

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

April 2007 Version 1.0

## Start Here

### Key Updates:

- Support for SC44Ge SAS HBA
- Legato NetWorker support for MSL8096 library
- New 4Gb Solaris HBAs
- Interoperability updates throughout
- New customer advisories



## Enterprise Backup Solution Compatibility Matrix Index

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## How To Use This Document

The **HP StorageWorks Enterprise Backup Solution (EBS) Compatibility Matrix** provides information for designing data protection solutions, including backup/restore and archiving, that scale from entry-level workgroups to enterprise-level datacenters. It includes support for Direct Attach SCSI (DAS), Direct Attach Fibre (DAF), and Storage Area Network (SAN). It does not imply product availability. Products **highlighted in yellow** will be removed from the EBS Compatibility Matrix in the next release. Previous versions of the EBS Compatibility Matrix are available on the web at [www.hp.com/go/ebs](http://www.hp.com/go/ebs).

HP partners with leading application and product vendors to provide backup/restore, archiving, and data security solutions. See below for information on the Extended Solution Interoperability (ESI) and Tape Automation Compatibility (TAC) categories:

**Extended Solution Interoperability:** HP performs on-going interoperability and extensive solution testing with these applications to provide fully certified and supported data protection solutions that include HP tape libraries, autoloaders, and virtual library systems. See the [Libraries and Partner Products](#) page for compatibility information. Extensive solution details including operating system details, host bus adapter and driver information, SAN infrastructure, and extended tape library feature support can be found throughout this document.

**Tape Automation Compatibility:** These products are verified for compatibility with HP tape libraries, autoloaders, and virtual library systems. See the [Libraries and Partner Products](#) page for compatibility information. Consult the product compatibility guide(s) for additional support details such as product version information, driver details, firmware revisions, patch levels, etc.

Additional technical information can be found in the Enterprise Backup Solution Design Guide and various Backup Application Implementation Guides located on the web at [www.hp.com/go/ebs](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).

# Sample Page Layout

Index menu system, click to navigate to other pages

Yellow Box indicates current page selection

HP StorageWorks EBS Compatibility Matrix  
[Index](#) [Libraries/Autoloaders & Partner Products](#) [Backup App.](#) [Advanced Library Features](#) [Interface Controllers](#) **HP-UX** [Windows](#) [Linux](#)  
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## HP-UX (Integrity)<sup>5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Back-up Exec	Symantec NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
HP-UX 11.23 (11i v2)	HWE 11.23 March 2006 Quality Pack March 2006	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11i v2 Sept 2006 Quality Pack Sept 2006	HWE 11.23 June 2006 Quality Pack May 2005		HWE 11i v2 Sept 2006 Quality Pack Sept 2006
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters</b> <sup>4</sup>						
A8379A / A8379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcid Driver	Native		Native	Native		Native
A8378A / A8378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcid Driver	Native		Native	Native		Native
A8465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
FW	1.10	1.10	1.10	1.10		1.10
fcid Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcid Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support</b> <sup>4</sup>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability</b> <sup>6</sup>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

CLICK cell to navigate to the HP product webpage

CLICK cell to navigate to the firmware/driver download page

NOTES: section contains specific configuration details

- NOTES:**
- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
  - 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
  - 3) ATS is not supported.
  - 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
  - 5) For Dofit from Tape support, [click here](#), and select the type of tape for compatibility.
  - 6) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configuration.

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Matrix Version

Darkened section indicates environment currently not supported by application

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Navigation buttons

Libraries/Autoloaders and Partner Products

DAF, SAN, and DAS Support <sup>1</sup>		Extended Solution Interoperability <sup>1</sup>								Tape Automation Compatibility <sup>1</sup>																
		HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Manager	Symantec Backup Exec	HP Data Protector Express	HP Non-Stop Servers	HP File System Extender	Attempo Time Navigator	BakBone NetVault	Bridgehead HT ISM Suite	CommVault QNEX Suite	Decru DataFort <sup>15</sup>	EMC Retrospect	IBM TSM Express	Intradyn ComplianceVault	NeoScale CryptoStor <sup>14,15</sup>	QStar HSM / Data Director	Quantum StorNext	SQL FlashNet	Synsort Backup Express	XenData Archive Series	Yosemite Backup	
<b>Enterprise Class Libraries</b>	<b>Firmware</b>																									
<b>ESL E-Series</b>		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L57W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460	F68W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K46W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 160/320	v95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>EML E-Series</b>	1070	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L58S	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460 FC	K620	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>ESL 9000 Series <sup>5</sup></b>	3.60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G55W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460	F68W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 160/320	v95	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Virtual Library Systems</b>																										
VLS 300 EVA Gateway	1.1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EVA 4000/6000/8000	5.1xx	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
EVA 4000/6000/8000	6.000	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VLS 6000 Series	1.1.0	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VLS 1000i Series <sup>8</sup> (iSCSI)	2.6.0.228	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
HP StorageWorks D2D Backup System		<a href="http://www.hp.com/go/connect">www.hp.com/go/connect</a>								<a href="http://www.hp.com/go/connect">www.hp.com/go/connect</a>																
<b>Business Class Libraries</b>																										
<b>MSL 6000 Series</b>	5.20	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G54W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 460	F68W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600	v41	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 8096 <sup>10</sup></b>	8.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M22W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G54W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS <sup>3</sup>	C24W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 4048 <sup>10</sup></b>	5.50	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M22W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L57W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G54W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920	D21W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS <sup>3</sup>	C24W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 448	S54W	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>MSL 2024 <sup>10</sup></b>	3.10	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 4Gb FC	M22W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960 FC	L57W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 960	G54W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920	D21W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 920 SAS <sup>3</sup>	C24W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ultrium 448	S54W	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ <sup>11</sup>	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Autoloaders <sup>4,6,10</sup></b>	<b>Robot (Drive)</b>																									
1/8 G2 Tape Autoloader (Ultrium 920)	1.20 (D22W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 G2 Tape Autoloader (Ultrium 920 SAS) <sup>3</sup>	1.20 (C23W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 G2 Tape Autoloader (Ultrium 448)	1.20 (S54W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 G2 Tape Autoloader (Ultrium 232)	1.20 (P54W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 Tape Autoloader (Ultrium 960)	1.50 (G54W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 Tape Autoloader (Ultrium 448)	1.50 (S54W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 Tape Autoloader (Ultrium 232)	1.50 (P54W)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 Tape Autoloader (SDLT 160/320)	L14r (v95)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
1/8 DLT Tape Autoloader (vs80)	5E40 (v64)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Advanced Drive and Media Features</b>																										
Ultrium 960 WORM <sup>2</sup>		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SDLT 600 WORM <sup>2</sup>		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

NOTES:  
 1) See "How To Use This Document" for description of support.  
 2) WORM (Write-Once, Read-Many) implementation is dependent on the backup application.  
 3) Automation products with SAS drives must be connected using the HP SC44Ge SAS HBA (part #: 416096B21).  
 4) Autoloaders are only supported in Direct Attach SCSI configurations.  
 5) Ultrium drives are not supported with ESL9198 and ESL9326 libraries.  
 6) Refer to the EBS Design Guide for additional information on the use of native backup commands and programs.

7) Symantec Backup Exec 10.i requires the QLA4050C-CK or QLA4050C-BK PCI-X iSCSI Host Bus Adapter to be installed in each Windows server that will connect to the VLS1000.  
 8) Supported with Windows 2003 (32-bit) only using the native Microsoft iSCSI initiator or QLogic 4050c iSCSI HBA.  
 9) Not supported with Symantec Backup Exec for NetWare (BENW).  
 10) Autoloaders, MSL 2024, MSL 4048, and MSL 8096 are not supported with SMART Array Controllers.  
 11) Requires connectivity of tape library to HP Virtual TapeServer for NonStop Systems.

12) Support is only with MSL 6026 and MSL 6030 models.  
 13) Support is with LTO emulations only.  
 14) Support is with the NeoScale CryptoStor Tape 700 Family only.  
 15) Refer to vendor for software application and additional hardware interoperability support.  
 16) Support is with the Decru DataFort FC-Series and S-Series for Tape only.  
 17) Support with Decru DataFort S-Series in a direct attach SCSI configuration only.

## Backup Application Details <sup>1</sup>

	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec (Windows)	Symantec Backup Exec (NetWare)	Symantec NetBackup
<b>Partner Device Compatibility Pages</b>	<a href="#">Data Protector HCL</a>	<a href="#">ARCserve HCL</a>	<a href="#">NetWorker HCL</a>	<a href="#">Tivoli Storage Manager HCL</a>	<a href="#">Backup Exec HCL</a>	<a href="#">Backup Exec HCL</a>	<a href="#">NetBackup HCL</a>
<b>Recommended Tape Driver</b>	Native Drivers	CABA Drivers	HP Drivers	Tivoli Drivers	BE Drivers	BE Drivers	HP or NBU Drivers

### Lastest and Minimum Application Version Support

	HP Data Protector		CA BrightStor ARCserve		EMC Legato NetWorker		IBM Tivoli Storage Manager		Symantec Backup Exec (Windows)		Symantec Backup Exec (NetWare)		Symantec NetBackup	
<b>Enterprise Class Libraries</b>	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum	Latest	Minimum
ESL E-Series	6.0	5.0	11.5	9.0	7.3	6.0	5.3 <sup>4</sup>	5.2 <sup>4</sup>	11d	9.0	9.2	9.0	6.0	4.5
EML E-Series	6.0	5.1	11.5	9.0	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10.0			6.0	5.0
ESL 9000 Series	6.0	5.0	11.5	9.0	7.3	6.0	5.3 <sup>4</sup>	5.1	11d	9.0	9.2	9.0	6.0	4.5
<b>Virtual Library Systems</b>														
VLS 300 EVA Gateway EVA 4000/6000/8000	6.0	5.1	11.5	11.1	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10.0			6.0	5.0
VLS 6000 Series	6.0	5.1	11.5	11.1	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10.0			6.0	5.0
VLS 1000i Series	6.0	5.5	11.5	11.5	7.3	7.0	5.3 <sup>4,7</sup>	5.3 <sup>4,7</sup>	11d <sup>7</sup>	10d <sup>7</sup>			6.0	5.0
<b>Business Class Libraries</b>														
MSL 6000 Series	6.0	5.0	11.5	9.0	7.3	6.0	5.3 <sup>4</sup>	5.2 <sup>4</sup>	11d	9.0	9.2	9.0	6.0	4.5
MSL 8096	6.0	5.5	11.5	11.1	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10d <sup>2,6</sup>			6.0	6.0
MSL 4048	6.0	5.5	11.5	11.1	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10d <sup>2,6</sup>			6.0	6.0
MSL 2024	6.0	5.1	11.5	11.1	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10d <sup>2,6</sup>			6.0	6.0
<b>Autoloaders</b>														
1/8 G2 Tape Autoloader (Ultrium 920)	6.0	6.0	11.5	11.5	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10d <sup>3</sup>	9.2	9.0	6.0	6.0
1/8 G2 Tape Autoloader (Ultrium 920 SAS)	6.0	6.0	11.5	11.5	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	11d <sup>6</sup>			6.0	6.0
1/8 G2 Tape Autoloader (Ultrium 448)	6.0	6.0	11.5	11.5	7.3	7.0	5.3	5.3	11d	10d <sup>3</sup>	9.2 <sup>8</sup>	9.0 <sup>8</sup>	6.0	6.0
1/8 G2 Tape Autoloader (Ultrium 232)	6.0	6.0	11.5	11.5	7.3	7.0	5.3	5.3	11d	10d <sup>3</sup>	9.2 <sup>8</sup>	9.0 <sup>8</sup>	6.0	6.0
1/8 Tape Autoloader (Ultrium 960)	6.0	5.1	11.5	9.0	7.3	7.0	5.3 <sup>4</sup>	5.3 <sup>4</sup>	11d	10.0	9.2	9.0	6.0	5.0
1/8 Tape Autoloader (Ultrium 448)	6.0	5.1	11.5	11.1	7.3	7.0	5.3	5.3	11d	10.0	9.2	9.0	6.0	5.0
1/8 Tape Autoloader (Ultrium 232)	6.0	5.1	11.5	11.1	7.3	7.0	5.3	5.3	11d	10.0	9.2	9.0	6.0	5.0
1/8 Tape Autoloader (SDLT 160/320)	6.0	5.0	11.5	9.0	7.3	7.0	5.3	5.1	11d	9.0	9.2	9.0	6.0	4.5
1/8 DLT Tape Autoloader (vs80)	6.0	5.0	11.5	9.0	7.3	6.0	5.3	5.1	11d	9.0	9.2	9.0	6.0	4.5

#### NOTES:

- 1) Use the latest backup application maintenance release unless otherwise noted. Refer to the backup application vendor for specific operating system support, patches, builds, and drivers required to support HP tape automation and virtual library products.
- 2) Backup Exec version 10d and Device Driver Installer (DDI) version 20060615 or later are required to support the HP StorageWorks MSL2024 and MSL4048 Tape Automation Libraries.
- 3) Backup Exec version 10d and Device Driver Installer (DDI) version 20061015 or later are required to support the HP StorageWorks 1/8 G2 Tape Autoloaders.
- 4) TSM version 5.2.4 (or later) or 5.3.4 (or later) are required to support HP Ultrium 920 and 960 drives.

- 5) Application versions listed in the table are not necessarily the current version supported, but indicate the required minimum to support the associated HP tape automation and virtual library products.
- 6) Backup Exec 11d and Device Driver Installer (DDI) version 20061215 or later are required to support HP StorageWorks Ultrium 920 SAS drives in HP libraries.
- 7) Configurations running an HP VLS1000i virtual tape library must use the "HP VLS1000i" emulation in order function properly.
- 8) BENW 9.x Driver SET 2 is required for Ultrium 232 and 448 1/8 G2 Autoloader support. Also, multi-LUN support must be enabled on the SCSI HBA.

## Advanced Library Features

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Enterprise Libraries</b>	<b>IMPORTANT:</b> See the <a href="#">Backup Application Details</a> page for the latest supported versions of backup software.					
<b>ESL E-Series 2 Unit Cross Link</b> <sup>1</sup>	✓	✓ <sup>3</sup>	✓	✓		✓
<b>ESL E-Series 3-5 Unit Cross Link</b> <sup>1</sup>	✓			✓		✓
<b>ESL 9000 Multi-Unit Scalability</b> <sup>1</sup>	✓	✓ <sup>3</sup>	✓	✓		✓
<b>ESL Mixed Media</b>	✓	✓ <sup>3</sup>	✓	✓	✓ <sup>4</sup>	✓
<b>ESL Partitioning</b>	✓	✓ <sup>3</sup>	✓	✓	✓ <sup>4</sup>	✓
<b>EML Partitioning</b>	✓		✓	✓	✓ <sup>4</sup>	✓
<b>Midrange Libraries</b>						
<b>MSL 6000 Multi-Unit Scalability</b> <sup>1,2</sup>	✓	✓	✓	✓	✓	✓
<b>MSL 6000 Mixed Media Support</b>	✓	✓	✓	✓	✓ <sup>4</sup>	✓

**NOTES:**

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

## Libraries and Interface Controllers

DAF and SAN Support <sup>1</sup>	e2400-FC 4Gb Interface Controller (FC-FC)	e2400-FC 2Gb Interface Controller (FC-FC)	e2400-160 Interface Controller (FC-SCSI)	NSR E2400 <sup>3</sup>	NSR M2402	NSR N1200-320 4Gb	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 (Ultrium 960 FC)	✓	✓					
EML E-Series (Ultrium 460 FC)	✓	✓					
ESL 9595 (Ultrium 960)			✓		✓		
ESL 9595 (Ultrium 460)			✓		✓		
ESL 9595 (SDLT600)			✓		✓		
ESL 9595 S2 (SDLT320)			✓	✓	✓	✓	✓
ESL 9326 (SDLT600)			✓		✓		
ESL 9326 (SDLT320)			✓	✓	✓	✓	✓
ESL 9322 (Ultrium 960)			✓		✓		
ESL 9322 (Ultrium 460)			✓		✓		
ESL 9322 (SDLT600)			✓		✓		
ESL 9322 (SDLT320)			✓	✓	✓	✓	✓
ESL 9198 (SDLT600)			✓		✓		
ESL 9198 S2 (SDLT320)			✓	✓	✓	✓	✓
ESL E-Series Cross Link	✓	✓	✓				
ESL 9000 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 and Interface Controllers - Continued

DAF and SAN Support <sup>1</sup>	e1200-320 4Gb Interface Controller (FC-SCSI)	NSR E1200-160	NSR M2402	NSR N1200-320 4Gb	NSR N1200	Native Fibre Connection
<b>Mid-Range Libraries</b>						
MSL 6060 (Ultrium 960)	✓	✓	✓			
MSL 6060 (Ultrium 460)	✓	✓	✓			
MSL 6052 (SDLT 600)	✓	✓	✓			
MSL 6030 (Ultrium 960)	✓	✓	✓			
MSL 6030 (Ultrium 460)	✓	✓	✓			
MSL 6026 (SDLT 600)	✓	✓	✓			
MSL 8096 (Ultrium 960 4Gb FC) <sup>2</sup>						✓
MSL 8096 (Ultrium 960)				✓	✓	
MSL 4048 (Ultrium 960 4Gb FC) <sup>2</sup>						✓
MSL 4048 (Ultrium 960 FC) <sup>2</sup>						✓
MSL 4048 (Ultrium 960)				✓	✓	
MSL 4048 (Ultrium 448)				✓	✓	
MSL 2024 (Ultrium 960 4Gb FC) <sup>2</sup>						✓
MSL 2024 (Ultrium 960 FC) <sup>2</sup>						✓
MSL 2024 (Ultrium 960)				✓	✓	
MSL 2024 (Ultrium 448)				✓	✓	
MSL 6000 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) Library is controlled through tape drive and does not have a physical connection.

## Interface Controllers

DAF and SAN Support	Supported Release	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Fibre Channel Interface Controller</b>							
Interface Manager	i180	✓	✓	✓	✓	✓	✓
e2400-FC 4Gb Interface Controller (FC-FC)	5.7.1f	✓	✓	✓	✓	✓	✓
e2400-FC 2Gb Interface Controller (FC-FC)	5.6.8c	✓	✓	✓	✓	✓	✓
e2400-160 Interface Controller (FC-SCSI)	5.6.8c	✓	✓	✓	✓	✓	✓
e1200-320 4Gb Interface Controller (FC-SCSI)	5.7.1f	✓	✓	✓	✓	✓	✓
NSR E1200-160	5.6.8c	✓	✓	✓	✓	✓	✓
NSR E2400	5.6.8c	✓	✓	✓	✓	✓	✓
NSR E1200	5.6.8c	✓	✓	✓	✓	✓	✓
NSR M2402	5.6.8c	✓	✓	✓	✓	✓	✓
NSR N1200-320 4Gb	5.7.1f	✓	✓	✓	✓	✓	✓
NSR N1200	5.6.8c	✓	✓	✓	✓	✓	✓

Interface Manager Firmware Required Minimum Component							
	i150	i155	i160	i161	i170	i171	i180
e2400-FC 4Gb Interface Controller (FC-FC)	N/A	N/A	N/A	5.7.06	5.7.18	5.7.1b	5.7.1f
e2400-FC 2Gb Interface Controller (FC-FC)	5.6.41	5.6.69	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c
e2400-160 Interface Controller (FC-SCSI)	5.6.41	5.6.69	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c
NSR E2400	5.6.41	5.6.69	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c
NSR E1200-160	5.6.41	5.6.69	5.6.78	5.6.7a	5.6.87	5.6.87	5.6.8c
ESL 9595/9322	3.55	3.55	3.60	3.60	3.60	3.60	3.60
ESL 9198/9326	3.55	3.55	3.60	3.60	3.60	3.60	3.60
ESL E-Series 712e/630e	3.00	3.00	4.10	4.10	4.60	4.60	4.86
ESL E-Series 322e/286e	3.00	3.00	4.10	4.10	4.60	4.60	4.86
EML E-Series	N/A	1016	1022	1022	1022	1022	1070
JAVA Run Time	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2	1.4.2
Command View TL	1.50	1.5.05	1.6.00	1.6.01	1.7	1.7	1.8.00

## HP-UX (PA-RISC) <sup>6</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems <sup>1, 2</sup></b>						
HP-UX 11.11 (11i v1)	HWE 11.11, June 2005 Quality Pack. June 2005	HWE 11.11, Dec 2004 Gold Pack, Dec 2004	HWE 11.11, June 2005 Quality Pack. June 2005	HWE 11.11, Dec 2004 Gold Pack, Dec 2004		HWE 11.11, Dec 2006 Quality Pack. Dec 2006
HP-UX 11.23 (11i v2)	HWE 11i v2 March 2006 Quality Pack March 2006		HWE 11i v2 Sept 2006 Quality Pack Sept 2006	HWE 11i v2 June 2006 Quality Pack March 2006		HWE 11i v2 Sept 2006 Quality Pack Sept 2006
<b>Servers</b>						
HP 9000 Superdome and Mid-Range (rp7000-rp8000 Series, PA-RISC)	✓	✓	✓	✓		✓
HP 9000 Entry-Level (rp2000-rp5000 Series, PA-RISC)	✓	✓	✓	✓		✓
HP A, L, N, and V Class (PA-RISC)	✓	✓	✓	✓		✓
HP R Class (PA-RISC) <sup>3</sup>	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters <sup>5</sup></b>						
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
td Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support <sup>5</sup></b>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability <sup>4</sup></b>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

**NOTES:**

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

- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.

## HP-UX (Integrity) <sup>5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems <sup>1, 2</sup></b>						
HP-UX 11.23 (11i v2)	HWE 11.23 March 2006 Quality Pack March 2006	HWE 11.23 May 2005 Quality Pack May 2005	HWE 11i v2 Sept 2006 Quality Pack Sept 2006	HWE 11.23 June 2006 Quality Pack May 2005		HWE 11i v2 Sept 2006 Quality Pack Sept 2006
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters <sup>4</sup></b>						
AB379A / AB379B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB378A / AB378B (4G, PCI-X 2.0)						
FW	4.00.70		4.00.70	4.00.70		4.00.70
fcd Driver	Native		Native	Native		Native
AB465A (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9782 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A9784 (2G, PCI-X, Combo Card)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
A6795A (2G, PCI)						
FW	1.10	1.10	1.10	1.10		1.10
td Driver	Native	Native	Native	Native		Native
A6826A (2G, PCI-X)						
FW	3.003.154	3.003.154	3.003.154	3.003.154		3.003.154
fcd Driver	Native	Native	Native	Native		Native
<b>Disk Array Multipath Support <sup>4</sup></b>						
Secure Path for HP-UX	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2	3.0F SP2 patch 2		3.0F SP2 patch 2
<b>High Availability <sup>6</sup></b>						
MC/ServiceGuard	✓ <sup>3</sup>		✓ <sup>3</sup>			

**NOTES:**

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

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) For Boot from Tape support, [click here](#), and select the type of tape for compatibility.
- 6) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations.

## Windows (x86)

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems <sup>1, 2</sup></b>						
Windows Server 2003 (32-bit)	sp1	sp1	sp1	sp1	sp1	sp1
Windows Server 2003 R2 (32-bit)	✓	✓	✓	✓	✓	✓
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
Third Party X86	✓	✓	✓	✓	✓	✓
<b>Fibre Host Bus Adapters <sup>5, 6</sup></b>						
<b>HP Branded / 3rd Party</b>						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0) FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10	2.10a10	2.10a10	2.10a10
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
FC1243 (4G, PCI-X 2.0) FC1143 (4G, PCI-X 2.0)						
BIOS	1.09	1.09	1.09	1.09	1.09	1.09
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver <sup>3,4</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
FC1142SR / QLogic QLE2460 (4G, PCI-e) FC1242SR DC / QLogic QLE2462 (4G, PCI-e)						
BIOS	1.09	1.09	1.09	1.09	1.09	1.09
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver <sup>3,4</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
FC2142SR / Emulex LPe1150 (4G, PCI-e) FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.50a2	2.50a2	2.50a2	2.50a2	2.50a2	2.50a2
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
A7388A / Emulex LP1050 (2G, PCI-X) A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
A7560A / Emulex LP1050EX-F2 (2G, PCI-e)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) All applications except Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended). Tivoli configurations require Storport.sys KB901371.

- 4) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 6) 3rd Party adapters require HP drivers and firmware.

## Windows (x86) - Continued

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Fibre Host Bus Adapters <sup>1, 2</sup></b>						
<b>HP Branded / 3rd Party</b>						
FCA2355 / Emulex LP9002DC (2G, PCI-X)						
FW	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
FCA2408 / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver <sup>3,4</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.50a8	2.50a8	2.50a8	2.50a8	2.50a8	2.50a8
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
QLogic Balcony Card for p-Class Blades (2G, PCI-X) QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver <sup>3,4</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
FCA2404 / Emulex LP9802 (2G, PCI-X) FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
FCA2101 / Emulex LP952 (2G, PCI-X)						
FW	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0	3.93a0
WIN 2003 SCSIport Driver	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2	5-5.30a2
WIN 2003 StorPort Driver <sup>3,4</sup>	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7	5-1.20a7
FCA2214 / QLogic 2340 (2G, PCI-X) FCA2214DC / QLogic 2342 (2G, PCI-X)						
FW	1.45	1.45	1.45	1.45	1.45	1.45
WIN 2003 SCSIport Driver	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11	9.1.3.11
WIN 2003 StorPort Driver <sup>7,8</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16

**NOTES:**

- 1) Refer to [EBS Design Guide](#) for configuration rules and guidelines.  
2) 3rd Party adapters require HP drivers and firmware.

- 3) All applications except Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended). Tivoli configurations require Storport.sys KB901371.  
4) Please reference ISV application installation/support documents for specific driver and patch requirements

## Windows (x86) - Continued

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Disk Array Multipath Support <sup>1</sup></b>						
Secure Path for Windows	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1
Windows MPIO <sup>5</sup>	✓	✓	✓	✓	✓	✓
<b>High Availability <sup>2</sup></b>						
Windows (MSCS)		✓	✓	✓ <sup>3</sup>	✓ <sup>4</sup>	✓

**NOTES:**

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

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

3) Not supported with TSM 5.3.x.

4) Support includes NAS9000 and NAS4000 platforms.

5) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.

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

7) All applications except Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended). Tivoli configurations require Storport.sys KB901371.

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

## Windows (Integrity)

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
Windows Server 2003 (64-bit)	sp1	sp1	sp1	sp1		sp1
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓	✓		✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters</b> <sup>4, 7</sup>						
<b>HP Branded / 3rd Party</b>						
AB379A / AB379B (4G, PCI-X 2.0) FC1143 (4G, PCI-X 2.0)						
EFI	1.05	1.05	1.05	1.05		1.05
WIN 2003 StorPort Driver <sup>5, 8</sup>	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16		9.1.3.16
FC2143 / Emulex LP1150 (4G, PCI-X 2.0) FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10	2.10a10		2.10a10
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
AB467A / Emulex LP1050 (2G, PCI-X) AB466A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
A7298A / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
AB232A / Emulex LP9802 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
WIN 2003 SCSIport Driver	6-5.30a2	6-5.30a2	6-5.30a2	6-5.30a2		6-5.30a2
WIN 2003 StorPort Driver <sup>5, 8</sup>	6-1.20a7	6-1.20a7	6-1.20a7	6-1.20a7		6-1.20a7
<b>Disk Array Multipath Support</b> <sup>4</sup>						
Secure Path for Windows	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1	4.0C SP2-1		4.0C SP2-1
Windows MPIO <sup>6</sup>	✓	✓	✓	✓		✓
<b>High Availability</b> <sup>3</sup>						
Windows (MSCS)				✓		✓

**NOTES:**

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

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) Please reference ISV application installation/support documents for specific driver and patch requirements.
- 6) Windows Full-Feature MPIO failover support. Clusters sharing disk and tape on the same HBA require StorPort.
- 7) 3rd Party adapters require HP drivers and firmware.
- 8) All applications except Tivoli require updated Storport.sys KB891793 (minimum) or KB916048 (recommended). Tivoli configurations require Storport.sys KB901371.



## Windows (x64)

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems 1, 2</b>						
Windows Server 2003 x64 Edition	sp1	sp1	sp1	sp1	sp1	sp1
Windows Server 2003 R2 x64 Edition	✓	✓	✓	✓	✓	✓
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓	✓	✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓	✓	✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓	✓	✓
<b>Fibre Host Bus Adapters 4,5</b>						
<b>HP Branded / 3rd Party</b>						
FC1243 (4G, PCI-X 2.0)						
FC1143 (4G, PCI-X 2.0)						
BIOS	1.09	1.09	1.09	1.09	1.09	1.09
WIN 2003 StorPort Driver 6,7	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10	2.10a10	2.10a10	2.10a10
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
FC2142SR / Emulex LPe1150 (4G, PCIe)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCIe)						
FW	2.50a6	2.50a6	2.50a6	2.50a6	2.50a6	2.50a6
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
FC1142SR / QLogic QLE2460 (4G, PCIe)						
FC1242SR DC / QLogic QLE2462 (4G, PCIe)						
BIOS	1.09	1.09	1.09	1.09	1.09	1.09
WIN 2003 StorPort Driver 6,7	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
A7388A / Emulex LP1050 (2G, PCI-X)						
A7387A / Emulex LP1050DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
FCA2408 / Emulex LP982 (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
QMH2462 (4G, PCIe) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26	1.26	1.26
WIN 2003 StorPort Driver 6,7	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
LPe1105 (4G, PCIe) for HP c-Class BladeSystem						
FW	2.50a8	2.50a8	2.50a8	2.50a8	2.50a8	2.50a8
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48	1.48	1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48	1.48	1.48
WIN 2003 StorPort Driver 6,7	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16	9.1.3.16
FCA2404 / Emulex LP9802 (2G, PCI-X)						
FCA2404DC / Emulex LP9802DC (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5	1.91a5
WIN 2003 StorPort Driver 6,7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7	7-1.20a7
<b>Disk Array Multipath Support 4</b>						
Windows MPIO	✓	✓	✓	✓	✓	✓
<b>High Availability 3</b>						
Windows (MSCS)		✓		✓		

**NOTES:**

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

- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) All applications except Tivoli require updated Storport.sys KB903081 (minimum) or KB916048 (recommended). Tivoli configurations require Storport.sys KB901371.
- 7) Please reference ISV application installation/support documents for specific driver and patch requirements.

**LINUX (x86) 4,6**

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems 1, 2</b>						
Red Hat Enterprise Linux [AS/ES/WS] 3.0 (32-bit)	✓	✓	✓	✓		✓
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (32-bit)	✓	✓	✓	✓		✓
United Linux 1.0/SuSE SLES 8 (32-bit)	✓	✓	✓	✓		✓
SuSE SLES 9 (32-bit)	✓	✓	✓	✓		✓
SuSE SLES 10 (32-bit)						
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters 3, 5</b>						
<b>HP Branded / 3rd Party</b>						
FC1243 (4G, PCI-X 2.0)						
FC1143 (4G, PCI-X 2.0)						
BIOS	1.09	1.09	1.09	1.09		1.09
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10	2.10a10		2.10a10
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6			7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
FC2142SR / Emulex LPe1150 (4G, PCI-e)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCI-e)						
FW	2.50a6	2.50a6	2.50a6	2.50a6		2.50a6
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6			7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
FC1142SR / QLogic QLE2460 (4G, PCI-e)						
FC1242SR DC / QLE2462 (4G, PCI-e)						
BIOS	1.09	1.09	1.09	1.09		1.09
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05			7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
United Linux 1.0/SuSE SLES 8 driver	7.07.05	7.07.05	7.07.05			7.07.05
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45	1.45	1.45	1.45		1.45
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
United Linux 1.0/SuSE SLES 8 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

## LINUX (x86)<sup>4,6</sup> - Continued

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Fibre Host Bus Adapters<sup>3, 5</sup></b>						
<b>HP Branded / 3rd Party</b>						
QMH2462 (4G, PCI-e) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
LPe1105 (4G, PCI-e) for HP c-Class BladeSystem						
FW	2.50a8	2.50a8	2.50a8	2.50a8		2.50a8
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
QLogic Balcony Card for p-Class Blades (2G, PCI-X) QLogic Mezzanine Card for BL20p G2/G3 (2G, PCI-X)						
FW (BL25p)	1.48	1.48	1.48	1.48		1.48
FW (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48		1.48
Red Hat Enterprise Linux 3.0 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
United Linux 1.0/SuSE SLES 8 driver	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
<b>Disk Array Multipath Support<sup>3</sup></b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	2.1.9	2.1.9	2.1.9		2.1.9
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05	7.07.05	7.07.05	7.07.05		7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
Secure Path for Linux	3.0C		3.0C SP2	3.0C SP1		3.0C SP2

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

## LINUX (Integrity) <sup>3,5</sup>

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems <sup>1, 2</sup></b>						
Red Hat Enterprise Linux [AS/ES/WS] 3.0 (64-bit)	✓		✓			✓
Red Hat Enterprise Linux [AS/ES/WS] 4.0 (64-bit)	✓	✓	✓			✓
United Linux 1.0/SuSE SLES 8 (64-bit)	✓	✓	✓			
SuSE SLES 9 (64-bit)	✓	✓	✓			✓
SuSE SLES 10 (64-bit)	✓					
<b>Servers</b>						
HP Integrity Superdome and Mid-Range (rx7000-rx8000 Series, Integrity)	✓	✓	✓			✓
HP Integrity Entry-Level (rx1000-rx6000 Series, Integrity)	✓	✓	✓			✓
<b>Fibre Host Bus Adapters <sup>4</sup></b>						
<b>AB379A / AB379B (4G, PCI-X 2.0)</b>						
FC1143 (4G, PCI-X 2.0)						
EFI	1.05	1.05	1.05			1.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06			8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06			8.01.06
SuSE SLES 10 driver	8.01.06					
<b>FC2143 / Emulex LP1150 (4G, PCI-X 2.0)</b>						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10			2.10a10
Red Hat Enterprise Linux 3.0 driver			7.3.6			7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27			8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27			8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
<b>A6826A (2G, PCI-X)</b>						
BIOS	1.45	1.45	1.45			1.45
Red Hat Enterprise Linux 3.0 driver	7.07.05		7.07.05			7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06			8.01.06
United Linux 1.0/SuSE SLES 8 driver	7.07.05	7.07.05	7.07.05			
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06			8.01.06
SuSE SLES 10 driver	8.01.06					
<b>A7538A (2G, PCI-X)</b>						
BIOS	1.45	1.45	1.45			1.45
Red Hat Enterprise Linux 3.0 driver	7.07.05		7.07.05			7.07.05
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06			8.01.06
United Linux 1.0/SuSE SLES 8 driver	7.07.05	7.07.05	7.07.05			
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06			8.01.06
SuSE SLES 10 driver	8.01.06					
<b>Disk Array Multipath Support <sup>4</sup></b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	2.1.9	2.1.9			2.1.9
QLogic Native Multi-Path for Linux (2.4 kernel)	7.07.05	7.07.05	7.07.05			7.07.05
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.06	8.01.06	8.01.06			8.01.06
Secure Path for Linux	3.0C		3.0C			3.0C SP2

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.

- 3) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 5) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

**LINUX (x64) 4,6**

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems 1, 2</b>						
Red Hat Enterprise Linux [AS/ES/WVS] 4.0 (x64)	✓	✓	✓	✓		✓
SuSE SLES 9 (x64)	✓	✓		✓		✓
SuSE SLES 10 (x64)	✓					
<b>Servers</b>						
HP ProLiant	✓	✓	✓	✓		✓
HP ProLiant c-Class BladeSystem	✓	✓	✓	✓		✓
HP ProLiant p-Class BladeSystem	✓	✓	✓	✓		✓
HP NetServer	✓	✓	✓	✓		✓
Third Party X86	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters 3, 5</b>						
<b>HP Branded / 3rd Party</b>						
FC1243 (4G, PCI-X 2.0)						
FC1143 (4G, PCI-X 2.0)						
BIOS	1.09	1.09	1.09	1.09		1.09
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
FC2143 / Emulex LP1150 (4G, PCI-X 2.0)						
FC2243 / Emulex LP11002 (4G, PCI-X 2.0)						
FW	2.10a10	2.10a10	2.10a10	2.10a10		2.10a10
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
FC2142SR / Emulex LPe1150 (4G, PCIe)						
FC2242SR DC / Emulex LPe11002-M4 (4G, PCIe)						
FW	2.50a6	2.50a6	2.50a6	2.50a6		2.50a6
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
FC1142SR / QLogic QLE2460 (4G, PCIe)						
FC1242SR DC / QLE2462 (4G, PCIe)						
BIOS	1.09	1.09	1.09	1.09		1.06
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
FCA2214 / QLogic 2340 (2G, PCI-X)						
FCA2214DC / QLogic 2342 (2G, PCI-X)						
BIOS	1.45	1.45	1.45	1.45		1.45
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
QMH2462 (4G, PCIe) for HP c-Class BladeSystem						
BIOS	1.26	1.26	1.26	1.26		1.26
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
LPe1105 (4G, PCIe) for HP c-Class BladeSystem						
FW	2.50a8	2.50a8	2.50a8	2.50a8		2.50a8
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
Emulex Mezzanine Card for p-Class Blades (2G, PCI-X)						
FW	1.91a5	1.91a5	1.91a5	1.91a5		1.91a5
Red Hat Enterprise Linux 3.0 driver	7.3.6	7.3.6	7.3.6	7.3.6		7.3.6
Red Hat Enterprise Linux 4.0 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 9 driver	8.0.16.27	8.0.16.27	8.0.16.27	8.0.16.27		8.0.16.27
SuSE SLES 10 driver	8.1.6.7					
QLogic Balcony Card for p-Class Blades (2G, PCI-X)						
QLogic Mezzanine Card for p-Class Blades G2/G3 (2G, PCI-X)						
BIOS (BL25p)	1.48	1.48	1.48	1.48		1.48
BIOS (BL20p, BL30p, and BL35p)	1.48	1.48	1.48	1.48		1.48
Red Hat Enterprise Linux 4.0 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 9 driver	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06
SuSE SLES 10 driver	8.01.06					
<b>Disk Array Multipath Support 3</b>						
Emulex Multipulse (2.6 kernels only)	2.1.9	2.1.9	2.1.9	2.1.9		2.1.9
QLogic Native Multi-Path for Linux (2.6 kernel)	8.01.06	8.01.06	8.01.06	8.01.06		8.01.06

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) EBS is not dependent on specific kernel errata levels. For required/supported kernel errata, refer to your online storage array and backup application support documentation.
- 5) 3rd Party adapters require HP drivers and firmware.
- 6) Due to tape device discovery issues, SP2 for SLES 9 is not supported.

## Solaris

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems<sup>1, 2</sup></b>						
Solaris 8	✓	✓	✓	✓		✓
Solaris 9	✓	✓	✓	✓		✓
Solaris 10	✓	✓	✓	✓		✓
<b>Servers</b>						
Sun UltraSPARC	✓	✓	✓	✓		✓
Sun Sun Fire	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters<sup>3</sup></b>						
SG-XPCI2FC-QF4 (4G, PCI-X 2.0) SG-XPCI1FC-QF4 (4G, PCI-X 2.0) Sun Native Driver			✓	✓		
QLogic QLA2462 (4G, PCI-X 2.0) QLogic QLA2460 (4G, PCI-X 2.0) Sun Native Driver			✓	✓		
FCA2257P (2G, PCI-X) Fcode Driver	2.00.09 4.20	2.00.09 4.20	2.00.09 4.20	2.00.09 4.20		2.00.09 4.20
SG-XPCI1FC-QF2 (X6767A) (2G, PCI-X) SG-XPCI2FC-QF2 (X6768A) (2G, PCI-X) Sun Native Driver	✓	✓	✓	✓		✓
SG-XPCI2FC-QF2-Z (2G, PCI-X) SG-XPCI1FC-QL2 (2G, PCI-X) Sun Native Driver	✓	✓	✓	✓		✓
SG-XPCI2FC-EM2 (2G, PCI-X) SG-XPCI1FC-EM2 (2G, PCI-X) Sun Native Driver	✓			✓		
QLogic QLA2342 (2G, PCI-X) QLogic QLA2340 (2G, PCI-X) Fcode QLogic Driver Sun Native Driver			2.00.09 4.20 ✓	2.00.09 4.20 ✓		
FCA2684/Emulex LP10000 (2G, PCI-X) FCA2684DC/Emulex LP10000DC (2G, PCI-X) FW Emulex Driver Sun Native Driver	1.91a1 6.02h	1.91a1 6.02h	1.91a1 6.02h <sup>4</sup> ✓	1.91a1 6.02h <sup>4</sup> ✓		1.91a1 6.02h ✓
Emulex LP9002L (2G, PCI-X) FW Emulex Driver			3.92a2 6.01f			3.92a2 5.01E <sup>5</sup>

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 4) Supported with Solaris 9 only.
- 5) Solaris 8 support only.

## Solaris - Continued

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Disk Array Multipath Support <sup>1</sup></b>						
Secure Path for Solaris	3.0D SP1	3.0D SP1	3.0D SP1	3.0D SP1		3.0D SP1
Solaris MPxIO			✓ <sup>4</sup>	✓ <sup>4</sup>		✓ <sup>3</sup>
VERITAS DMP			✓ <sup>5</sup>			✓ <sup>5</sup>
<b>High Availability <sup>2</sup></b>						
VERITAS Cluster Server						✓

**NOTES:**

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

## Tru64

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
Tru64 5.1A <sup>8</sup>	5.1A pk6	5.1A pk6 <sup>7</sup>	5.1A pk6			5.1A pk6
Tru64 5.1B <sup>8</sup>	5.1B-3		5.1B-4			5.1B-4
<b>Servers</b>						
HP AlphaServer	✓	✓	✓			✓
<b>Fibre Host Bus Adapters</b> <sup>5</sup>						
FCA2684 (2G, PCI-X)						
FCA2684 DC (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
FCA2354 (2G, PCI-X)						
FW	3.93a0	3.93a0	3.93a0			3.93a0
Tru64 Driver	2.17	2.14	2.17			2.17
FCA2384 (2G, PCI-X)						
FW	1.91x6		1.91x6			1.91x6
Tru64 Driver	2.17		2.17			2.17
<b>Disk Array Multipath Support</b> <sup>5</sup>						
Tru64 Multipath		Native	Native			Native
<b>High Availability</b> <sup>4</sup>						
Tru64 (TruCluster)			✓			✓

## OVMS

<b>Operating Systems</b> <sup>1, 2</sup>						
OpenVMS 8.2 <sup>3, 6, 8</sup>	✓					
OpenVMS 8.2-1 <sup>3, 6, 8</sup>	✓					
OpenVMS 8.3 <sup>3, 6, 8</sup>	✓					
<b>Servers</b>						
HP AlphaServer	✓					
HP Integrity	✓					
<b>Fibre Host Bus Adapters</b> <sup>5</sup>						
FCA2684 (2G, PCI-X)						
FCA2684 DC (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
FCA2354 (2G, PCI-X)						
FW	3.93a0					
OVMS Driver	Native					
FCA2384 (2G, PCI-X)						
FW	1.91x6					
OVMS Driver	Native					
A6826A (2G, PCI-X)						
EFI	1.47					
OVMS Driver	Native					

### NOTES:

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) OpenVMS supported in switched fabric configurations only.
- 4) Refer to the [EBS Design Guide](#) for details on failover configurations. For Operating Systems not listed, please refer to the ISV's web page for supported High Availability configurations
- 5) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 6) [Click here](#) for additional data protection applications and solution information for OpenVMS, which includes HP and 3rd Party Heterogeneous Backup Solutions, as well as OpenVMS-specific solutions including ABS (Archive Backup Systems) and SLS (Storage Library System)
- 7) Support is with BEB v10.5 only
- 8) Ultrium 230 (LTO) not supported



# AIX

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
AIX 5.2	✓ <sup>3</sup>	✓	✓	✓		✓
AIX 5.3	✓ <sup>3</sup>	✓	✓	✓		✓
<b>Servers</b>						
IBM RS/6000	✓	✓	✓	✓		✓
IBM pSeries	✓	✓	✓	✓		✓
<b>Fibre Host Bus Adapters</b> <sup>3, 4</sup>						
A7539A (Cambex PC2000) (2G, PCI-X)						
AIX Driver w/o Secure Path	1.5.26.0	1.5.26.0	1.5.26.0			1.5.26.0
AIX Driver w/ Secure Path	1.6.5.1	1.6.5.1	1.6.5.1			1.6.5.1
IBM 6228 (2G, PCI-X)						
AIX Driver	Native	Native	Native	Native		Native
IBM 6239 (2G, PCI-X)						
AIX Driver	Native <sup>8</sup>	Native <sup>8</sup>	Native <sup>8</sup>	Native <sup>8</sup>		Native <sup>8</sup>
IBM 5716 (2G, PCI-X)						
AIX Driver	Native <sup>9</sup>	Native <sup>8</sup>	Native <sup>8</sup>	Native <sup>8</sup>		Native <sup>8</sup>
IBM 5758 (4G, PCI-X 2.0) IBM 5759 (4G, PCI-X 2.0)						
AIX Driver			Native <sup>9</sup>			
<b>Disk Array Multipath Support</b> <sup>4</sup>						
Secure Path for AIX	2.0D SP3	2.0D SP3	2.0D SP3	2.0D SP3		2.0D SP3
AIX MPIO	✓ <sup>6</sup>		✓	✓		✓

**NOTES:**

- 1) Other Operating Systems may be supported within EBS by the respective ISVs as LAN clients.
- 2) Please reference your ISV support matrices for supported application and operating system version compatibility.
- 3) Robot control is not supported
- 4) Refer to [EBS Design Guide](#) for configuration rules and guidelines.

- 5) DLT8000 products not supported
- 6) Disk and tape require dedicated HBA's.
- 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	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>Operating Systems</b> <sup>1, 2</sup>						
NetWare 6.0	6.0 sp5	6.0 sp5 <sup>3</sup>			6.0 sp5	
NetWare 6.5	6.5 sp5	6.5 sp2 <sup>3</sup>			6.5 sp6	
<b>Servers</b>						
HP ProLiant <sup>5</sup>	✓	✓			✓	
HP ProLiant p-Class Blade Server <sup>5</sup>	✓	✓			✓	
Third Party X86	✓	✓			✓	
<b>Fibre Host Bus Adapters</b> <sup>3, 5</sup>						
FCA2214 (FCA2210) / QLA2340 (2G, PCI-X) FCA2214DC / QLA2342 (2G, PCI-X)						
FW	1.45	1.45			1.45	
NetWare Driver	6.90m	6.51b			6.90m	
<b>Disk Array Multipath Support</b> <sup>5</sup>						
Secure Path for NetWare <sup>9</sup>	3.0C SP2.1	3.0C SP2			3.0C SP2.1	
MPIO	✓				✓	
<b>High Availability</b> <sup>4</sup>						
NetWare 6.0 (NWCS)					✓	
NetWare 6.5 (NWCS)					✓	

**NOTES:**

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

- 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) 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	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
<b>RAID Arrays</b>						
XP 12000 <sup>1</sup>	✓	✓	✓	✓	✓	✓
XP 10000 <sup>1</sup>	✓	✓	✓	✓	✓	✓
XP 1024/128 <sup>1</sup>	✓	✓	✓	✓	✓	✓
XP 48/512 <sup>1</sup>	✓	✓	✓	✓	✓	✓
Zero Downtime with XP	✓					
Instant Recovery with XP	✓					
Enterprise Virtual Array EVA 8000 <sup>1</sup>	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 6000 <sup>1</sup>	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 4000 <sup>1</sup>	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 5000 <sup>1,3,7</sup>	✓	✓	✓	✓	✓	✓
Enterprise Virtual Array EVA 3000 <sup>1,3,7</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.
- 7) Supported with VCS 3.X and 4.X.

**Infrastructure**

SAN Support	Supported Release	Native Fibre Channel Drives		Virtual Library Systems		Interface Controllers									
		I TO3 NFC Drive (4Gb)	I TO3 NFC Drive (2Gb)	VLS 300 EVA Gateway	VLS 6000 Series	e2400-FC 4Gb	e2400-FC 2Gb	e2400-160	e1200-320 4Gb	NSR E1200-160	NSR E2400	NSR E1200	NSR M2402	NSR N1200-320 4Gb	NSR N1200
<b>SAN Switches<sup>1</sup></b>															
<b>M-Series</b>															
McData 4Gb SAN Switch for HP p-Class BladeSystem	6.4.0.08.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
McData Sphereon 4700, 4400	09.02.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Director Switch 2/140, 2/64	09.02.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Edge Switch 2/32, 2/24, 2/16, 2/12	09.02.00	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>B-Series</b>															
SAN Director 4/256	5.2.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 4/64, 4/32, 4/16, 4/8	5.2.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP c-Class BladeSystem (4/12 and 4/24)	5.0.5b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Brocade 4Gb SAN Switch for HP p-Class BladeSystem	5.0.5b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Director 2/128	5.2.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Core Switch 2/64	5.0.5b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/32, 2/8V, 2/16V, 2/16N	5.2.0b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
SAN Switch 2/16, 2/8, 2/8-EL, 2/16-EL	3.2.1b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
FC Switch 16B, 8B	3.2.1b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MSA SAN Switch 2/8	3.2.1b	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>C-Series</b>															
Cisco MDS 9513, 9506, 9509, 9216 9216a, 9216i, 9120, 9124, 9124e, 9140	3.1(2a)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Cisco MDS 9020	2.1(3)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
<b>Multi-Protocol Routers and Gateways<sup>1</sup></b>															
StorageWorks 400 Multi-Protocol Router <sup>2</sup>	5.2.0a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
StorageWorks Multi-Protocol Router Blade <sup>2</sup>	5.2.0a	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Multi-Protocol Router <sup>2,3</sup>	7.4.1d	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
IP Storage Router 2122-2 <sup>4</sup>	3.4.5c	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

**NOTES:**

1) Refer to [HP StorageWorks SAN Design Reference Guide](#) for configuration rules and guidelines

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

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

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

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

DAS, DAF, and SAN Support	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
EFS Clustered Gateway (LINUX)	√ <sup>3</sup>					
DL380 G5 Data Protection Storage Server	√				√	√ <sup>1</sup>
DL380 G4 Data Protection Storage Server	√				√	√ <sup>1</sup>
ML310 G2 Data Protection Storage Server	√				√	√ <sup>1</sup>
DL100G2 Storage Server <sup>2</sup>	√				√	√ <sup>1</sup>
DL100 G2 Data Protection Storage Server <sup>2</sup>	√				√	√ <sup>1</sup>
DL585G2 Storage Server	√	√	√	√	√	√ <sup>1</sup>
DL585 Storage Server	√	√	√	√	√	√ <sup>1</sup>
DL380 G5 Storage Server	√	√	√	√	√	√ <sup>1</sup>
DL380 G4 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML370 G4 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML350 G5 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML350 G4p Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML350 G4 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML310 G4 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML310 G3 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML310 G2 Storage Server	√	√	√	√	√	√ <sup>1</sup>
ML110 G2 Storage Server <sup>2</sup>	√	√			√	
AiO600 <sup>2</sup>	√				√	
AiO400 <sup>2</sup>	√				√	
NAS 9000s	√	√	√		√	√ <sup>1</sup>
NAS 4000s	√	√	√		√	√ <sup>1</sup>
NAS 8000	√					
NAS e7000	√	√	√	√	√	√
NAS 1500s <sup>2</sup>	√	√			√	
NAS 500s <sup>2</sup>	√	√			√	
NAS 2000s <sup>2</sup>	√	√			√	
NAS 1200s <sup>2</sup>	√	√			√	
NAS B3000	√	√	√	√	√	√
NAS B2000	√	√	√	√	√	√

**NOTES:**

- 1) Requires NetBackup 5.0 MP2 or later.
- 2) Tape connectivity via direct-attach SCSI only.
- 3) Supported with Data Protector v5.5 only.

## SCSI Host Bus Adapters

HP Branded ProLiant, HP-9000, and HP Alpha SCSI Host Bus Adapters <sup>2, 3, 4</sup>

Windows						Linux						Netware					
Product # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product # (-B21)	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
416096 (SAS)	PCI-e	3Gb	4	SAS	SFF-8470	416096 (SAS)	PCI-e	3Gb	4	SAS	SFF-8470	374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI
AH627A	PCI-e	Ultra320	2	SCSI-LVD	VHDCI	AH627A	PCI-e	Ultra320	2	SCSI-LVD	VHDCI	284688	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
412911	PCI-e	Ultra320	1	SCSI-LVD	VHDCI	412911	PCI-e	Ultra320	1	SCSI-LVD	VHDCI	129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI	374654	PCI-X	Ultra320	1	SCSI-LVD	VHDCI	154457	PCI-X	Ultra160	1	SCSI-LVD	HD68
268351	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	268351	PCI-X	Ultra320	2	SCSI-LVD	VHDCI						
284688	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	284688	PCI-X	Ultra160	2	SCSI-LVD	VHDCI						
129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	129803	PCI-X	Ultra160	2	SCSI-LVD	VHDCI						
154457	PCI-X	Ultra160	1	SCSI-LVD	HD68	154457	PCI-X	Ultra160	1	SCSI-LVD	HD68						

HP-UX						Tru64					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	3X-KXPEA-DB	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
AB290A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	3X-KXPCA-AA	PCI-X	Ultra80	1	SCSI-LVD	HD68
A6829A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI						
A6828A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI						
A4999A <sup>1</sup>	PCI	Ultra80	1	SCSI-LVD	HD68						

**NOTES:**

- 1) Supported on HP-UX Workstations only
- 2) Refer to the Server QuickSpecs to determine which SCSI HBAs are supported
- 3) Third party X86 servers supported with HP-Branded adapters only.
- 4) SMART Array Controllers do not support attachment to tape automation products.

## SCSI Host Bus Adapters - Continued

### HP Branded Integrity SCSI Host Bus Adapters, Integrity 64-bit <sup>1</sup>

Windows						Linux						HP-UX					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	A7173A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	A7060A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	AB290A	PCI-X	Ultra320	2	SCSI-LVD	VHDCI
A7059A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	A7059A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	A6829A	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
												A6828A	PCI-X	Ultra160	1	SCSI-LVD	VHDCI

**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>1,2,3</sup>

Windows						Linux						Netware					
Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type	Product #	System Bus	Data Transfer	Number of Channels	Signal Interface	Connector Type
Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68	Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68	Adaptec 29320	PCI-X	Ultra320	1	SCSI-LVD	HD68
Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI	Adaptec 29160	PCI-X	Ultra160	1	SCSI-LVD	VHDCI
Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	Adaptec 39160	PCI-X	Ultra160	2	SCSI-LVD	VHDCI
LSI 22915	PCI-X	Ultra160	2	SCSI-LVD	VHDCI	ATTOTech UL4D	PCI-X	Ultra320	2	SCSI-LVD	VHDCI						
ATTOTech UL4D	PCI-X	Ultra320	2	SCSI-LVD	VHDCI	ATTOTech UL5D	PCI-e	Ultra320	2	SCSI-LVD	VHDCI						
ATTOTech UL5D	PCI-e	Ultra320	2	SCSI-LVD	VHDCI												

**NOTES:**

- 1) For Solaris and AIX configurations, HP supports all SCSI HBA's supported by the server hardware manufacturer. Refer to the server manufacturer's web site for supported HBA/server platform/operating system combinations.
- 2) Third Party SCSI HBA support is for HP servers only
- 3) See vendor website for additional details:  
<http://www.adaptec.com/>  
<http://www.attotech.com/hp.html>  
<http://www.lsilogic.com/>



## Storage Software

	HP Data Protector	CA BrightStor ARCserve	EMC Legato NetWorker	IBM Tivoli Storage Manager	Symantec Backup Exec	Symantec NetBackup
Command View TL	1.8.00	1.8.00	1.8.00	1.8.00	1.8.00	1.8.00
Continuous Access		✓	✓	✓	✓	✓
Business Copy EVA	✓	✓	✓	✓	✓	✓
Business Copy XP	✓					
Storage Essentials	5.1.0 SP1	5.1.0 SP1	5.1.0 SP1	5.1.0 SP1	5.1.0 SP1	5.1.0 SP1
Systems Insight Manager (SIM)	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5	5.0 SP5
Insight Manager Agents	7.70	7.70	7.70	7.70	7.70	7.70
Smart Start	7.70	7.70	7.70	7.70	7.70	7.70

## 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
MSL5000 Series	March 2006
SSL1016 Tape Autoloaders	March 2006
ESL9000 Series (Ultrium 230 and SDLT 110/220)	March 2006
1/8 Tape Autoloaders (Ultrium 230 and Ultrium 460)	March 2006

**NOTES:**

- 1) EBS Compatibility Matrices from the last year can be found on <http://www.hp.com/go/ebs>.  
For matrices older than one year, consult your HP Account Representative.

## Useful Links

Product Family	URL
EBS Home Webpage	<a href="http://www.hp.com/go/ebs">http://www.hp.com/go/ebs</a>
EBS Design Guide	<a href="http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00190922/c00190922.pdf">http://h200001.www2.hp.com/bc/docs/support/SupportManual/c00190922/c00190922.pdf</a>
EBS 1-2-3	<a href="http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html">http://h18000.www1.hp.com/products/storageworks/ebs/ebs123.html</a>
EBS Example Configurations	<a href="http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf">http://h200005.www2.hp.com/bc/docs/support/SupportManual/c00375285/c00375285.pdf</a>
Library and Tape Tools (LTT)	<a href="http://h18006.www1.hp.com/products/storageworks/ltt/index.html">http://h18006.www1.hp.com/products/storageworks/ltt/index.html</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>
Tape Systems	<a href="http://www.hp.com/go/tape">http://www.hp.com/go/tape</a>
HP StorageWorks SAN Design Reference Guide	<a href="http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&amp;locale=en_US&amp;docIndexId=179911&amp;taskId=101&amp;prodTypeld=12169&amp;prodSeriesId=406734">http://h20000.www2.hp.com/bizsupport/TechSupport/DocumentIndex.jsp?contentType=SupportManual&amp;locale=en_US&amp;docIndexId=179911&amp;taskId=101&amp;prodTypeld=12169&amp;prodSeriesId=406734</a>

## Advisories

Date	Problem Description	Number
<b>Tape Libraries Advisories</b>		
06/16/06	<b>Interface Controller/NSR and Storport Drivers</b> - Library and Tape Tools Hardware Scan Unresponsive When Using Storport Drivers and Interface Controller/NSR with Fibre LUN Target/Active Fabric Enabled.	<a href="#">c00683746</a>
05/09/06	<b>Network Storage Router (NSR) or Interface Controller (IFC)</b> have a Maximum Limit for the Number of Initiators That Can Be Seen Through One or Two External Fibre Channel Port Routers	<a href="#">c00492083</a>
10/29/05	<b>1/8 Autoloaders Ultrium 232, 448 and 960</b> - Tapes automatically labeled as slots with chance of duplicates	<a href="#">OT050930_CW02</a>
07/11/05	<b>ESL-e Library Firmware</b> v3.40 Recommended for Robot 24-Day Unresponsive Issue	<a href="#">c00891572</a>
05/12/05	<b>Network Storage Routers (NSR)/Interface Controllers (IC)</b> Switch Login Issue with M-Series Switches on 6.x Firmware	<a href="#">OT050324_CW01</a>
<b>Application Advisories</b>		
08/23/06	<b>Data Protector Express</b> Version 3.1 may generate a tape mount request (alert message number 1401) when using two drive versions of HP StorageWorks MSL 2024.	<a href="#">c00743086</a>
07/06/06	<b>EMC Legato NetWorker</b> backup jobs failing with 10 second timeout may occur while running on either Redhat Linux v2.1 or v3.0 and any tape library or tape drive.	<a href="#">c00707628</a>
12/12/05	<b>Symantec Backup Exec</b> May Report "Drive Serialization" for HP EML and ESL E Tape Libraries Configured for SCSI-over-Internet Protocol (SIPP) - Requires HP Secure Manager Partitioning	<a href="#">C00571560</a>
08/29/05	<b>Tivoli Storage Manager (TSM)</b> 5.3.0.0 to 5.3.1.1 May Not Access All Tape Load Ports on ESL E-Series With Cross Link Kit	<a href="#">OT050822_CW01</a>
06/20/05	<b>Tivoli Storage Manager (TSM)</b> 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>
<b>Operating System Advisories</b>		
03/26/07	<b>Emulex StorPort Driver</b> - Targets Cannot be Persistently Bound when Running with the Emulex StorPort Driver	<a href="#">c00871551</a>
03/07/07	<b>Microsoft Windows SAN</b> - How to Disable Tape Drive Polling on Microsoft Windows SAN-Attached Servers Running hplto.sys	<a href="#">c00718488</a>
03/01/07	<b>HP-UX 11.11</b> - Running Get All Elements Details on HP-UX 11.11 Hosts Can Cause Tape Backups to Abort	<a href="#">c00869191</a>
12/21/06	<b>Linux</b> - Tape Drives in an HP StorageWorks Enterprise Backup Solution (EBS) Shared Tape Configuration are being Issued Rewind Commands by Rebooted Linux Hosts	<a href="#">c00823270</a>
10/11/06	<b>Linux</b> - Driver Kit Installation Procedures for HP StorageWorks Enterprise Backup Solution Shared Tape Configurations	<a href="#">c00788781</a>
09/26/05	<b>Linux Red Hat</b> - Tape Devices Not Discovered and Configured Across Server Reboots on Linux Red Hat	<a href="#">OT050715_CW01</a>
09/13/05	<b>Windows 2003 OS (SP1)</b> - HP StorageWorks Tape Drives and Libraries May Experience Performance Issues and/or Failures with Windows 2003 OS (SP1)	<a href="#">OT050906_CW01</a>
04/07/05	<b>HP-UX Tachlite HBA Driver</b> Causes SAN Tape Backups to Fail with Bus Reset when Background Applications, Such as OV-SAM, are Running	<a href="#">OE041223_CW01</a>
<b>Miscellaneous Advisories</b>		
06/08/05	<b>Change Media Notification</b> - HP SDLT and DLT Tape Drive Change Media Notification.	<a href="#">OT050606_CW01</a>
04/22/05	<b>Insight Management Storage Agent s</b> - 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>

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.