
NSR N1200				✓ <sup>3</sup>						✓ <sup>4</sup>	✓ <sup>5</sup>

	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	
<b>AutoLoaders<sup>1</sup></b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.												
1/8 Ultrium 960 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	1.46	1.46				1.46			1.46	1.46	1.46	1.46
	Drive FW Ultrium 960	G38W	G38W				G38W			G38W	G38W	G38W	G38W
	<b>Operating System Support</b>												
	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	<b>Component Firmware</b>												
	Robot FW	1.46	1.46				1.46			1.46	1.46	1.46	1.46
	Drive FW Ultrium 448	S38W	S38W				S38W			S38W	S38W	S38W	S38W
	<b>Operating System Support</b>												
	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	
<b>AutoLoaders<sup>1</sup></b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.												
SSL1016 Ultrium 460 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	v20	v20	v20	v10	v20	v10	v20	v20	v20	v20	v20	
	Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W	
	<b>Operating System Support</b>												
	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	<b>Component Firmware</b>											
Robot FW		v40	v40		v35	v40	v31	v40	v40		v40	v40	
Drive FW SDLT 160/320		v85	v85		v85	v85	v75	v85	v85		v85	v85	
<b>Operating System Support</b>													
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	
<b>AutoLoaders<sup>1</sup></b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.												
1/8 Ultrium 460 Tape Autoloader	<b>Component Firmware</b>												
	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	
	<b>Operating System Support</b>												
	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	<b>Component Firmware</b>											
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	
<b>Operating System Support</b>													
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	
<b>AutoLoaders<sup>1</sup></b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.												
1/8 Ultrium 232 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	1.40	1.40				1.40				1.40	1.40	1.40
	Drive FW Ultrium 232	P32W	P32W				P32W				P32W	P32W	P32W
	<b>Operating System Support</b>												
	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	<b>Component Firmware</b>											
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	
<b>Operating System Support</b>													
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
<b>AutoLoaders<sup>1</sup></b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.											
1/8 DLT vs80 Tape Autoloader	<b>Component Firmware</b>											
	Robot FW	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40
	Drive FW vs80	v64	v64	v56	v56	v64	v56	v64	v56		v64	v64
	<b>Operating System Support</b>											
	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	<b>Component Firmware</b>										
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
<b>Operating System Support</b>												
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) <sup>6</sup>

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
<b>Operating Systems <sup>1, 2</sup></b>										
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			
<b>Servers</b>										
HP 9000 Superdome and Mid-Range (rp7000-rp8000, PA-RISC)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP 9000 Entry-Level (rp2000-rp5000, PA-RISC)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP A, L, N, and V Class (pa-risc)	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP R Class (pa-risc) <sup>3</sup>	✓	✓	✓	✓	✓	✓	✓	✓		✓
<b>Workstations</b>										
HP B-Class (pa-risc)	✓									✓
HP C-Class (pa-risc)	✓									✓
HP J-Class (pa-risc)	✓									✓
<b>Fibre Host Bus Adapters <sup>5</sup></b>										
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
<b>Disk Array Multipath Support <sup>5</sup></b>										
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
<b>High Availability <sup>4</sup></b>										
MC/ServiceGuard	✓ <sup>3</sup>					✓ <sup>3</sup>				

**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 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) For Boot from Tape support, refer to: <http://www.hp.com/products1/storage/compatibility/tapebackup/software/index.html> and select the type of tape for compatibility.

# HP-UX (IA-64)<sup>5</sup>

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
<b>Operating Systems<sup>1, 2</sup></b>										
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
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx5000, IA-64)	✓	✓	✓	✓		✓	✓	✓		✓
<b>Workstations</b>										
HP xz series (IA)	✓									
<b>Fibre Host Bus Adapters<sup>4</sup></b>										
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
<b>Disk Array Multipath Support<sup>4</sup></b>										
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
<b>High Availability<sup>6</sup></b>										
MC/ServiceGuard	✓ <sup>3</sup>					✓ <sup>3</sup>				

**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](#) 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) For Boot from Tape support, refer to: <http://www.hp.com/products1/storage/compatibility/tapebackup/software/index.html> 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.

## 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
<b>Operating Systems <sup>1, 2</sup></b>										
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
<b>Servers</b>										
HP ProLiant	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HP ProLiant Blade Server	✓	✓		✓	✓	✓	✓	✓	✓	✓
HP NetServer	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Fibre Host Bus Adapters <sup>5, 6</sup></b>										
<b>HP Branded / 3rd Party</b>										
FC2142SR / Emulex LPe1150 (4G)										
FW						2.50a2				2.50a2
WIN 2000/2003 SCSIport Driver						5-5.20a9				5-5.20a9
WIN 2003 StorPort Driver <sup>3,4</sup>						5-1.11a0				5-1.11a0
FC2242SR DC / Emulex LPe11002-M4 (4G)										
FW						2.50a2				2.50a2
WIN 2000/2003 SCSIport Driver						5-5.20a9				5-5.20a9
WIN 2003 StorPort Driver <sup>3,4</sup>						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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	5-1.11a0			5-1.11a0		5-1.11a0		5-1.11a0	5-1.11a0	5-1.11a0
FCA2355 / Emulex LP9002DC										
FW	3.93a0	3.92a2	3.92a2	3.93a0	3.92a2	3.93a0	3.92a2	3.93a0	3.93a0	3.93a0
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 <sup>3,4</sup>	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
<b>Fibre Host Bus Adapters <sup>1, 2</sup></b>										
<b>HP Branded / 3rd Party</b>										
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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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 <sup>3,4</sup>	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
<b>Fibre Host Bus Adapters <sup>1, 6</sup></b>										
<b>HP Branded / 3rd Party</b>										
FCA2101 / Emulex LP952										
FW	3.93a0	3.92a2	3.92a2	3.93a0	3.92a2	3.93a0	3.92a2	3.93a0	3.93a0	3.93a0
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 <sup>3,4</sup>	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 <sup>7,8</sup>	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 <sup>7,8</sup>	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	3.93a0	3.92a2	3.92a2	3.93a0	3.92a2	3.93a0	3.92a2	3.93a0	3.93a0	3.93a0
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 <sup>7,8</sup>	5-1.11a0			5-1.11a0		5-1.11a0			5-1.11a0	5-1.11a0
<b>Fibre Host Bus Adapters <sup>1,9</sup></b>										
<b>3rd Party Drivers</b>										
Emulex LP982 (Full-Port Driver)										
FW	1.01a2									1.01a2
WIN 2000/2003 Full-Port Driver	2.21a0									2.21a0
<b>Disk Array Multipath Support <sup>1</sup></b>										
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 <sup>5</sup>	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	
<b>High Availability <sup>2</sup></b>										
Windows (MSCS)	✓ <sup>3</sup>	✓	✓	✓	✓	✓	✓	✓ <sup>10</sup>	✓ <sup>4</sup>	✓

**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
<b>Operating Systems <sup>1, 2</sup></b>										
Windows Server 2003 (64-bit)	sp1	✓		sp1	✓	sp1	✓	sp1		sp1
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓		✓	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx5000, IA-64)	✓	✓		✓	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters <sup>4, 7</sup></b>										
<b>HP Branded / 3rd Party</b>										
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 <sup>5, 8</sup>	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 <sup>5, 8</sup>	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 <sup>5, 8</sup>	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 <sup>5, 8</sup>	6-1.10a4			6-1.10a4		6-1.10a4				6-1.10a4
<b>Disk Array Multipath Support <sup>4</sup></b>										
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 <sup>6</sup>	1.0			1.0		1.0		1.0		1.0
AutoPath for Windows 2003						1.00				
<b>High Availability <sup>3</sup></b>										
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
<b>Operating Systems</b> <sup>1, 2</sup>										
Windows Server 2003 x64 Edition				sp1						
<b>Servers</b>										
HP ProLiant				✓						
HP ProLiant Blade Server				✓						
<b>Fibre Host Bus Adapters</b> <sup>4,5</sup>										
<b>HP Branded / 3rd Party</b>										
A7387A / Emulex LP1050DC										
FW				1.91a1						
WIN 2003 StorPort Driver <sup>6,7</sup>				7-1.11a0						
A7388A / Emulex LP1050										
FW				1.91a1						
WIN 2003 StorPort Driver <sup>6,7</sup>				7-1.11a0						
FCA2408 / Emulex LP982										
FW				1.91a1						
WIN 2003 StorPort Driver <sup>6,7</sup>				7-1.11a0						
FCA2404DC / Emulex LP9802DC										
FW				1.91a1						
WIN 2003 StorPort Driver <sup>6,7</sup>				7-1.11a0						
FCA2404 / Emulex LP9802										
FW				1.91a1						
WIN 2003 StorPort Driver <sup>6,7</sup>				7-1.11a0						
<b>Disk Array Multipath Support</b> <sup>4</sup>										
Windows MPIO				1.0						
<b>High Availability</b> <sup>3</sup>										
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)<sup>4</sup>

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
<b>Operating Systems 1, 2</b>										
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)	✓			✓				✓		✓
<b>Servers</b>										
HP ProLiant	✓	✓	✓	✓	✓	✓	✓	✓		✓
HP ProLiant Blade Server	✓	✓		✓	✓	✓	✓	✓		✓
HP NetServer	✓	✓	✓	✓	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters 3, 5</b>										
<b>HP Branded / 3rd Party</b>										
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)<sup>4</sup> - 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
<b>Fibre Host Bus Adapters<sup>3, 5</sup></b>										
<b>HP Branded / 3rd Party</b>										
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			
<b>Disk Array Multipath Support<sup>3</sup></b>										
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)<sup>3</sup>

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
<b>Operating Systems<sup>1, 2</sup></b>										
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)				✓						✓
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓	✓	✓	✓		✓	✓			✓
HP Integrity Entry-Level (rx1000-rx5000, IA-64)	✓	✓	✓	✓		✓	✓			✓
<b>Fibre Host Bus Adapters<sup>4</sup></b>										
<b>A6826A (2G)</b>										
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
<b>A7538A (2G)</b>										
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
<b>Disk Array Multipath Support<sup>4</sup></b>										
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
<b>Operating Systems <sup>1, 2</sup></b>										
Solaris 8	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 9	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 10				✓						✓
<b>Servers</b>										
Sun UltraSPARC	✓	✓	✓	✓	✓	✓	✓	✓		✓
Sun Sun Fire	✓	✓	✓	✓	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters <sup>3</sup></b>										
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 <sup>4,5</sup>	Native	Native	Native	Native <sup>4</sup>	Native		Native <sup>4</sup>		Native
SG-XPCI1FC-QF2 (X6767A) (2G - PCI-X)										
Solaris Driver	Native <sup>4,5</sup>	Native	Native	Native	Native <sup>4</sup>	Native		Native <sup>4</sup>		Native
FCA2684DC/Emulex LP10000DC (2G - PCI-X)										
FW				1.90a4		1.90a4		1.90a4		1.90a4
Solaris Driver				6.01f		6.01f <sup>4</sup>		6.01f <sup>4</sup>		6.01f
FCA2684/Emulex LP10000 (2G - PCI-X)										
FW				1.90a4		1.90a4		1.90a4		1.90a4
Solaris Driver				6.01f		6.01f <sup>4</sup>		6.01f <sup>4</sup>		6.01f
Emulex LP9002L (2G - PCI)										
FW						3.92a2				3.92a2
Solaris Driver						6.01f				5.01E <sup>6</sup>

**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) 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
<b>Disk Array Multipath Support <sup>1</sup></b>										
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 <sup>3</sup>										✓
<b>High Availability <sup>2</sup></b>										
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
<b>Operating Systems <sup>1, 2</sup></b>										
Tru64 5.1A <sup>9</sup>	5.1A pk6	5.1A pk6	5.1A pk6	5.1A pk6 <sup>7</sup>	5.1A pk6	5.1A pk6	5.1A pk6			5.1A pk6
Tru64 5.1B <sup>9</sup>	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
<b>Servers</b>										
HP AlphaServer	✓	✓	✓	✓	✓	✓	✓			✓
<b>Fibre Host Bus Adapters <sup>3, 5</sup></b>										
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
<b>Disk Array Multipath Support <sup>5</sup></b>										
Tru64 Multipath		Native	Native	Native	Native	Native	Native			Native
<b>High Availability <sup>4</sup></b>										
Tru64 (TruCluster)		✓				✓	✓			✓
<b>OVMS</b>										
<b>Operating Systems <sup>1, 2</sup></b>										
OpenVMS 7.3-1 <sup>6, 8, 9, 10</sup>	✓									
OpenVMS 7.3-2 <sup>6, 9, 10</sup>	✓									
<b>Servers</b>										
HP AlphaServer	✓									
<b>Fibre Host Bus Adapters <sup>5</sup></b>										
FCA2354 (2G)										
FW	3.92a2									
OVMS Driver	Native									
FCA2384 (2G - PCI-X)										
FW	1.90a4									
OVMS 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. November 2005, v1.0

- 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 (SYS\$MKDRIVER.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
<b>Operating Systems <sup>1, 2</sup></b>										
AIX 5.1L	✓ <sup>3, 6</sup>	✓		✓	✓	✓ <sup>5</sup>	✓	✓		✓
AIX 5.2	✓ <sup>3, 6</sup>	✓	✓	✓	✓	✓	✓	✓		✓
AIX 5.3	✓ <sup>3, 6</sup>			✓				✓		✓
<b>Servers</b>										
IBM RS/6000	✓	✓	✓	✓	✓	✓	✓	✓		✓
IBM pSeries	✓			✓				✓		✓
<b>Fibre Host Bus Adapters <sup>3, 4</sup></b>										
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 <sup>7</sup>	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 <sup>7</sup>	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 <sup>7</sup>			Native <sup>8</sup>		Native <sup>7</sup>		Native <sup>8</sup>		Native <sup>8</sup>
IBM 5716 (2G)										
AIX Driver	Native <sup>9</sup>			Native <sup>8</sup>				Native <sup>8</sup>		Native <sup>8</sup>
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
<b>Disk Array Multipath Support <sup>4</sup></b>										
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
<b>Operating Systems</b> <sup>1, 2</sup>										
NetWare 5.1	5.1 sp8		5.1 sp5	5.1 sp7 <sup>3</sup>			5.1 sp6		5.1 sp8	
NetWare 6.0	6.0 sp5			6.0 sp5 <sup>3</sup>	6.0 sp4		6.0 sp5		6.0 sp5	
NetWare 6.5	6.5 sp3			6.5 sp2 <sup>3</sup>	6.5 sp1		6.5 sp2		6.5 sp3	
<b>Servers</b>										
HP ProLiant <sup>5</sup>	✓		✓	✓	✓		✓		✓	
HP ProLiant Blade Server <sup>5</sup>	✓			✓	✓		✓		✓	
HP NetServer	✓		✓	✓	✓		✓		✓	
Third Party X86	✓		✓	✓	✓		✓		✓	
<b>Fibre Host Bus Adapters</b> <sup>3, 5</sup>										
FCA2214 (FCA2210) (2G)										
FW	1.45			1.45	1.34		1.45		1.45	
NetWare Driver	6.80f <sup>9</sup>			6.51b	6.51b		6.80f		6.80f	
64-bit / 66 MHz PCI to FC HBA (1G) <sup>6, 7, 8</sup>										
NetWare Driver	2.52 <sup>9</sup>		2.52				2.52		2.52	
32-bit / 33 MHz HBA (1G) <sup>6, 7, 8</sup>										
NetWare Driver	2.52 <sup>9</sup>						2.52		2.52	
<b>Disk Array Multipath Support</b> <sup>5</sup>										
Secure Path for NetWare <sup>10</sup>	3.0C SP2.1			3.0C SP2	3.0C SP2		3.0C SP2		3.0C SP2.1	
<b>High Availability</b> <sup>4</sup>										
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
<b>RAID Arrays</b>										
XP 12000 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 10000 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 1024/128 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 48/512 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Zero Downtime with XP	✓									
Instant Recovery with XP	✓									
Enterprise Virtual Array EVA 8000 <sup>1</sup>	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 6000 <sup>1</sup>	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 4000 <sup>1</sup>	✓			✓		✓		✓	✓	✓
Enterprise Virtual Array EVA 5000 <sup>1,3</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 3000 <sup>1,3</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VA 7410/7110 <sup>1,6</sup>	✓			✓		✓			✓	✓
VA 7400/7100 <sup>1,6</sup>	✓			✓		✓			✓	✓
EMA 16000 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EMA 12000/8000 <sup>1</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSA1500 <sup>1</sup>	✓			✓		✓	✓	✓	✓	✓
MSA1000 Small Business SAN Kit	✓ <sup>4</sup>			✓ <sup>5</sup>					✓ <sup>5</sup>	
MSA1000 <sup>2</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**NOTES:**

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

- 4) LINUX and Windows support only
- 5) Windows support only
- 6) 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
<b>SAN Switches<sup>1</sup></b>								
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	5.0.1b	✓	✓	✓	✓	✓	✓	✓
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	5.0.1b	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16N	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16V	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16	3.2.0a	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8V	5.0.1b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8	3.2.0a	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16-EL	3.2.0a	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8-EL	3.2.0a	✓	✓	✓	✓	✓	✓	✓
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	3.2.0a	✓	✓	✓	✓	✓	✓	✓
FC Switch 8B	3.2.0a	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.0a	✓	✓	✓	✓	✓	✓	✓
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)	✓	✓	✓	✓	✓	✓	✓
<b>Multi-Protocol Routers and Gateways<sup>1</sup></b>								
Multi-Protocol Router <sup>2,3</sup>	7.4.0	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 <sup>4</sup>	3.4.5c	✓	✓	✓	✓	✓	✓	✓

**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	✓								✓	✓ <sup>1</sup>
DL100 G2 Data Protection Storage Server	✓								✓	✓ <sup>1</sup>
DL585 Storage Server	✓			✓					✓	
DL380 G4 Storage Server	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>1</sup>
ML370 G4 Storage Server	✓			✓			✓		✓	
ML350 G4p Storage Server	✓			✓					✓	✓ <sup>1</sup>
ML350 G4 Storage Server	✓			✓			✓		✓	✓ <sup>1</sup>
ML110 G2 Storage Server	✓			✓			✓		✓	
NAS 9000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>1</sup>
NAS 4000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>1</sup>
NAS 8000	✓						✓			
NAS e7000	✓	✓	✓	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓
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<sup>2, 3</sup>

Windows	HP-UX	LINUX	Tru64	NetWare
268351-B21 Ultra320, LVD, Dual Channel, VHDCI	AB290A Ultra320, LVD, Dual Channel, VHDCI	268351-B21 Ultra320, LVD, Dual Channel, VHDCI	3X-KZPCA-AA Ultra80, LVD, Single Channel, HD68	284688-B21 Ultra160, LVD, Dual Channel, VHDCI
284688-B21 Ultra160, LVD, Dual Channel, VHDCI	A7173A Ultra320, LVD, Dual Channel, VHDCI	374654-B21 <sup>4</sup> Ultra320, LVD, Single Channel, VHDCI	3X-KZPCA-EA Ultra80, LVD, Dual Channel, HD68	129803-B21 Ultra160, LVD, Dual Channel, VHDCI
C7474A Ultra160, LVD, Single Channel, VHDCI	A6829A Ultra160, LVD, Dual Channel, VHDCI	284688-B21 Ultra160, LVD, Dual Channel, VHDCI	3X-KZPCA-EB Ultra80, LVD, Dual Channel, HD68	154457-B21 Ultra160, LVD, Single Channel, HD68
154457-B21 Ultra160, LVD, Single Channel, HD68	A6828A Ultra160, LVD, Single Channel, VHDCI	C7474A Ultra160, LVD, Single Channel, VHDCI		C7474A Ultra160, LVD, Single Channel, VHDCI
129803-B21 Ultra160, LVD, Dual Channel, VHDCI	A5149A Ultra80, LVD, Single Channel, VHDCI	154457-B21 Ultra160, LVD, Single Channel, HD68		348757-B21 Ultra80, LVD, Dual Channel, VHDCI
348757-B21 Ultra80, LVD, Dual Channel, VHDCI	A5150A Ultra80, LVD, Dual Channel, VHDCI	129803-B21 Ultra160, LVD, Dual Channel, VHDCI		
374654-B21 <sup>4</sup> Ultra320, LVD, Single Channel, VHDCI	A4974A <sup>1</sup> Ultra, SE, Single Channel, HD68			
	A4999A <sup>1</sup> 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 <sup>1</sup>

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<sup>2,3</sup>

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 <sup>1</sup> 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
<b>OpenView</b>										
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	✓									
<b>StorageWorks</b>										
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	✓									
<b>Tools and Utilities</b>										
Smart Start	7.40	7.00	7.00	7.40	7.00	7.40	7.20	7.40	7.40	7.40
Insight Manager Agents	7.40	7.00	7.00	7.40	7.00	7.40	7.20	7.40	7.40	7.40

## Backup Application Details

Name	Latest Tested Version	Application Supported Devices List	Recommended Tape Driver
HP OpenView Storage Data Protector	5.5	<a href="#">Data Protector Supported Devices</a>	Use Native Drivers
Atempo Time Navigator	3.7.0.3	<a href="http://www.atempo.com">www.atempo.com</a>	No Recommendation
BakBone NetVault	7.3	<a href="http://www.bakbone.com">www.bakbone.com</a>	No Recommendation
Computer Associates BrightStor ARCserve	11.5	<a href="#">ARCserve Supported Devices</a>	CABA Driver for Windows
Computer Associates BrightStor ARCserve (NetWare and Tru64)	11.1	<a href="#">ARCserve Supported Devices</a>	
CommVault Systems QiNetix Galaxy	5	<a href="http://www.commvault.com">www.commvault.com</a>	HP Driver for Windows
EMC Legato NetWorker	7.2	<a href="#">NetWorker Supported Devices</a>	HP Driver for Windows
Syncsort Backup Express	2.3	<a href="http://www.syncsort.com">www.syncsort.com</a>	Use Native Drivers
Tivoli Storage Manager	5.3.2	<a href="#">TSM Supported Devices</a>	Tivoli Driver for Windows
Symantec Backup Exec for Windows Servers	10.0.5484	<a href="#">Backup Exec Supported Devices</a>	BE Driver for Windows
Symantec Backup Exec for NetWare	9.1.1152	<a href="#">Backup Exec Supported Devices</a>	BE Driver for Netware
Symantec NetBackup	6.0	<a href="#">NetBackup Supported Devices</a>	HP or NBU Tape Driver for Windows

**IMPORTANT:** Consult with your application vendor for minimum application versions, patches, builds, and/or drivers for support of your HP tape automation or HP virtual library products.

**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 <sup>1</sup>
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	<a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a>
EBS Design Guide	<a href="http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00190922/c00190922.pdf">http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00190922/c00190922.pdf</a>
EBS 1-2-3	<a href="http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html">http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html</a>
EBS Example Configurations	<a href="http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf">http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf</a>
Tape Systems	<a href="http://www.hp.com/go/tape">http://www.hp.com/go/tape</a>
Interconnects	<a href="http://h18006.www1.hp.com/storage/saninfrastructure.html">http://h18006.www1.hp.com/storage/saninfrastructure.html</a>
RAID Arrays	<a href="http://h18006.www1.hp.com/storage/arrayssystems.html">http://h18006.www1.hp.com/storage/arrayssystems.html</a>
OpenView Storage	<a href="http://h18006.www1.hp.com/storage/software.html">http://h18006.www1.hp.com/storage/software.html</a>
Data Protector	<a href="http://www.hp.com/go/dataprotector">http://www.hp.com/go/dataprotector</a>
Storage Media	<a href="http://h18006.www1.hp.com/storage/storagemedia.html">http://h18006.www1.hp.com/storage/storagemedia.html</a>
Firmware & Driver Downloads	<a href="http://welcome.hp.com/country/us/en/support.html">http://welcome.hp.com/country/us/en/support.html</a>
Windows OS/ProLiant Server Support Matrix	<a href="http://h10018.www1.hp.com/wwsolutions/windows/index-all.html">http://h10018.www1.hp.com/wwsolutions/windows/index-all.html</a>
Linux OS/ProLiant Server Support Matrix	<a href="http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html">http://h18004.www1.hp.com/products/servers/linux/hpLinuxcert.html</a>
NetWare OS/ProLiant Server Support Matrix	<a href="http://h10018.www1.hp.com/wwsolutions/novell/index-all.html">http://h10018.www1.hp.com/wwsolutions/novell/index-all.html</a>
IT Resource Center Website	<a href="http://itrc.hp.com">http://itrc.hp.com</a>
Performance and Troubleshooting Support	<a href="http://www.hp.com/support/pat">http://www.hp.com/support/pat</a>
Network Services - Backup and Recovery	<a href="http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx">http://h20219.www2.hp.com/services/cache/10819-0-0-225-121.aspx</a>

## Current EBS Configuration Advisories

Date	Description	Number
10/29/05	Tapes automatically labeled as slots with chance of duplicates in Ultrium 232, 448 and 960 1/8 Autoloaders	<a href="#">OT050930_CW02</a>
09/30/05	Network Storage Routers have Limited Initiators for Single and Dual Port Routers	<a href="#">c00492083</a>
09/26/05	Tape Devices Not Discovered and Configured Across Server Reboots on Linux Red Hat	<a href="#">OT050715_CW01</a>
09/13/05	HP StorageWorks Tape Drives and Libraries May Experience Performance Issues and/or Failures with Windows 2003 OS (SP1)	<a href="#">OT050906_CW01</a>
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	<a href="#">OT050822_CW01</a>
07/11/05	Upgrade to ESL-e Library Firmware v3.40 Recommended for Robot 24-Day Unresponsive Issue	<a href="#">OT050701_CW02</a>
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.	<a href="#">OT050526_CW02</a>
06/08/05	HP SDLT and DLT Tape Drive Change Media Notification.	<a href="#">OT050606_CW01</a>
05/12/05	Network Storage Routers (NSR)/Interface Controllers (IC) Switch Login Issue with M-Series Switches on 6.x Firmware	<a href="#">OT050324_CW01</a>
04/22/05	Tape Backup In StorageWorks Enterprise Backup Solution (EBS) Environment From ProLiant Server May Not Complete If Insight Management Storage Agents Loaded	<a href="#">ES040611_CW01</a>
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	<a href="#">OE041223_CW01</a>
04/07/05	Enterprise Backup Solution (EBS) support for QLogic Serverless backup configurations is restricted to driver version 8.2.0.73	<a href="#">OA050126_CW01</a>
03/29/05	File Library Issue on NetWare Agent	<a href="#">OS050322_CW01</a>
02/15/05	SDLT 600 Drives Not Detected or Detected as Robotics with Interface Manager < I142 and Command View ESL < 1.4.02	<a href="#">OT050127_CW07</a>
02/03/05	Unload to source slot may not work after power-cycling the ESL-e	<a href="#">OT050124_CW02</a>
01/21/05	Some tape devices may not be presented when the QLogic fibre channel HBA driver for Linux is installed in failover mode	<a href="#">OT050112_CW01</a>
01/20/05	No Detected Fibre-Attached Tape Drive Devices, But Many Hidden	<a href="#">OT041223_CW01</a>
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	<a href="#">OS040917_CW01</a>

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.  
November 2005, v1.0