

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

July 2005 Version 1.1



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](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

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# Sample Page Layout

Black bar shows title of current page

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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)

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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>										
HP-UX 11.23 (11i v2)	Sept 2004	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004			HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004	Sept 2004		
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓ <sup>4</sup>	✓	✓			✓	✓	✓		
<b>Workstations</b>										
HP xz series (IA)	✓									
<b>Fibre Host Bus Adapters</b> <sup>5</sup>										
AB465A (2G Combo Card)										
FW										
fcid Driver	Native					Native		Native		
A8782 (2G Combo Card)										
FW										
fcid Driver	Native	Native	Native			Native		Native		
A9784 (2G Combo Card)										
FW										
fcid Driver	Native	Native	Native			Native		Native		
A6795A (2G)										
FW	1.10					1.10	1.10	1.10		
fcid Driver	Native					Native	Native	Native		
A6826A (2G)										
FW	3.03.150	3.02.165	3.02.165			3.03.150		3.03.150		
fcid Driver	Native	Native	Native			Native		Native		
<b>Disk Array Multipath Support</b> <sup>5</sup>										
AutoPath for HP-UX	2.01.02					2.01.02				
Secure Path for HP-UX	3.0F	3.0C	3.0C			3.0F	3.0E	3.0F		
<b>High Availability</b> <sup>6</sup>										
HP-UX (Service Guard)	✓ <sup>3</sup>					✓ <sup>3</sup>				

**NOTES:**

- Other Operating Systems not listed above may be supported within EBS by the respective ISVs as LAN clients.
- Please reference your ISV support matrices for supported application and operating system version compatibility.
- ATS is not supported.
- 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.
- Data Protector 5.0 support in 32-bit emulation mode.
- 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.

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CLICK cell to go to download page for this product

Notes pertaining to unique configurations

Matrix version

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## 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Enterprise Libraries</b> <sup>13</sup>											
<b>ESL E-Series 712e/322e</b> <sup>1</sup>											
Robot FW	3.40	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960 FC	L25W	✓			✓ <sup>3</sup>		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 460 FC	K42W	✓			✓	✓	✓	✓	✓	✓	✓
<b>ESL E-Series 630e/286e</b> <sup>1</sup>											
Robot FW	3.40	✓	✓	✓	✓ <sup>2</sup>	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓ <sup>10</sup>		✓	✓	✓	✓ <sup>6</sup>	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>6</sup>	✓
<b>EML E-Series 245e/103e</b> <sup>1</sup>											
Robot FW	1016	✓ <sup>12</sup>			✓ <sup>7</sup>		✓ <sup>5</sup>				✓
Drive FW Ultrium 960 FC	L25S	✓			✓		✓				✓
Drive FW Ultrium 460 FC	K480	✓			✓		✓				✓
<b>ESL 9000 Series</b> <sup>1</sup>											
Robot FW	3.55	✓	✓	✓	✓ <sup>2, 11</sup>	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 230	E38W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓ <sup>10</sup>		✓	✓	✓	✓ <sup>6</sup>	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 110/220	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>HP VLS 6000</b> <sup>14</sup>	1.04	✓								✓ <sup>6</sup>	✓
<b>ESL E-Series Cross Link</b> <sup>4, 15</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>	✓

**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](http://www.hp.com/go/connect).
- 2) NetWare is supported with ESL libraries in a homogeneous environment only.
- 3) Direct attach Fibre support only.

- 4) Contact your ISV for scalability support.
- 5) Not supported with LINUX (IA-64) and AIX.
- 6) Windows support only.
- 7) Not supported with HP-UX (PA-RISC) at this time.
- 8) Homogeneous Windows only.
- 9) Mixed Media using Partitioning not supported.
- 10) Direct attach SCSI support only.

- 11) SDLT 600 direct attach LINUX support only.
- 12) Not supported with NetWare and OVMS.
- 13) For each library/drive combination, check with your software vendor's hardware compatibility documentation to determine the minimum supported application version.
- 14) Minimum supported version is 1.04.
- 15) Requires Interface Manager firmware i156 and Command View TL version 1.5.06.

## 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Mid-Range Libraries <sup>6</sup></b>											
<b>MSL 6000 Series <sup>1</sup></b>											
Robot FW	5.07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G24W	✓			✓ <sup>5</sup>		✓	✓	✓	✓	✓
Drive FW Ultrium 460	F59W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓ <sup>5</sup>		✓	✓	✓	✓	✓
Drive FW SDLT 160/320	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 5000 Series <sup>1</sup></b>											
Robot FW	5.07	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW Ultrium 960	G24W	✓			✓ <sup>5</sup>		✓	✓	✓	✓	✓
Drive FW Ultrium 230	E38W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Drive FW SDLT 600	v35	✓			✓ <sup>5</sup>		✓	✓	✓	✓	✓
Drive FW SDLT 110/220	v85	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL Multi-Unit Scalability <sup>3, 4</sup></b>											
		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<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. For more information on which applications support WORM, go to: [www.hp.com/go/connect](http://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) Direct attach SCSI support only.
- 6) 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 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 <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	VERITAS Backup Exec	VERITAS NetBackup
<b>Fibre Channel Interface Controller</b>											
Interface Manager	i155	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
e2400-FC 2G Interface Controller (FC-FC)	5.6.69	✓			✓		✓	✓	✓	✓	✓
e2400-160 Interface Controller (FC-SCSI)	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E1200-160	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E2400	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR E1200	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR M2402	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NSR N1200	5.6.69	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<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
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
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
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
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
ESL 9595/9322	3.40	3.40	3.40	3.48	3.48	3.55	3.55	3.55
ESL 9198/9326	N/A	3.40	3.40	3.48	3.48	3.55	3.55	3.55
ESL E-Series 712e/630e	N/A	N/A	1.01	1.10	2.00	2.00	3.00	3.00
ESL E-Series 322e/286e	N/A	N/A	N/A	1.10	2.00	2.00	3.00	3.00
EML E-Series 245e/103e	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1016
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
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

**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	VERITAS Backup Exec	VERITAS NetBackup	Native	
<b>AutoLoaders<sup>1</sup></b>													
1/8 Ultrium 960 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	1.20	1.20				1.20			1.20	1.20	1.20	
	Drive FW Ultrium 960	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 NT 4.0		✓					✓			✓	✓	
	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 7							✓				✓	
	Solaris 8							✓				✓	
	Solaris 9							✓				✓	
	AIX 4.3.3 (32-bit)							✓				✓	
	AIX 5.1L (32-bit)							✓				✓	
	AIX 5.2 (32-bit)							✓				✓	
1/8 Ultrium 448 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	1.20	1.20				1.20			1.20	1.20	1.20	
	Drive FW Ultrium 448	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 NT 4.0		✓					✓			✓	✓	
	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 7							✓				✓	
	Solaris 8							✓				✓	
	Solaris 9							✓				✓	
	AIX 4.3.3 (32-bit)							✓				✓	
	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	VERITAS Backup Exec	VERITAS NetBackup	Native	
<b>AutoLoaders<sup>1</sup></b>													
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 NT 4.0		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
	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 7		✓					✓		✓		✓	
	Solaris 8		✓					✓		✓		✓	
	Solaris 9		✓					✓		✓		✓	
	AIX 4.3.3 (32-bit)							✓		✓		✓	
	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	v40
	Drive FW SDLT 160/320	v85	v85		v85	v85	v75	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 NT 4.0		✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
	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 7		✓					✓				✓	
	Solaris 8		✓					✓				✓	
	Solaris 9		✓					✓				✓	
	AIX 4.3.3 (32-bit)		✓					✓				✓	
	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	VERITAS Backup Exec	VERITAS NetBackup	Native	
<b>AutoLoaders<sup>1</sup></b>													
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 NT 4.0		✓	✓	✓	✓	✓			✓	✓	✓	✓
	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 7		✓					✓		✓		✓	
	Solaris 8		✓					✓		✓		✓	
	Solaris 9		✓					✓		✓		✓	
	AIX 4.3.3 (32-bit)		✓					✓		✓			
	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 NT 4.0			✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
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 7								✓		✓		✓	
Solaris 8								✓		✓		✓	
Solaris 9								✓		✓		✓	
AIX 4.3.3 (32-bit)										✓			
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	VERITAS Backup Exec	VERITAS NetBackup	Native	
<b>AutoLoaders<sup>1</sup></b>													
1/8 SDLT 160/320 Tape Autoloader	<b>Component Firmware</b>												
	Robot FW	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 NT 4.0		✓	✓	✓		✓			✓	✓	✓	✓
	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 7		✓					✓		✓		✓	
	Solaris 8		✓					✓		✓		✓	
	Solaris 9		✓					✓		✓		✓	
	AIX 4.3.3 (32-bit)							✓		✓			
	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	VERITAS Backup Exec	VERITAS NetBackup	Native
<b>AutoLoaders<sup>1</sup></b>												
1/8 DLT vs80 Tape Autoloader	<b>Component Firmware</b>											
	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
	<b>Operating System Support</b>											
	HP-UX 11.0		✓						✓			✓
	HP-UX 11.11 (11i v1)		✓						✓			✓
	HP-UX 11.23 (11i v2)		✓									
	Windows NT 4.0		✓	✓	✓	✓	✓		✓	✓	✓	
	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 7							✓		✓		
	Solaris 8							✓		✓		
	Solaris 9							✓		✓		
	AIX 4.3.3 (32-bit)									✓		
	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 NT 4.0			✓	✓	✓	✓	✓		✓	✓	✓ <sup>2</sup>	✓
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>2</sup>	✓
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 7								✓		✓		
Solaris 8								✓		✓		
Solaris 9								✓		✓		
AIX 4.3.3 (32-bit)								✓		✓		
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	VERITAS Backup Exec	VERITAS 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 Dec 2004 Gold Pack Dec 2004
HP-UX 11.23 (11i v2)							Sept 2004			
<b>Servers</b>										
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) <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
A9782 (2G Combo Card)										
FW										
fcd Driver	Native					Native		Native		Native
A9784 (2G Combo Card)										
FW										
fcd Driver	Native					Native		Native		Native
A6826A (2G)										
fcd Driver	Native					Native	Native	Native		Native
FW	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	3.0C	3.0C	3.0F	3.0E	3.0F		3.0F
<b>High Availability <sup>4</sup></b>										
HP-UX (Service Guard)	✓ <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 July 2005, v1.1

- 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></b>										
HP-UX 11.23 (11i v2)	Sept 2004	HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004			HWE 11.23 March 2004 Gold Pack March 2004	HWE 11.23 March 2004 Gold Pack March 2004	Sept 2004		
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓ <sup>4</sup>	✓	✓			✓	✓	✓		
<b>Workstations</b>										
HP xz series (IA)	✓									
<b>Fibre Host Bus Adapters <sup>5</sup></b>										
AB465A (2G Combo Card)										
FW										
fcd Driver	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		
A6795A (2G)										
FW										
td Driver	1.10					1.10	1.10	1.10		
A6826A (2G)										
FW										
fcd Driver	3.03.150	3.02.165	3.02.165			3.03.150		3.03.150		
Disk Array Multipath Support <sup>5</sup>										
AutoPath for HP-UX	2.01.02					2.01.02				
Secure Path for HP-UX	3.0F	3.0C	3.0C			3.0F	3.0E	3.0F		
<b>High Availability <sup>6</sup></b>										
HP-UX (Service Guard)	✓ <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) Data Protector 5.0 support in 32-bit emulation mode.
- 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 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></b>										
Windows NT 4.0	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a
Windows 2000 Server/AS	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4
Windows Server 2003 (32-bit)	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>										
A7387A / Emulex LP1050DC										
FW	1.90a4			1.90a4		1.90a4		1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11			5-5.10a11		5-5.10a11		5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
A7388A / Emulex LP1050										
FW	1.90a4			1.90a4		1.90a4		1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11			5-5.10a11		5-5.10a11		5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
A7560A / Emulex LP1050EX-F2										
FW	1.90a4					1.90a4		1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11					5-5.10a11		5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7					5-1.02a7			5-1.02a7	5-1.02a7
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 NT 4.0 Driver	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7

**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 QFE837413 (minimum) or QFE891793 (recommended).

- 4) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 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) 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Fibre Host Bus Adapters <sup>1, 2</sup></b>										
<b>HP Branded / 3rd Party</b>										
FCA2408 / Emulex LP982										
FW	1.90a4	1.81a2	1.81a2	1.90a4	1.81a2	1.90a4	1.01a2	1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-4.82a16	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
BL20p Blade Server (2G)										
FW	1.43	1.34		1.43	1.34	1.43	1.43	1.43	1.43	1.43
WIN 2000/2003 SCSIport Driver	9.0.0.13	9.0.0.13		9.0.0.13	9.0.0.13	9.0.0.13	9.0.0.13	9.0.0.13	9.0.0.13	9.0.0.13
WIN 2003 StorPort Driver <sup>3,4</sup>										
BL25p Blade Server (2G)										
FW	1.48					1.48		1.48	1.48	1.48
WIN 2000/2003 SCSIport Driver	9.0.0.14					9.0.0.14		9.0.0.14	9.0.0.14	9.0.0.14
WIN 2003 StorPort Driver <sup>3,4</sup>										
BL30p Blade Server (2G)										
FW	1.43	1.43		1.43	1.43	1.43	1.43	1.43	1.43	1.43
WIN 2000/2003 SCSIport Driver	9.0.0.14	9.0.0.14		9.0.0.14	9.0.0.14	9.0.0.14	9.0.0.14	9.0.0.14	9.0.0.14	9.0.0.14
WIN 2003 StorPort Driver <sup>3,4</sup>										
BL35p Blade Server (2G)										
FW	1.43					1.43		1.43	1.43	1.43
WIN 2000/2003 SCSIport Driver	9.0.0.14					9.0.0.14		9.0.0.14	9.0.0.14	9.0.0.14
WIN 2003 StorPort Driver <sup>3,4</sup>										
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 NT 4.0 Driver	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
FCA2404 / Emulex LP9802										
FW	1.90a4	1.81a2	1.81a2	1.90a4	1.81a2	1.90a4	1.90a4	1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
FCA2404DC / Emulex LP9802DC										
FW	1.90a4	1.81a2	1.81a2	1.90a4	1.81a2	1.90a4	1.90a4	1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7

**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 QFE837413 (minimum) or QFE891793 (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	VERITAS Backup Exec	VERITAS NetBackup
<b>Fibre Host Bus Adapters<sup>1, 6</sup></b>										
<b>HP Branded / 3rd Party</b>										
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	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2	3.92a2
WIN NT 4.0 Driver	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a11	5-5.10a9	5-5.10a9	5-5.10a11	5-5.10a9	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11	5-5.10a11
WIN 2003 StorPort Driver <sup>7,8</sup>	5-1.02a7			5-1.02a7		5-1.02a7			5-1.02a7	5-1.02a7
<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 SP1	4.0C	4.0C	4.0C SP1	4.0C	4.0C SP2	4.0C SP1	4.0C SP2	4.0C SP2	4.0C SP2
Windows MPIO <sup>5</sup>	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 QFE837413 (minimum) or QFE891793 (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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></b>										
Windows Server 2003 (64-bit)	✓	✓			✓	sp1	✓	sp1		✓
<b>Servers</b>										
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)	✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)	✓ <sup>5</sup>	✓			✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters <sup>4, 7</sup></b>										
<b>HP Branded / 3rd Party</b>										
AB466A / Emulex LP1050DC										
FW	1.90a4					1.90a4		1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a11					6-5.10a11		6-5.10a11		6-5.10a11
WIN 2003 StorPort Driver <sup>8, 9</sup>	6-1.03a10					6-1.03a10				6-1.03a10
AB467A / Emulex LP1050										
FW	1.90a4					1.90a4		1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a11					6-5.10a11		6-5.10a11		6-5.10a11
WIN 2003 StorPort Driver <sup>8, 9</sup>	6-1.03a10					6-1.03a10				6-1.03a10
A7298A / Emulex LP982										
FW	1.90a4	1.81a2			1.81a2	1.90a4	1.90a4	1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a11	6-5.10a9			6-5.10a9	6-5.10a11	6-5.10a11	6-5.10a11		6-5.10a11
WIN 2003 StorPort Driver <sup>8, 9</sup>	6-1.03a10					6-1.03a10				6-1.03a10
AB232A / Emulex LP9802										
FW	1.90a4	1.81a2			1.81a2	1.90a4		1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a11	6-5.10a9			6-5.10a9	6-5.10a11		6-5.10a11		6-5.10a11
WIN 2003 StorPort Driver <sup>8, 9</sup>	6-1.03a10					6-1.03a10				6-1.03a10
<b>Disk Array Multipath Support <sup>4</sup></b>										
Secure Path for Windows	4.0C SP1	4.0C			4.0C	4.0C SP2	4.0B	4.0C SP2		4.0C SP2
Windows MPIO <sup>6</sup>	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) Data Protector 5.0 support in 32-bit emulation mode
- 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 QFE89173 (minimum).
- 9) 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></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 <sup>3, 5</sup></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		
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		
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		
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		
BL20p Blade Server (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		
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		

**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	VERITAS Backup Exec	VERITAS NetBackup
<b>Fibre Host Bus Adapters<sup>3, 5</sup></b>										
<b>HP Branded / 3rd Party</b>										
BL25p Blade Server (2G)										
FW	1.48							1.48		1.48
Red Hat Advanced Server 2.1 driver	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
Red Hat Enterprise Linux 4.0 driver								8.00.02		
United Linux 1.0/SuSE SLES 8 driver	7.05.00							7.05.00		7.05.00
SuSE SLES 9 driver								8.00.02		
BL30p Blade Server (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		
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		
BL35p Blade Server (2G)										
FW	1.43							1.43		1.43
Red Hat Advanced Server 2.1 driver	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
Red Hat Enterprise Linux 4.0 driver								8.00.02		
United Linux 1.0/SuSE SLES 8 driver	7.05.00							7.05.00		7.05.00
SuSE SLES 9 driver								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		
QLogic Native Multi-Path for Linux (2.4 kernel)	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		

**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 (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	VERITAS Backup Exec	VERITAS 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-rx6000, IA-64)	✓ <sup>5</sup>	✓	✓			✓	✓			
<b>Fibre Host Bus Adapters<sup>4</sup></b>										
<b>A6826A (2G)</b>										
EFI	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										
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
SuSE SLES 9 driver										
<b>A7538A (2G)</b>										
EFI	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										
United Linux 1.0/SuSE SLES 8 driver	7.05.00	7.00.03	7.00.03			7.05.00	7.05.00			
SuSE SLES 9 driver										
<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			
QLogic Native Multi-Path for Linux (2.4 kernel)	7.05.00					7.05.00	7.05.00			
QLogic Native Multi-Path for Linux (2.6 kernel)										

**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
- 5) Data Protector 5.0 support in 32-bit emulation mode

# 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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></b>										
Solaris 7	✓				✓	✓		✓		✓
Solaris 8	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 9	✓	✓	✓	✓	✓	✓	✓	✓		✓
<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			3.26	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 <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 <sup>4</sup>	Native		Native <sup>4</sup>		Native
FCA2684DC/Emulex LP10000DC (2G - PCI-X)										
FW						1.90a4		1.90a4		1.90a4
Solaris Driver						6.01f <sup>4</sup>		6.01f <sup>4</sup>		6.01f <sup>4</sup>
FCA2684/Emulex LP10000 (2G - PCI-X)										
FW						1.90a4		1.90a4		1.90a4
Solaris Driver						6.01f <sup>4</sup>		6.01f <sup>4</sup>		6.01f <sup>4</sup>
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	VERITAS Backup Exec	VERITAS 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](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.

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	VERITAS Backup Exec	VERITAS 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-2
<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>										
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 (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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>										
AIX 4.3.3	✓ <sup>3, 6</sup>		✓		✓	✓		✓		✓
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</b> <sup>3, 4</sup>										
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>7</sup>		Native <sup>8</sup>		Native <sup>8</sup>
IBM 5716 (2G)										
AIX Driver	Native <sup>9</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</b> <sup>4</sup>										
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	VERITAS Backup Exec	VERITAS NetBackup
<b>Operating Systems <sup>1, 2</sup></b>										
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 <sup>3, 5</sup></b>										
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 <sup>5</sup></b>										
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 <sup>4</sup></b>										
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	VERITAS Backup Exec	VERITAS NetBackup
<b>RAID Arrays</b>										
XP 12000 <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	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/64	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/24	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/16	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/12	07.00.00-84	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	4.4.0c	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	4.4.0c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/32	4.4.0c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32	4.4.0c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16N	4.4.0c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16V	4.4.0c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8V	4.4.0c	✓	✓	✓	✓	✓	✓	✓
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	2.6.2c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 8	2.6.2c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 16EL	2.6.2c	✓	✓	✓	✓	✓	✓	✓
SAN Switch 8EL	2.6.2c	✓	✓	✓	✓	✓	✓	✓
FC Switch 16B	3.2.0	✓	✓	✓	✓	✓	✓	✓
FC Switch 8B	3.2.0	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.0	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9506	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9509	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9120	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9140	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216a	2.1.1a	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216i	2.1.1a	✓	✓	✓	✓	✓	✓	✓
<b>Multi-Protocol Routers and Gateways<sup>1</sup></b>								
Multi-Protocol Router <sup>2,3</sup>	7.3.0b	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 <sup>4</sup>	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)

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	VERITAS Backup Exec	VERITAS NetBackup
DL585 Storage Server	✓								✓	
DL380G4 Storage Server	✓	✓	✓	✓	✓	✓	✓		✓	✓ <sup>1</sup>
ML370G4 Storage Server	✓			✓			✓		✓	
ML350G4 Storage Server	✓			✓			✓		✓	
ML110G2 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	A6829A Ultra160, 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	A6828A Ultra160, LVD, Single Channel, VHDCI	374654-B21 <sup>4</sup> 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	A5149A Ultra80, 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	A5150A Ultra80, LVD, Dual Channel, VHDCI	C7474A Ultra160, LVD, Single Channel, VHDCI		154457-B21 Ultra160, LVD, Single Channel, HD68
129803-B21 Ultra160, LVD, Dual Channel, VHDCI	A4974A <sup>1</sup> Ultra, SE, Single Channel, HD68	154457-B21 Ultra160, LVD, Single Channel, HD68		C7474A Ultra160, LVD, Single Channel, VHDCI
348757-B21 Ultra80, LVD, Dual Channel, VHDCI	A4999A <sup>1</sup> Ultra80, LVD, Single Channel, VHDCI	129803-B21 Ultra160, LVD, Dual Channel, VHDCI		348757-B21 Ultra80, LVD, Dual Channel, VHDCI
374654-B21 <sup>4</sup> Ultra320, 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>**

<b>Windows</b>	<b>HP-UX</b>	<b>LINUX</b>
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>**

<b>Windows</b>	<b>Linux</b>	<b>NetWare</b>
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	VERITAS Backup Exec	VERITAS 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	1.5.05	1.2.00	1.2.00	1.5.05	1.2.00	1.5.05	1.5.05	1.5.05	1.5.05	1.5.05
Continuous Access				✓		✓		✓	✓	✓
Business Copy EVA	✓	✓		✓	✓	✓	✓	✓	✓	✓
Business Copy XP	✓									
<b>Tools and Utilities</b>										
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	Supported Version(s)	Recommended Tape Driver	Application Information/Support
HP OpenView Storage Data Protector	5.5, 5.1, and 5.0	Use Native Drivers	<a href="#">Data Protector Product Information</a>
			<a href="#">Data Protector Device Support Matrix</a>
Atempo Time Navigator	3.7.0.3		<a href="http://www.atempo.com">www.atempo.com</a>
BakBone NetVault	7.1 & 7.3		<a href="http://www.bakbone.com">www.bakbone.com</a>
Computer Associates BrightStor ARCserve (Windows)	11.1, 11.0, and 9.0	CABA Driver for Windows	<a href="http://support.ca.com">support.ca.com</a>
Computer Associates BrightStor ARCserve (NetWare)	11.1 and 9.0	HP Driver for Netware	<a href="http://support.ca.com">support.ca.com</a>
Computer Associates BrightStor ARCserve (Linux)	11.1 and 9.0		<a href="http://support.ca.com/">support.ca.com/</a>
Computer Associates BrightStor ARCserve (UNIX)	11.1 and BEB 10.5		<a href="http://support.ca.com/">support.ca.com/</a>
CommVault Systems QiNetix Galaxy	5.0	HP Driver for Windows	<a href="http://www.commvault.com">www.commvault.com</a>
EMC Legato NetWorker	7.2, and 7.1.x	HP Driver for Windows	<a href="http://www.legato.com">www.legato.com</a>
Syncsort Backup Express	2.3	Use Native Drivers	<a href="http://www.syncsort.com">www.syncsort.com</a>
Tivoli Storage Manager	5.3.x, 5.2.4.x	Tivoli Driver for Windows	<a href="http://www.tivoli.com">www.tivoli.com</a>
VERITAS Backup Exec for Windows Servers	10.0.5484	BE Driver for Windows	<a href="http://www.veritas.com">www.veritas.com</a>
VERITAS Backup Exec for NetWare	9.1.1152	BE Driver for Netware	<a href="http://www.veritas.com">www.veritas.com</a>
VERITAS NetBackup Windows	5.1 MP1, 5.0 MP4, and 4.5 FP8/MP8	HP Driver for Windows or NBU Tape Driver for Windows	<a href="http://www.veritas.com">www.veritas.com</a>
VERITAS NetBackup UNIX	5.1 MP1, 5.0 MP4, and 4.5 FP8/MP8		<a href="http://www.veritas.com">www.veritas.com</a>

NOTE: 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>
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
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.