

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

March 2005 Version 1.0



i n v e n t

Start Here



Easy to use, OS-centric format. Product pages include version details allowing for easier data lookup and search.

The EBS Compatibility Matrix represents the latest tested software and hardware. Older versions may be supported, provided it was listed in a previous matrix. The legacy EBS compatibility matrices can be located at www.hp.com/go/ebs. While older versions of software and hardware may be supported, HP customer support may ask you to update components in order to eliminate known issues.

This matrix includes tape automation compatibility details for Direct Attach SCSI (DAS), Direct Attach Fibre (DAF or point-to-point fibre), and Storage Area Network (SAN) connection options. This matrix does not imply device availability. Products that are scheduled for removal from the EBS Compatibility Matrix next month will be **highlighted in yellow**. Automation products will then be moved to the Legacy Support Details page.

For information about tape drive compatibility and support, go to <http://www.hp.com/go/connect>. For more technical information about EBS and supported 3rd party arrays, go to the Enterprise Backup Solution Design Guide and ISV implementation guides located at <http://www.hp.com/go/ebs>



Enterprise Backup Solution Compatibility Matrix Index

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Sample Page Layout

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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

Windows (IA-64)

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
Windows Server 2003 (64-bit)	✓	✓	✓			✓		✓	✓		✓
Servers											
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)		✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)		5	✓	✓		✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{4, 7}											
HP Brandad / 3rd Party											
AB466A / Emulex LP1050											
FW	1.90a4	1.90a4					1.90a4				1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10					6-5.10a10				6-5.10a10
AB467A / Emulex LP1050DC											
FW	1.90a4	1.90a4					1.90a4				1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10					6-5.10a10				6-5.10a10
A7298A / Emulex LP982											
FW	1.90a4	1.90a4	1.81a2			1.81a2	1.90a4	1.90a4	1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10	6-5.10a9			6-5.10a9	6-5.10a10	6-5.10a10	6-5.10a10		6-5.10a10
A8232A / Emulex LP9802											
FW	1.90a4	1.90a4	1.81a2			1.81a2	1.90a4		1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10	6-5.10a9			6-5.10a9	6-5.10a10		6-5.10a10		6-5.10a10
Disk Array Multipath ⁴											
Secure Path for Windows											
Secure Path for Windows	4.0C SP1	4.0C SP1	4.0C	4.0C	4.0C SP1	4.0C	4.0C SP1	4.0B	4.0C SP1	4.0C SP1	4.0C SP1
Windows MPIO ⁶											
Windows MPIO	1.00				1.00		1.00			1.00	1.00
High Availability ³											
Windows (MSCS)			✓			✓		✓	✓		✓

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
- 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.
- 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
- Windows MPIO Basic Failover support. Clusters sharing disk and tape on the same HBA require storport.
- 3rd Party adapters require HP drivers and firmware.

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Notes pertaining to unique configurations

Matrix version

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Libraries - Application Support

DAS, DAF, and SAN Support	Current 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
Enterprise Libraries											
ESL E-Series 712e/322e¹⁰											
Robot FW	3.00	3.00	1.01	1.01	3.00 ²	1.01	3.00	3.00	3.00	3.00	3.00
Drive FW Ultrium 960 FC	L25W	L25W			L25W ¹³			L25W	L25W	L25W	L25W
Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W
Drive FW Ultrium 460 FC	K42W	K42W			K42W	K42W	K42W	K42W	K42W	K42W	K42W
ESL E-Series 630e/286e¹⁰											
Robot FW	3.00	3.00	1.01	1.01	3.00 ²	1.01	3.00	3.00	3.00	3.00	3.00
Drive FW SDLT 600	v35	v35			v85 ¹³		v35 ¹²	v35		v35 ⁶	v35
Drive FW SDLT 160/320	v85	v85	v75	v75	v85	v75	v85	v85	v85	v85 ⁶	v85
ESL 9000 Series¹⁰											
Robot FW	3.55	3.55	3.48	3.48	3.55 ^{2, 11}	3.48	3.55	3.55	3.55	3.55	3.55
Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W
Drive FW Ultrium 230	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W
Drive FW SDLT 600	v35	v35			v85 ¹³		v35 ¹²	v35		v35 ⁶	v35
Drive FW SDLT 160/320	v85	v85	v75	v75	v85	v75	v85	v85	v85	v85	v85
Drive FW SDLT 110/220	v85	v85	v75	v75	v85	v75	v85	v85	v85	v85	v85
Drive FW 40/80	v88	v88	V80	V80	v88	V80	v88	v80	v88	v88	v88
ESL 9000 Multi-Unit Scalability ^{3,4}		✓	✓	✓	✓ ²	✓	✓	✓	✓ ⁷		✓
ESL Mixed Media		✓	✓ ⁹		✓ ²	✓ ⁹	✓		✓	✓ ⁸	✓
ESL Partitioning		✓			✓ ²		✓		✓	✓ ⁸	✓
Mid-Range Libraries											
MSL 6000 Series¹⁰											
Robot FW	5.07	5.07	4.23	4.23	4.30	4.23	5.07	5.07	5.07	5.07	5.07
Drive FW Ultrium 960	G24W	G24W			G24W ¹³			G24W	G24W	G24W	G24W
Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W
Drive FW SDLT 600	v35	v35			v35 ¹³			v35		v35 ⁶	v35
Drive FW SDLT 160/320	v85	v85	v75	v75	v85	v75	v85	v85	v85	v85	v85
MSL 5000 Series^{5,10}											
Robot FW	5.07	5.07	4.23	4.23	4.30	4.23	5.07	5.07	5.07	5.07	5.07
Drive FW Ultrium 960	G24W	G24W			G24W ¹³			G24W	G24W	G24W	G24W
Drive FW Ultrium 230	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W	E38W
Drive FW SDLT 600	v35	v35			v35 ¹³			v35		v35 ⁶	v35
Drive FW SDLT 110/220	v85	v85	v75	v75	v85	v75	v85	v85	v85	v85	v85
Drive FW 40/80	v88	v88	V80	V80	v88	V80	v88	v80	v88	v88	v88
SSL 2020 TL											
Robot FW	4.16	4.16	4.15	4.15 ⁶	4.16	4.16	4.16 ¹	4.16	4.16 ¹	4.16 ⁶	4.16 ¹
Drive FW AIT50	1.35	1.35	1.30	1.30	1.35	1.30	1.35	1.27	1.35	1.35	1.35
MSL Multi-Unit Scalability ^{3,4}		✓	✓	✓	✓	✓	✓	✓		✓	✓
MSL Mixed Media Support		✓	✓	✓	✓	✓	✓			✓ ⁸	✓

NOTES:

- Win NT/2000 and Solaris support in homogeneous SAN environments only
- NetWare is supported with ESL libraries in a homogeneous environment only
- ESL multi-unit scalability is with a horizontal pass-through mechanism, and the MSL multi-unit scalability is with a vertical pass-through mechanism
- Contact your ISV for scalability support
- MSL 5026 DLX is not supported with IA-64 operating systems
- Windows support only

- Support is with IBM 6228 HBA only
- Homogeneous Windows only
- Mixed Media using Partitioning not supported.
- 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 and more information on which applications support WORM can be found at: www.hp.com/go/connect.

- SDLT 600 direct attach LINUX support only
- Not supported with AIX
- Direct attach SCSI support only

Libraries - Controller Support

DAF and SAN Support ¹	e2400-FC 2G Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200
Enterprise Libraries							
ESL E-Series 712e/322e (Ultrium 960 FC)	✓						
ESL E-Series 712e/322e (Ultrium 460)		✓					
ESL E-Series 712e/322e (Ultrium 460 FC)	✓						
ESL E-Series 630e/286e (SDLT320)		✓					
ESL E-Series 630e/286e (SDLT600)		✓					
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 9326 DX						✓	✓
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 9198 DLX		✓		✓		✓	✓
ESL Multi-Unit Scalability ²		✓		✓		✓	✓
Interface Manager	✓	✓					
Mid-Range Libraries							
MSL 6060 (Ultrium 960)			✓			✓	
MSL 6060 (Ultrium 460)			✓			✓	
MSL 5060 (Ultrium 230)			✓		✓	✓	✓
MSL6052 (SDLT 600)			✓			✓	
MSL5052 (SDLT 600)			✓			✓	
MSL 5052 S2			✓		✓	✓	✓
MSL 5052 SL			✓		✓	✓	✓
MSL 6030 (Ultrium 960)			✓			✓	
MSL 6030 (Ultrium 460)			✓			✓	
MSL 5030 (Ultrium 230)			✓		✓	✓	✓
MSL 6026 (SDLT 600)			✓			✓	
MSL 5026 (SDLT 600)			✓		✓	✓	✓
MSL 5026 S2			✓		✓	✓	✓
MSL 5026 SL			✓		✓	✓	✓
MSL 5026 DLX			✓		✓	✓	✓
MSL Multi-Unit Scalability			✓		✓	✓	✓
SSL 2020 TL						✓	✓

NOTE:

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

DAF and SAN Support	Current 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
Fibre Channel Interface Controller											
Interface Manager	i150	i150	i130	i120	i150	i120	i150	i150	i150	i150	i150
e2400-FC 2G Interface Controller (FC-FC)	5.6.41	5.6.41					5.6.41	5.6.41	5.6.41	5.6.41 ⁸	5.6.41
e2400-160 Interface Controller (FC-SCSI)	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
NSR E1200-160	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
NSR E2400	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
NSR E1200	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
NSR M2402	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
NSR N1200	5.6.41	5.6.41	5.4.25	5.3.0b	5.6.41	5.3.0b	5.6.41	5.6.41	5.6.41	5.6.41	5.6.41
Serverless Backup^{1,2,6,9,10} (SAN Support Only)											
e2400-FC 2G Interface Controller (FC-FC)											
e2400-160 Interface Controller (FC-SCSI)		✓ ⁷									
NSR E2400				✓ ³						✓ ⁴	✓ ⁵
NSR E1200				✓ ³						✓ ⁴	✓ ⁵
NSR M2402		✓		✓ ³						✓ ⁴	✓ ⁵
NSR N1200				✓ ³						✓ ⁴	✓ ⁵

	Interface Manager Firmware Required Minimum Component						
	i100	i110	i120	i130	i141	i142	i150
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
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
NSR E2400	N/A	5.3.0b	5.3.0b	5.4.25	5.6.06	5.6.06	5.6.41
NSR E1200-160	N/A	5.3.0b	5.3.0b	5.4.25	5.6.06	5.6.06	5.6.41
ESL 9595/9322	3.40	3.40	3.40	3.48	3.48	3.55	3.55
ESL 9198/9326	N/A	3.40	3.40	3.48	3.48	3.55	3.55
ESL-E 712e/630e	N/A	N/A	1.01	1.10	2.00	2.00	3.00
ESL-E 322e/286e	N/A	N/A	N/A	1.10	2.00	2.00	3.00
JAVA Run Time	1.4.0	1.4.0	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
Command View ESL	1.0.00	1.1.00	1.2.00	1.3.00	1.4.01	1.4.02	1.50

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).
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- 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) Support is with Windows only.
- 9) The LUN ID of the disk volume to be backed up must be the same for the host and the interface controller.
- 10) Serverless backup is restricted to QLogic Windows driver version 8.2.0.73 or any version of Emulex HBA driver.

Autoloaders

DAS Support		Current 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	
AutoLoaders¹														
SSL1016 Ultrium 460 Tape Autoloader	Component Firmware													
	Robot FW	v20	v20	v20	v10	v20	v10	v20	v20	v20	v20	v20	v20	
	Drive FW Ultrium 460	F59W	F59W	F43W	F43W	F59W	F43W	F59W	F59W	F59W	F59W	F59W	F59W	
	Operating System Support													
	HP-UX 11.0		✓					✓		✓		✓	✓	
	HP-UX 11.11 (11i v1)		✓					✓		✓		✓	✓	
	HP-UX 11.23 (11i v2)		✓					✓					✓	
	Windows NT 4.0		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Windows Server 2003 (32-bit)		✓				✓		✓	✓	✓	✓	✓	
	Windows Server 2003 (64-bit)		✓						✓	✓	✓		✓	
	Tru64 5.1								✓				✓	
	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)								✓					✓
	United Linux 1.0/SuSE SLES 8 (32-bit)								✓					✓
	United Linux 1.0/SuSE SLES 8 (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	Component Firmware												
		Robot FW	v40	v40		v35	v40	v31	v40	v40		v40	v40	v40
		Drive FW SDLT 160/320	v85	v85		v85	v85	v75	v85	v85		v85	v85	v85
Operating System Support														
HP-UX 11.0			✓					✓				✓	✓	
HP-UX 11.11 (11i v1)			✓					✓				✓	✓	
HP-UX 11.23 (11i v2)			✓										✓	
Windows NT 4.0			✓	✓	✓	✓	✓		✓		✓	✓	✓	
Windows 2000 Server/AS			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows Server 2003 (32-bit)			✓				✓		✓	✓	✓	✓	✓	
Windows Server 2003 (64-bit)			✓						✓				✓	
Tru64 5.1									✓				✓	
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)									✓					✓
United Linux 1.0/SuSE SLES 8 (32-bit)				✓										✓
United Linux 1.0/SuSE SLES 8 (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
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Autoloaders

DAS Support		Current 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	
AutoLoaders¹														
1/8 Ultrium 460 Tape Autoloader	Component Firmware													
	Robot FW	N12r	N12r	N12r	N12r	N12r	N12r	N12r	N12r		N12r	N12r	N12r	
	Drive FW Ultrium 460	F7BP	F7BP	F78V	F78V	F7BP	F78V	F7BP	F7BP		F7BP	F7BP	F7BP	
	Operating System Support													
	HP-UX 11.0		✓					✓		✓		✓	✓	
	HP-UX 11.11 (11i v1)		✓					✓		✓		✓	✓	
	HP-UX 11.23 (11i v2)		✓					✓					✓	
	Windows NT 4.0		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	
	Windows Server 2003 (32-bit)		✓				✓	✓		✓	✓	✓	✓	
	Windows Server 2003 (64-bit)		✓					✓	✓	✓	✓	✓	✓	
	Tru64 5.1		✓									✓		
	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)		✓										✓	
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓										✓	
	United Linux 1.0/SuSE SLES 8 (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	Component Firmware												
		Robot FW	H43r	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	E33P
Operating System Support														
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 5.1														
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)													✓	
United Linux 1.0/SuSE SLES 8 (32-bit)									✓				✓	
United Linux 1.0/SuSE SLES 8 (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
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Autoloaders

DAS Support		Current 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
AutoLoaders¹													
1/8 SDLT 160/320 Tape Autoloader	Component Firmware												
	Robot FW	L12r	L12r	L12r	L12r	L12r	L12r	L12r	L12r		L12r	L12r	L12r
	Drive FW SDLT 160/320	v85	v85	v75	v75	v85	v85	v85	v85		v85	v85	v85
	Operating System Support												
	HP-UX 11.0		✓					✓		✓		✓	✓
	HP-UX 11.11 (11i v1)		✓					✓		✓		✓	✓
	HP-UX 11.23 (11i v2)		✓					✓					✓
	Windows NT 4.0		✓	✓	✓		✓			✓	✓	✓	✓
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓		✓	✓	✓	✓
	Windows Server 2003 (32-bit)		✓				✓		✓	✓	✓	✓	✓
	Windows Server 2003 (64-bit)		✓				✓			✓			✓
	Tru64 5.1								✓				
	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)		✓										✓
	United Linux 1.0/SuSE SLES 8 (32-bit)		✓				✓						✓
	United Linux 1.0/SuSE SLES 8 (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

DAS Support		Current 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	
AutoLoaders¹														
1/8 DLT vs80 Tape Autoloader	Component Firmware													
	Robot FW	5E40	5E40	5E40	5E40	5E40	5E40	5E40	5E40		5E40		5E40	
	Drive FW vs80	v64	v64	v56	v56	v64	v56	v64	v56		v64		v64	
	Operating System Support													
	HP-UX 11.0		✓							✓			✓	
	HP-UX 11.11 (11i v1)		✓							✓			✓	
	HP-UX 11.23 (11i v2)		✓											
	Windows NT 4.0		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Windows Server 2003 (32-bit)		✓				✓		✓	✓	✓		✓	
	Windows Server 2003 (64-bit)		✓							✓				
	Tru64 5.1													
	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)													✓
	United Linux 1.0/SuSE SLES 8 (32-bit)								✓					
	United Linux 1.0/SuSE SLES 8 (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	Component Firmware													
	Robot FW	v40	v40	v31	v31	v40	v13	v40	v31	v40	v40	v40	v40	
	Drive FW DLT 1	v64	v64	v53	v53	v64	v46	v64	v53	v64	v64	v64	v64	
	Operating System Support													
	HP-UX 11.0							✓		✓				
	HP-UX 11.11 (11i v1)							✓		✓				
	HP-UX 11.23 (11i v2)		✓											
	Windows NT 4.0		✓	✓	✓	✓	✓		✓	✓	✓ ²	✓		
	Windows 2000 Server/AS		✓	✓	✓	✓	✓	✓	✓	✓	✓ ²	✓		
	Windows Server 2003 (32-bit)									✓				
	Windows Server 2003 (64-bit)		✓							✓				
	Tru64 5.1								✓					
	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)													
	United Linux 1.0/SuSE SLES 8 (32-bit)								✓					
	United Linux 1.0/SuSE SLES 8 (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.
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2) Supported with BE 9.0 and later only

HP-UX (PA-RISC)

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
HP-UX 11.0	(HWE 1100) March 2004	(HWE 1100) March 2004	(HWE 1100) March 2004	(HWE 1100) March 2004	(HWE 1100) 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 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							Sept 2004			
Servers											
HP 9000 Superdome and Mid-Range (rp7000-rp8000, PA-RISC)		✓	✓	✓	✓		✓	✓			✓
HP 9000 Entry-Level (rp1000-rp6000, PA-RISC)		✓	✓	✓	✓	✓	✓	✓	✓		✓
HP A, L, N, and V Class (pa-risc)		✓	✓	✓	✓	✓	✓	✓	✓		✓
HP K, R, and D Class (pa-risc)		✓	✓	✓							
Workstations											
HP B-Class (pa-risc)		✓									✓
HP C-Class (pa-risc)		✓									✓
HP J-Class (pa-risc)		✓									✓
Fibre Host Bus Adapters ⁵											
AB465A (2G Combo Card)											
FW											
fcd Driver	Native	Native					Native		Native		Native
A9782 (2G Combo Card)											
FW											
fcd Driver	Native	Native					Native		Native		Native
A9784 (2G Combo Card)											
FW											
fcd Driver	Native	Native					Native		Native		Native
A6826A (2G)											
fcd Driver	Native	Native					Native	Native	Native		Native
FW	3.02.165	3.02.165					3.02.165	3.02.165	3.02.165		3.02.165
A6795A (2G)											
td Driver	Native	Native	Native	Native	Native	Native	Native	Native	Native		Native
A6684A (1G)											
td Driver	Native	Native					Native				Native
A6685A (1G)											
td Driver	Native	Native					Native				Native
A5158A (1G)											
td Driver	Native	Native	Native	Native	Native	Native	Native	Native	Native		Native
Disk Array Multipath Support ⁵											
AutoPath for HP-UX	2.01.02	2.01.02					2.01.02				2.01.02
Secure Path for HP-UX	3.0E	3.0C	3.0C	3.0C	3.0C	3.0C	3.0E	3.0E	3.0C		3.0E
High Availability ⁴											
HP-UX (Service Guard)		✓ ³					✓ ³				

NOTES:

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

- 3) ATS is not supported.
- 4) Refer to 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	Current 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
Operating Systems ^{1, 2}											
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	(HWE 11.23) March 2004 Gold Pack March 2004			
Servers											
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)		✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)		✓ ⁶	✓	✓			✓	✓			
Workstations											
HP xz series (IA)		✓									
Fibre Host Bus Adapters ⁵											
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	1.10	1.10					1.10	1.10			
td Driver	Native	Native					Native	Native			
A6826A (2G)											
FW	3.02.165	3.02.165	3.02.165	3.02.165			3.02.165				
fcd Driver	Native	Native	Native	Native			Native				
Disk Array Multipath Support ⁵											
AutoPath for HP-UX	2.01.02	2.01.02					2.01.02				
Secure Path for HP-UX	3.0E	3.0C	3.0C	3.0C			3.0E	3.0E			
High Availability ⁴											
HP-UX (Service Guard)		✓ ³					✓ ³				

NOTES:

- 1) Other Operating Systems not listed above may be supported within EBS by the respective ISVs as LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility
- 3) ATS is not supported.
- 4) Refer to 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. March 2005, v1.0

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

Windows (32-bit)

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
Windows NT 4.0	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a	sp6a
Windows 2000 Server/AS	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4	sp4
Windows Server 2003 (32-bit)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Servers											
HP ProLiant		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HP ProLiant Blade Server		✓	✓		✓	✓	✓	✓	✓	✓	✓
HP NetServer		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third Party X86		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fibre Host Bus Adapters ^{5, 6}											
HP Branded / 3rd Party											
A7387A / Emulex LP1050DC											
FW	1.90a4	1.90a4			1.90a4		1.90a4		1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a10	5-5.10a10			5-5.10a10		5-5.10a10		5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
A7388A / Emulex LP1050											
FW	1.90a4	1.90a4			1.90a4		1.90a4		1.90a4	1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a10	5-5.10a10			5-5.10a10		5-5.10a10		5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
A7560A / Emulex LP1050EXF2											
FW	1.90a4						1.90a4			1.90a4	1.90a4
WIN 2000/2003 SCSIport Driver	5-5.10a10						5-5.10a10			5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6						5-1.02a6			5-1.02a6	5-1.02a6
FCA2355 / Emulex LP9002DC											
FW	3.92a2	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	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
FCA2408 / Emulex LP982											
FW	1.90a4	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	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-4.82a16	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
BL20p Blade Server (2G)											
FW	1.43	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	9.0.0.13
WIN 2003 StorPort Driver ^{3,4}											
BL25p Blade Server (2G)											
FW	1.48	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	9.0.0.14
WIN 2003 StorPort Driver ^{3,4}											

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](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	Current 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
Fibre Host Bus Adapters ^{1, 2}											
HP Branded / 3rd Party											
BL30p Blade Server (2G)											
FW	1.43	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	9.0.0.14
WIN 2003 StorPort Driver ^{3,4}											
BL35p Blade Server (2G)											
FW	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
WIN 2003 StorPort Driver ^{3,4}											
FCA2101 / Emulex LP952											
FW	3.92a2	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	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
FCA2404 / Emulex LP9802											
FW	1.90a4	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	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
FCA2404DC / Emulex LP9802DC											
FW	1.90a4	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	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
FCA2214DC / QLogic 2342											
FW	1.34	1.34	1.34		1.34	1.34	1.34	1.34	1.34	1.34	1.34
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	9.0.0.13
WIN 2003 StorPort Driver ^{3,4}											
FCA2214 / QLogic 2340											
FW	1.34	1.34	1.34		1.34	1.34	1.34	1.34	1.34	1.34	1.34
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	9.0.0.13
WIN 2003 StorPort Driver ^{3,4}											
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	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	4-4.82a16
WIN 2000/2003 SCSIport Driver	5-5.10a10	5-5.10a10	5-5.10a9	5-5.10a9	5-5.10a10	5-5.10a9	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10	5-5.10a10
WIN 2003 StorPort Driver ^{3,4}	5-1.02a6	5-1.02a6			5-1.02a6		5-1.02a6		5-1.02a6	5-1.02a6	5-1.02a6
Fibre Host Bus Adapters ^{1,5}											
3rd Party Drivers											
Emulex LP982 (Full-Port Driver)											
FW	1.01a2	1.01a2									1.01a2
WIN 2000/2003 Full-Port Driver	2.21a0	2.21a0									2.21a0

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.
 5) Supported for tape connections only.

Windows (32-bit) - Continued

DAS, DAF, and SAN Support	Current 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
Disk Array Multipath Support ¹											
Secure Path for Windows	4.0C SP1	4.0C SP1	4.0C	4.0C	4.0C SP1	4.0C	4.0C SP1	4.0C SP1	4.0C SP1	4.0C SP1	4.0C SP1
Windows MPIO ⁵	1.0								1.0	1.0	1.0
AutoPath for Windows 2000	2.01	2.01			2.01		2.01		2.01	2.01	2.01
AutoPath for Windows 2003	1.00				1.00		1.00			1.00	
High Availability ²											
Windows (MSCS)		✓ ³	✓	✓		✓	✓	✓	✓	✓ ⁴	✓

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 on Windows 2000 only.
- 4) Support includes NAS9000 and NAS4000 platforms.
- 5) Windows MPIO Basic Failover support. Clusters sharing disk and tape on the same HBA require StorPort.

Windows (IA-64)

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
Windows Server 2003 (64-bit)	✓	✓	✓			✓		✓	✓		✓
Servers											
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)		✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)		✓ ⁵	✓	✓		✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{4, 7}											
HP Branded / 3rd Party											
AB466A / Emulex LP1050											
FW	1.90a4	1.90a4					1.90a4				1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10					6-5.10a10				6-5.10a10
AB467A / Emulex LP1050DC											
FW	1.90a4	1.90a4					1.90a4				1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10					6-5.10a10				6-5.10a10
A7298A / Emulex LP982											
FW	1.90a4	1.90a4	1.81a2			1.81a2	1.90a4	1.90a4	1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10	6-5.10a9			6-5.10a9	6-5.10a10	6-5.10a10	6-5.10a10		6-5.10a10
AB232A / Emulex LP9802											
FW	1.90a4	1.90a4	1.81a2			1.81a2	1.90a4		1.90a4		1.90a4
WIN 2003 SCSIport Driver	6-5.10a10	6-5.10a10	6-5.10a9			6-5.10a9	6-5.10a10		6-5.10a10		6-5.10a10
Disk Array Multipath Support ⁴											
Secure Path for Windows	4.0C SP1	4.0C SP1	4.0C	4.0C	4.0C SP1	4.0C	4.0C SP1	4.0B	4.0C SP1	4.0C SP1	4.0C SP1
Windows MPIO ⁶	1.0								1.0		1.0
AutoPath for Windows 2003	1.00				1.00		1.00			1.00	
High Availability ³											
Windows (MSCS)			✓			✓		✓	✓		✓

NOTES:

- 1) Other Operating Systems not listed above may be supported within EBS by the respective ISVs as LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility
- 3) Refer to the EBS Design Guide for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 4) Refer to Heterogeneous Open SAN Design Reference Guide 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 MPIO Basic Failover support. Clusters sharing disk and tape on the same HBA require storport.
- 7) 3rd Party adapters require HP drivers and firmware.

LINUX (32-bit)⁴

DAS, DAF, and SAN Support	Current 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
Operating Systems^{1, 2}											
Red Hat Advanced Server 2.1 (32-bit)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Red Hat Enterprise Linux 3.0 (32-bit)	✓	✓	✓	✓	✓		✓	✓	✓		✓
United Linux 1.0/SuSE SLES 8 (32-bit)	✓	✓	✓	✓	✓		✓	✓			✓
Servers											
HP ProLiant ⁵		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HP ProLiant Blade Server ⁵		✓	✓		✓	✓	✓	✓	✓	✓	✓
HP NetServer		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Third Party X86		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Fibre Host Bus Adapters^{3, 7}											
HP Branded / 3rd Party											
FCA2214DC / QLogic 2342 (2G)											
FW	1.45	1.45	1.34	1.34	1.45	1.34	1.45	1.45	1.45		1.45
Linux Driver (Intel)	7.01.01	7.01.01	7.00.03	7.00.03	7.01.01	6.06.50	7.01.01	7.01.01	7.01.01		7.01.01
FCA2214 / QLogic 2340 (2G)											
FW	1.45	1.45	1.34	1.34	1.45	1.34	1.45	1.45	1.45		1.45
Linux Driver (Intel)	7.01.01	7.01.01	7.00.03	7.00.03	7.01.01	6.06.50	7.01.01	7.01.01	7.01.01		7.01.01
BL20p Blade Server (2G)											
FW	1.45	1.45	1.34		1.45	1.34	1.45	1.45	1.45		1.45
Linux Driver (Intel)	7.01.01	7.01.01	7.00.03		7.01.01	6.06.50	7.01.01	7.01.01	7.01.01		7.01.01
BL25p Blade Server (2G)											
FW	1.48	1.48							1.48		1.48
Linux Driver (Intel)	7.01.01	7.01.01							7.01.01		7.01.01
BL30p Blade Server (2G)											
FW	1.45	1.45	1.34		1.45	1.34	1.45	1.45	1.45		1.45
Linux Driver (Intel)	7.01.01	7.01.01	7.00.03		7.01.01	6.06.50	7.01.01	7.01.01	7.01.01		7.01.01
BL35p Blade Server (2G)											
FW	1.43	1.43							1.43		1.43
Linux Driver (Intel)	7.01.01	7.01.01							7.01.01		7.01.01
QLA2200 (1G)											
FW	1.76	1.76					1.76	1.76			
Linux Driver (Intel)	6.0.1c	6.0.1c					6.0.1c	6.0.1			
Disk Array Multipath Support³											
Secure Path for Linux	3.0Csp1	3.0C	3.0A	3.0A			3.0C	3.0Csp1			
QLogic Native Multi-Path for Linux ⁶	7.01.01	7.01.01					7.01.01	7.01.01	7.01.01		7.01.01

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
- 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

- 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.
- EBS OS support details for ProLiant platforms are located on the ProLiant Server page in this document
- QLogic Native Multipath requires "Patch for HP Tape Libraries" documented in Customer Advisory OT050112_CW01.
- 3rd Party adapters require HP drivers and firmware.

LINUX (IA-64)³

DAS, DAF, and SAN Support	Current 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
Operating Systems^{1, 2}											
Red Hat Advanced Server 2.1 (64-bit)	✓	✓	✓	✓			✓	✓			
Red Hat Enterprise Linux 3.0 (64-bit)	✓	✓	✓	✓			✓	✓			
United Linux 1.0/SuSE SLES 8 (64-bit)	✓	✓	✓	✓			✓	✓			
Servers											
HP Integrity Superdome and Mid-Range (rx7000-rx8000, IA-64)		✓					✓				
HP Integrity Entry-Level (rx1000-rx6000, IA-64)		✓ ⁵	✓	✓		✓	✓	✓	✓		✓
Fibre Host Bus Adapters⁴											
A6826A (2G)											
EFI	1.30	1.30	1.30	1.30			1.30	1.30			
RedHat Advanced Server 2.1 Driver	7.01.01	7.01.01	7.00.03	7.00.03			7.01.01	7.01.01			
Red Hat Enterprise Linux 3.0 Driver	7.01.01		7.00.03	7.00.03			7.01.01	7.01.01			
SuSE SLES 8/United Linux Driver	7.01.01	7.01.01	7.00.03	7.00.03			7.01.01	7.01.01			
A7538A (2G)											
EFI	1.42	1.42					1.42				
RedHat Advanced Server 2.1 Driver	7.01.01	7.01.01					7.01.01				
Red Hat Enterprise Linux 3.0 Driver	7.01.01	7.01.01					7.01.01				
SuSE SLES 8/United Linux Driver	7.01.01	7.01.01					7.01.01				
Disk Array Multipath Support⁴											
Secure Path for Linux	3.0C	3.0C	3.0A	3.0A			3.0C	3.0E			
QLogic Native Multi-Path for Linux ⁶	7.01.01	7.01.01					7.01.01	7.01.01	7.01.01		7.01.01

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 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) Qlogic Native Multipath requires "Patch for HP Tape Libraries" documented in Customer Advisory OT050112_CW01.

Solaris

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
Solaris 7	✓	✓				✓	✓		✓		✓
Solaris 8	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Solaris 9	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Servers											
Sun UltraSPARC		✓	✓	✓	✓	✓	✓	✓	✓		✓
Sun Sun Fire		✓	✓	✓	✓	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ³											
FCA2257P (2G - PCI)											
Fcode	2.00.05	2.00.05			2.00.05	2.00.05	2.00.05	2.00.05	2.00.05		2.00.05
Solaris Driver	4.13.01	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		1.18.5
Solaris Driver	4.13.01	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		1.18.3
Solaris Driver	4.13.01	4.13.01			3.26	4.11	4.13.01	4.13.01	4.13.01		4.13.01
SWSA4-SC 64-bit Sbus											
Fcode	13.3.7	13.3.7	13.3.7	13.3.7	13.3.7	13.3.7	13.3.7	13.3.7	13.3.7		13.3.7
Solaris Driver	2.5.9	2.5.9	2.5.9	2.5.9	2.5.9	2.5.9	2.5.9	2.5.9	2.5.9		2.5.9
SWSA4-PC 32-bit PCI											
Fcode	3.0.3						3.0.3		3.0.3		3.0.3
Solaris Driver	2.5.9						2.5.9		2.5.9		2.5.9
SG-XPCI2FC-QF2 (X6768A) (2G - PCI-X)											
Solaris Driver	Native	Native ^{4,5}	Native	Native		Native ⁴	Native				Native ⁴
SG-XPCI1FC-QF2 (X6767A) (2G - PCI-X)											
Solaris Driver	Native	Native ^{4,5}	Native	Native		Native ⁴	Native				Native ⁴
SG-XPCI1FC-JF2 (2G-PCI-X)											
Solaris Driver	Native	Native ⁴					Native ⁴				Native ⁴
SG-XPCI2FC-JF2 (2G-PCI-X)											
Solaris Driver	Native	Native ⁴					Native ⁴				Native ⁴

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.

Solaris - Continued

DAS, DAF, and SAN Support	Current 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
Fibre Host Bus Adapters ¹											
FCX-6562 (2G - PCI)											
Fcode	3.9						3.9				3.9
Solaris Driver	5.3.1						5.3.1 ³				5.3.1 ³
FCX2-6562 (2G - PCI)											
Fcode	3.9						3.9				3.9
Solaris Driver	5.3.1						5.3.1 ³				5.3.1 ³
JNI FCE6460 (2G - PCI)											
Fcode	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Solaris Driver	5.3.1	5.3.1	5.3	5.3	5.3.1	5.3	5.3.1	5.3.1	5.3.1	5.3.1	5.3.1
JNI FCC6460 (2G - cPCI)											
Fcode	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Solaris Driver	5.3.1	5.3.1	5.3	5.3	5.3.1	5.3	5.3.1	5.3.1	5.3.1	5.3.1	5.3.1
JNI FCE6410 (1G - PCI)											
Fcode	3.9	3.9					3.9				3.9
Solaris Driver	4.1.5	4.1.5					4.1.5				4.1.5
Emulex LP10000DC (2G - PCI-X)											
FW	1.90a4						1.90a4				
Solaris Driver	6.01f						6.01f ³				
Emulex LP10000 (2G - PCI-X)											
FW	1.90a4						1.90a4				
Solaris Driver	6.01f						6.01f ³				
Emulex LP9002L (2G - PCI)											
FW	3.92a2						3.92a2				3.92a2
Solaris Driver	6.01f						6.01f				5.01E ⁴
Disk Array Multipath Support ¹											
Secure Path for Solaris	3.0D	3.0D	3.0C SP1	3.0C	3.0D	3.0C	3.0D	3.0D	3.0D	3.0D	3.0D
Solaris MpXIO ³											✓
High Availability ²											
VERITAS Cluster Server											✓

NOTES:

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

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

3) Supported with Solaris 9 only.
4) Solaris 8 support only.

Tru64

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
Tru64 5.1 ⁹	5.1 pk6						5.1 pk6				5.1 pk6
Tru64 5.1A ⁹	5.1A pk6	5.1A pk6	5.1A pk6	5.1A pk6	5.1A pk6 ⁷	5.1A pk6	5.1A pk6	5.1A pk6			5.1A pk6
Tru64 5.1B ⁹	5.1B pk4	5.1B pk4	5.1B pk3	5.1B pk3		5.1B pk3	5.1B pk4	5.1B pk4			5.1B pk4
Servers											
HP AlphaServer		✓	✓	✓	✓	✓	✓	✓			✓
Fibre Host Bus Adapters ^{3, 5}											
FCA2684 and FCA2684 DC (2G - PCI-X)											
FW	1.90a4	1.90a4	1.81a5				1.90a4				1.90a4
Tru64 Driver	2.14	2.14	2.14				2.14				2.14
FCA2354 (2G)											
FW	3.91a1	3.91a1	3.91a1	3.91a1	3.91a1	3.91a1	3.91a1	3.91a1			3.91a1
Tru64 Driver	2.14	2.14	2.14	2.10	2.10	2.10	2.14	2.14			2.14
FCA2384 (2G - PCI-X)											
FW	1.90a4	1.90a4					1.90a4				1.90a4
Tru64 Driver	2.14	2.14					2.14				2.14
KGPSA -CA (1G)											
FW	3.91a1	3.91a1	3.91a1	3.81a4	3.91a1	3.81a4	3.91a1	3.91a1			3.91a1
Tru64 Driver	2.14	2.14	2.14	1.32a	2.10	1.32a	2.14	2.14			2.14
Disk Array Multipath Support ⁵											
Tru64 Multipath	Native		Native	Native	Native	Native	Native	Native			Native
High Availability ⁴											
Tru64 (TruCluster)			✓				✓	✓			✓
OVMS											
Operating Systems ^{1, 2}											
OpenVMS 7.3-1 ^{6, 8, 9, 10}	✓	✓									
OpenVMS 7.3-2 ^{6, 9, 10}	✓	✓									
Servers											
HP AlphaServer		✓									
Fibre Host Bus Adapters ⁵											
FCA2384 (2G - PCI-X)											
FW	1.90a4	1.90a4									
Driver	Native	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	Current 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
Operating Systems ^{1, 2}											
AIX 4.3.3	✓	✓ ^{3, 6}		✓		✓	✓		✓		✓
AIX 5.1L	✓	✓ ^{3, 6}	✓		✓	✓	✓ ⁵	✓	✓		✓
AIX 5.2	✓	✓ ^{3, 6}	✓	✓	✓	✓	✓	✓	✓		✓
Servers											
IBM RS/6000		✓	✓	✓	✓	✓	✓	✓	✓		✓
Fibre Host Bus Adapters ^{3, 4}											
A7539A (Cambex PC2000) (2G - PCI)											
AIX Driver w/o Secure Path	1.5.26.0	1.5.26.0	1.5.26.0	1.5.22.0	1.5.26.0	1.5.22.0 ⁷	1.5.26.0	1.5.26.0			1.5.26.0
AIX Driver w/ Secure Path	1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3	1.5.25.3 ⁷	1.5.25.3	1.5.25.3			1.5.25.3
IBM 6228 (2Gb)											
AIX Driver	Native	Native	Native		Native	Native	Native	Native	Native		Native
IBM 6239 (2Gb) ⁷											
AIX Driver	Native	Native					Native		Native		Native
Cambex PC1000 (1G)											
AIX Driver w/o Secure Path	1.5.26.0	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		1.5.25.3
Disk Array Multipath Support ⁴											
Secure Path for AIX	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2	2.0D SP2		2.0D SP2

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.

NetWare

DAS, DAF, and SAN Support	Current 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
Operating Systems ^{1, 2}											
NetWare 5.1	5.1 sp7	5.1 sp7		5.1 sp5	5.1 sp7 ³			5.1 sp6		5.1 sp7	
NetWare 6.0	6.0 sp5	6.0 sp5			6.0 sp5 ³	6.0 sp4		6.0 sp5		6.0 sp5	
NetWare 6.5	6.5 sp2	6.5 sp2			6.5 sp2 ³	6.5 sp1		6.5 sp2		6.5 sp2	
Servers											
HP ProLiant ⁵		✓		✓	✓	✓		✓		✓	
HP ProLiant Blade Server ⁵		✓			✓	✓		✓		✓	
HP NetServer		✓		✓	✓	✓		✓		✓	
Third Party X86		✓		✓	✓	✓		✓		✓	
Fibre Host Bus Adapters ^{3, 5}											
FCA2214 (FCA2210) (2G)											
FW	1.45	1.45			1.45	1.34		1.45		1.45	
NetWare Driver	6.80f	6.80f ¹⁰			6.51b	6.51b		6.80f		6.80f	
64-bit / 66 MHz PCI to FC HBA (1G) ^{6, 7, 8, 9}											
NetWare Driver	2.52	2.52 ¹⁰		2.52				2.52		2.52	
32-bit / 33 MHz HBA (1G) ^{6, 7, 8, 9}											
NetWare Driver	2.52	2.52 ¹⁰						2.52		2.52	
Disk Array Multipath Support ⁵											
Secure Path for NetWare ¹¹	3.0C SP2	3.0C SP2			3.0C SP2	3.0C SP2		3.0C SP2		3.0C SP2	
High Availability ⁴											
NetWare 5.1 (NWCS)										✓	
NetWare 6.0 (NWCS)						✓		✓		✓	
NetWare 6.5 (NWCS)						✓		✓		✓	

NOTES:

- 1) Other Operating Systems not listed above may be supported within EBS by the respective ISVs as LAN clients
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility
- 3) NetWare is supported with ESL libraries in a homogeneous environment only.
- 4) Refer to the EBS Design Guide for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

- 5) Refer to Heterogeneous Open SAN Design Reference Guide for configuration rules and guidelines located at: <http://h18000.www1.hp.com/products/storageworks/san/documentation.html> or consult with your hp solutions provider for assistance
- 6) COMPAQ HBAs
- 7) NetWare 5.1 and 6.0 support only.
- 8) Heterogeneous Windows and NetWare configurations require FCA-2210 HBA for access to shared tape.
- 9) Not supported with CA ARCserve 9.0 for NetWare.

- 10) Support is limited to single path configurations only
- 11) 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
RAID Arrays										
XP 12000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 1024/128 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
XP 48/512 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Zero Downtime with XP	✓									
Instant Recovery with XP	✓									
Enterprise Virtual Array EVA 5000 ^{1,3,4}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 3000 ^{1,3,4}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VA 7410/7110 ^{1,7}	✓			✓		✓			✓	✓
VA 7400/7100 ^{1,7}	✓			✓		✓			✓	✓
EMA 16000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EMA 12000/8000 ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSA1500 ^{1, 3}	✓			✓		✓	✓	✓	✓	✓
MSA1000 Small Business SAN Kit	✓ ⁵			✓ ⁶					✓ ⁶	
MSA1000 ^{2, 3}	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

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) NetWare supported with FCA2210 HBA only
- 4) Supported with Fibre Channel and FATA disk drives.

- 5) LINUX and Windows support only
- 6) Windows support only
- 7) VA7xxx arrays require separate HBA's for disk and tape.

Infrastructure

SAN Support	Current Release	e2400-FC 2G Interface Controller	E2400-160 FC Interface Controller	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200
SAN Switches ¹								
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	4.4.0b	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	4.4.0b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/32	4.4.0b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32	4.4.0b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16N	4.4.0b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16V	4.4.0b	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16	3.2.0	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/8V	4.4.0b	✓	✓	✓	✓	✓	✓	✓
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	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9509	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9120	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9140	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216a	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9216i	2.0.1b	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Routers and Gateways ¹								
Multi-Protocol Router ^{2,3}	7.1.2c	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 ⁴	3.4.5	✓	✓	✓	✓	✓	✓	✓

NOTES:

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

2) Supported with all backup application/operating system combinations.

3) Supported as a SAN-to-SAN interconnect only. Direct connection of libraries or hosts to the MP Router is not supported.

4) Supported for FC-IP SAN-to-SAN interconnect only.

ProLiant Storage Servers (NAS)

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	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
ML370G4 Storage Server	✓			✓			✓		✓	
ML350G4 Storage Server	✓			✓			✓		✓	
ML110G2 Storage Server	✓						✓		✓	
NAS 9000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
NAS 4000s	✓	✓	✓	✓	✓	✓	✓		✓	✓ ¹
NAS 8000	✓						✓			
NAS e7000	✓	✓	✓	✓	✓	✓	✓ ²	✓	✓	✓
NAS 1500s	✓			✓			✓		✓	
NAS 500s	✓			✓			✓		✓	
NAS 2000s	✓	✓	✓	✓			✓		✓	
NAS 1200s	✓	✓	✓	✓			✓		✓	
NAS B3000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
NAS B2000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTES:

- 1) Requires NetBackup 5.0 MP2 or later.
- 2) Supported with Backup Express v2.1.x and earlier

SCSI Host Bus Adapters**HP Branded 32-bit SCSI Host Bus Adapters** ^{2, 3}

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, Dual Channel, HD68	268351-B21 Ultra320, LVD, Dual Channel, VHDCI
284688-B21 Ultra160, LVD, Dual Channel, VHDCI	A6828A Ultra160, LVD, Single Channel, VHDCI	374654-B21 ⁴ Ultra320, LVD, Single Channel, VHDCI		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		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 ¹ 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 ¹ Ultra80, LVD, Single Channel, VHDCI	129803-B21 Ultra160, LVD, Dual Channel, VHDCI		348757-B21 Ultra80, LVD, Dual Channel, VHDCI
374654-B21 ⁴ 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

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

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

NOTES:

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

SCSI Host Bus Adapters

Third Party SCSI HBA and Integrated SCSI Controllers ^{2,3}		
Windows	Linux	NetWare
Adaptec 29320 Ultra320, LVD, Single Channel	Adaptec 29320 Ultra320, LVD, Single Channel	Adaptec 29320 Ultra320, LVD, Single Channel
Adaptec 29160 Ultra160, LVD, Single Channel	Adaptec 29160 Ultra160, LVD, Single Channel	Adaptec 29160 Ultra160, LVD, Single Channel
Adaptec 39160 Ultra160, LVD, Dual Channel	Adaptec 39160 Ultra160, LVD, Dual Channel	Adaptec 39160 Ultra160, LVD, Dual Channel
Symbios/LSI 22915 Ultra160, LVD, Dual Channel		
Symbios/LSI 22903 Ultra160, LVD, Dual Channel		
Symbios/LSI 8951 Ultra80, LVD, Single Channel		
Integrated Smart Array 5i/5i Plus ¹ Ultra160, LVD, Single Channel		
ProLiant Integrated SCSI Ultra160, LVD, Single and Dual Channel		

NOTES:

- 1) Supported only with Enterprise and Mid-Range Libraries, SSL1016 Ultrium 460, 1/8 Ultrium 460, 1/8 SDLT320, and 1/8 Ultrium 230 tape autoloaders
- 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

	Current 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
OpenView											
Storage Virtual Replicator	3.0b sp1				3.0b sp1		3.0b sp1		3.0b sp1	3.0b sp1	3.0b sp1
OV-SAM	3.2	3.2			3.2	3.1	3.2	3.1	3.2	3.2	3.2
Zero Downtime with XP		✓									
Instant Recovery with XP		✓									
StorageWorks											
Command View for ESL		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Continuous Access					✓		✓		✓	✓	✓
Business Copy EVA		✓	✓		✓	✓	✓	✓	✓	✓	✓
Business Copy XP		✓									
Tools and Utilities											
Smart Start	7.20	7.20	7.00	7.00	7.10	7.00	7.20	7.20	7.20	7.20	7.20
Insight Manager	7.20	7.20	7.00	7.00	7.20	7.00	7.20	7.20	7.20	7.20	7.20

Backup Application Details

Name	Version	Date Last Tested	Recommended Tape Driver	Application Information/Support
HP OpenView Storage Data Protector	5.5, 5.1.1, 5.1, and 5.0	Current	Use Native Drivers	Data Protector Product Information Data Protector Device Support Matrix
Atempo Time Navigator	3.7.0.3	May-04		www.atempo.com
BakBone NetVault	7.1 & 7.3	Mar-04		www.bakbone.com
Computer Associates BrightStor ARCserve (Windows)	11.1, 11.0, and 9.0	Current	CABA Driver for Windows	support.ca.com
Computer Associates BrightStor ARCserve (NetWare)	11.1 and 9.0	Current	HP Driver for Netware	support.ca.com
Computer Associates BrightStor ARCserve (Linux)	11.1 and 9.0	Current		support.ca.com/
Computer Associates BrightStor ARCserve (UNIX)	11.1 and BEB 10.5	Oct-04		support.ca.com/
CommVault Systems QiNetix Galaxy	5.0	Jan-04	HP Driver for Windows	www.commvault.com
EMC Legato NetWorker	7.2, 7.1.x, and 6.1.4	Current	HP Driver for Windows	www.legato.com
Syncsort Backup Express	2.3	Mar-05	Use Native Drivers	www.syncsort.com
Tivoli Storage Manager	5.2.4.x	Current	Tivoli Driver for Windows	www.tivoli.com
VERITAS Backup Exec for Windows Servers	10.0.5484	Current	BE Driver for Windows	www.veritas.com
VERITAS Backup Exec for NetWare	9.1.1152	Current	BE Driver for Netware	www.veritas.com
VERITAS NetBackup Windows	5.1 MP1, 5.0 MP4, and 4.5 FP8/MP8	Current	HP Driver for Windows or NBU Tape Driver for Windows	www.veritas.com
VERITAS NetBackup UNIX	5.1 MP1, 5.0 MP4, and 4.5 FP8/MP8	Current		www.veritas.com

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 ¹
TL895	December 2002
TL891DLX	December 2002
ESL9326D	April 2002
TL891D	April 2002
DLT 35/70	April 2002
Modular Data Router (MDR)	February 2004

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

Current EBS Configuration Advisories

Date	Description	Number
01/05/05	Shared Tape Configurations in a SAN (EBS) with Legato Networker, Sun Solaris 9, and Sun SG-XPCI2FC-QF2 HBA's require Additional Manual Configuration Steps	OS040917_CW01
08/31/04	Consecutive backup jobs fail when a HP-UX host is configured as the Master server and 10 or more concurrent jobs are active.	OT040823_CW04
08/30/04	Legato Networker and Windows 2003 StorPort configuration requirements and limitations	OT040823_CW02
08/13/04	Tape Backup In StorageWorks Enterprise Backup Solution (EBS) Environment From ProLiant Server May Not Complete If Insight Management Storage Agents Loaded	ES040611_CW01
07/22/04	Removable Storage Manager (RSM) in Windows Server 2003 is not Disabling Properly Which Causes Performance Issues in Enterprise Backup Solutions (EBS).	OT040301_CW01
01/20/05	No Detected Fibre-Attached Tape Drive Devices, But Many Hidden	OT041223_CW01
01/21/05	Some tape devices may not be presented when the QLogic fibre channel HBA driver for Linux is installed in failover mode	OT050112_CW01
02/03/05	Unload to source slot may not work after power-cycling the ESL-e	OT050124_CW02
02/15/05	SDLT 600 Drives Not Detected or Detected as Robotics with Interface Manager < I142 and Command View ESL < 1.4.02	OT050127_CW07

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.