

Dell PowerVault Tape Compatibility Matrix

Dell Engineering
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Overview

Dell tape solutions are tested with a wide range of platforms, backup software, and media to help ensure trouble-free, reliable performance. This matrix can help you determine if your tape backup components are compatible. See the Dell Support website at www.dell.com/support for service and warranty related items. Some products listed may no longer be offered for sale; check with your Sales Representative for current portfolio offerings.

NOTE: Dell is providing the information in this matrix as a convenience to our customers. THE INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE AND IS PROVIDED "AS IS" WITHOUT WARRANTY OF ANY KIND. The limited warranties for Dell products are set forth exclusively in the documentation accompanying such products. Nothing herein should be construed as modifying those limited warranties in any way.

2 Dell PowerVault Tape Compatibility

NOTE: For older Dell PowerEdge or PowerVault systems not listed, see the PDF files attached to this document.

2.1 PowerVault Drives Internal to Servers



Internal PowerVault		Supported HBA's		
Drive Model	Current Firmware	Dell ITA	Dell H330	Onbrd SATA
LTO3-080 IBM SAS V2	F991	X		
LTO4-120HH IBM	C7QJ	X		
LTO4-120 IBM SAS	C7QH	X		
LTO4-120HH IBM V2	G9N1	X	X	
LTO5-140 IBM SAS	G9N1	X	X	
LTO6-HH IBM SAS	G9P1	X	X	
LTO7-HH IBM SAS	G9Q1	X	X	
RD1000 SATA1	0056			X

X = Supported

Device Drivers

Dell recommends using the driver supplied with the operating system (INBOX) for proper operation when the backup software does not provide a driver. Always consult the backup software documentation for driver requirements.

NOTE: LTO7 requires a HOTFIX for INBOX device driver recognition with Windows Server 2012 and Windows Server 2012 R2. Visit <https://support.microsoft.com/en-us/kb/3095711> or keyword search "LTO7 3095771"

2.2 PowerVault 114X & Desktop Models



Internal PowerVault		Supported HBA's		
Drive Model	Current Firm ware	Dell 6Gbps SAS HBA	Dell 12Gbps SAS HBA	USB 2.0/3.0
Pow erVault LTO3-060 IBM SAS	93GQ	X		
Pow erVault LTO3-080 IBM SAS V2	F991	X		
Pow erVault LTO4- 120HH IBM	C7QH	X		
Pow erVault LTO4- 120HH IBM V2	G9N1	X	X	
Pow erVault LTO5- 140 IBM SAS	G9N1	X	X	
Pow erVault LTO6-HH IBM SAS	G9P1	X	X	
Pow erVault LTO7-HH IBM SAS	G9Q1	X	X	
Pow erVault RD1000 USB 3.0	4121			X

X = Supported

Device Drivers
Dell recommends using the driver supplied with the operating system (INBOX) for proper operation when the backup software does not provide a driver.

NOTE: LTO7 requires a HOTFIX for INBOX device driver recognition with Windows Server 2012 and Windows Server 2012 R2. Visit <https://support.microsoft.com/en-us/kb/3095711> or keyword search "LTO7 3095771"

2.3 PowerVault TL1000



Supported HBA's		
Drive Model	Dell 6Gbps SAS HBA	Dell 12Gbps SAS HBA
PowerVault LTO4-120HH IBM V2	X	X
PowerVault LTO5-140 IBM	X	X
PowerVault LTO6-HH IBM	X	X
PowerVault LTO7-HH IBM	X	X

X = Supported

Drive Firmware	
PowerVault LTO4- 120HH IBM V2	G9N1
PowerVault LTO5- 140 IBM	G9N1
PowerVault LTO6- HH IBM	G9P1
PowerVault LTO7- HH IBM	G9Q1

Library Firmware	
TL1000	0071-3000

Device Drivers
Dell recommends using the driver supplied with the operating system (INBOX) for proper operation when the backup software does not provide a driver. Always consult the backup software documentation for driver requirements. The IBM device driver is provided for backup applications that do not permit INBOX driver usage.

NOTE: LTO7 requires a HOTFIX for INBOX device driver recognition with Windows Server 2012 and Windows Server 2012 R2. Visit <https://support.microsoft.com/en-us/kb/3095711> or keyword search "LTO7 3095771"

2.4 PowerVault TL2000/4000



Supported HBA's									
Drive Model	iSCSI Bridge	Dell 6Gbps SAS HBA	Dell 12Gbps SAS HBA	LPE1200x FC HBA	LPE1600x FC HBA	QLE246x FC HBA	QLE256x FC HBA	QLE266x FC HBA	BR8x5 FC HBA
PowerVault LTO3-060 IBM	X	X		X		X	X		X
PowerVault LTO3-080 IBM V2	X	X		X		X	X		X
PowerVault LTO4- 120 IBM	X	X	X	X	X	X	X	X	X
PowerVault LTO4- 120HH IBM	X	X	X	X	X	X	X	X	X
PowerVault LTO4- 120HH IBM V2	X	X	X	X	X	X	X	X	X
PowerVault LTO5- 140 IBM	X	X	X	X	X	X	X	X	X
PowerVault LTO6-HH IBM	X	X	X	X	X	X	X	X	X
PowerVault LTO7-HH IBM		X	X	X	X	X	X	X	X

X = Supported

NOTE: Brocade model BR815 and BR825 do not support direct attach to tape drive.

Drive Firmware	
PowerVault LTO3-060 IBM	93GQ
PowerVault LTO3-080 IBM V2	F991
PowerVault LTO4- 120 IBM	C7QH
PowerVault LTO4- 120HH IBM	C7QJ
PowerVault LTO4- 120HH IBM V2	G9N1
PowerVault LTO5- 140 IBM	G9N1
PowerVault LTO6-HH IBM	G9P1
PowerVault LTO7-HH IBM	G9Q1

Library Firmware	
TL2000 / TL4000	E.30 / 3.20e

Device Drivers
Dell recommends using the driver supplied with the operating system (INBOX) for proper operation when the backup software does not provide a driver. Always consult the backup software documentation for driver requirements. The IBM device driver is provided for failover purposes and backup applications that do not permit INBOX driver usage. The IBM device driver must be used in the exclusive mode to enable failover.

2.5 ML6000



Supported HBA's								
Drive Model	Dell 6Gbps SAS HBA	Dell 12Gbps SAS HBA	LPE1200x FC HBA	LPE1600x FC HBA	QLE246x FC HBA	QLE256x FC HBA	QLE266x FC HBA	BR8x5 FC HBA
PowerVault LTO4- 120 IBM	X	X	X	X	X	X	X	X
PowerVault LTO5- 140 IBM FH	X	X	X	X	X	X	X	X
PowerVault LTO6 IBM	X	X	X	X	X	X	X	X
PowerVault LTO7 IBM - FC ONLY			X	X	X	X	X	X

X = Supported

NOTE: Brocade model BR815 and BR825 do not support direct attach to tape drive.

Drive Firmware	
PowerVault LTO4-120 IBM	C7QH
PowerVault LTO5-140 IBM FH	G9N4
PowerVault LTO6 IBM	G9P4
PowerVault LTO7 IBM - FC ONLY	G9Q4

Library Firmware	
ML6000	690G.GS002

Device Drivers
Dell recommends using the driver supplied with the operating system (INBOX) for proper operation when the backup software does not provide a driver. Always consult the backup software documentation for driver requirements.

NOTE: LTO7 requires a HOTFIX for INBOX device driver recognition with Windows Server 2012 and Windows Server 2012 R2. Visit <https://support.microsoft.com/en-us/kb/3095711> or keyword search "LTO7 3095771"

2.6 Dell PowerEdge Server to HBA Compatibility



Internal SAS Adapters			
Generation	12G		
Model	T320	T420	T620
Adapter	ITA		
Generation	13G		
Model	T330	T430	T630
Adapter	H330		

External SAS Adapters												
Generation	12G											
Model	R220	R320	R420	R520	R620	R720	R820	R920	T320	T420	T620	
Adapter	6Gbps SAS											
Generation	13G											
Model	R230	R330	R430	R530	R630	R730	R830	R930	T330	T430	T630	FX2
Adapter	12Gbps SAS											

NOTE: 6 Gbps and 12 Gbps cards are not interchangeable between the server generations. 13G servers only support 12Gbps SAS adapters.

Fibre Host Bus Adapters												
Generation	12G											
Model	R920	R820	R720	R720xd	R620	R520	R420	R320	R220	T620	T420	T320
QLE246x		X	X	X	X	X	X	X		X	X	X
QLE256x	X	X	X	X	X	X	X	X	X	X	X	X
QLE266x	X	X	X	X	X	X				X		
LPE1200x	X	X	X	X	X	X	X	X	X	X		
LPE1600x	X	X	X	X	X	X				X		
BR815		X	X		X		X	X		X	X	
BR825		X	X		X		X	X		X	X	
BR1020		X	X		X		X	X				
Generation	13G											
Model	R930	R830	R730	R730XD	R630	R530	R430	R330	R230	T630	T430	T330
QLE256x	X	X	X	X	X	X	X	X		X	X	X
QLE266x	X		X	X	X	X				X		
QLE269x	X	X	X	X	X	X				X		
QLE274x	X	X	X	X	X	X						
LPE1200x	X	X	X	X	X	X	X	X		X	X	X
LPE1600x	X	X	X	X	X	X				X		

X = Supported

NOTE: Brocade model BR815 and BR825 do not support direct attach to tape drive.

3 Operating System Compatibility

PowerVault tape products are tested with various operating systems (OS). Compatibility of test tools and general operability has been validated with Windows, RHEL and SLES OS's. Always consult with your ISV application for specific OS version compatibility. A list of supported OS's can be found at www.dell.com/support on the product page for that specific PowerVault product.

4 Backup Software Compatibility

PowerVault tape products are tested using various Independent Software Vendor (ISV) applications. Dell tape products are compatible if they are listed in the hardware compatibility list and the ISV is running on a supported OS as called out in the Software compatibility list. For other solutions not listed please contact the ISV for compatibility.

Vendor	Application	Version	Compatibility List
Dell/EMC	NetWorker	8.1.x	Hardware
		8.2.x	
		9.0.x	Software
		9.1.x	
Symantec/Veritas	Backup Exec	2012	Hardware
			Software
		2010 R2 R3	Hardware
			Software
		12.5	Hardware
			Software
		14/15	Hardware
			Software
CommVault	Simpana	8/9/10/11	Hardware
Computer Associates	Arcserve	16	Hardware
			Software
		15	Hardware
			Software
Microsoft	*Data Protection Manager	2010 2007	Hardware
		2012	Hardware
Quest	NetVault	8/9/10/11	Hardware/Software

IBM	Linear Tape File System - Single drive Edition (LTFS-SDE)	2.2.x	PowerVault LTO5 & LTO6
			PowerVault 114X LTO5 & LTO6
IBM	Linear Tape File System Library Edition	2.1.4	PowerVault TL1000/2000/4000 ML6000
Retrospect	Retrospect 8/10/11	8.1.266 10.5.0.110 11.5.0.190	Hardware

*All Dell Tape drives supported in Data Protection Manager 2007 are supported in Data Protection Manager 2010.

5 Linear Tape File System Single Drive Edition (LTFS-SDE) Compatibility

The LTFS SDE software allows the media in the tape drive to be presented to the file system like disk with a drive letter. Users can easily drag and drop data onto the tape media without the need for additional tape backup software.

	LTO3	LTO4	LTO5	LTO6	LTO7
PowerVault			SDE	SDE	SDE
PowerVault 114X			SDE	SDE	SDE

- Additional Information:
http://www.ibm.com/support/knowledgecenter/STQNYL/com.ibm.storage.hollywood.doc/lfs_sd_ichome.html
- Free Software Download: <http://www.ibm.com/support/fixcentral>
 - Use Find Product tab and enter **IBM Spectrum Archive Single Drive Edition (SDE)** for the Product Selector

NOTE: IBM requires customer registration prior to download.

6 Linear Tape File System Library Edition (LTFS LE) Compatibility

The IBM® LTFS LE software creates a drive letter in the file system once LTFS is mounted. Each cartridge in the logical library is assigned to a drive letter or mount point and shows up as a directory under the drive letter or mount point. You can drag and drop data to the directories and create directories as needed for your specific needs.

	LTO3	LTO4	LTO5	LTO6	LTO7
PowerVault TL1000, TL2000, TL4000	N/A	N/A	LE	LE	LE
PowerVault ML6000	N/A	N/A	LE	LE	LE

- Additional Information: http://www.ibm.com/support/knowledgecenter/STZMZN/com.ibm.storage.hollywood.doc/ltfs_le_ichome.html
- Software Purchase: <http://www-03.ibm.com/systems/storage/tape/ltfs/index.html>

Other countries and languages can be selected from www.ibm.com. Customers may need to search for “LTFS LE” to locate the local link.

Dell customers will purchase the IBM LTFS LE software directly from IBM. Dell customers with existing IBM sales relationships can purchase through their IBM sales representative.

7 Dell Encryption Key Manager 3.0 Support

The sales life of the Dell Encryption Key Manager 3.0 software has ended. Customers purchasing library-managed encryption licenses for their PowerVault tape libraries will need to purchase the IBM Security Key Lifecycle Manager software from IBM.

Dell customers currently using Dell Encryption Key Manager 3.0 (EKM 3.0) may use the software through the end of support life of the initial support contract of the PowerVault TL2000, TL4000, and ML6000 tape libraries with which EKM 3.0 was purchased. However, no operating system or hardware updates or fixes will be available for the EKM 3.0 software. Customers needing updates (e.g. Microsoft Windows 2012 and LTO7) will need to purchase the IBM SLKM software.

Dell customers will purchase the IBM SKLM software directly from IBM. US customers can purchase the software at the following link. Non-US customers can access additional countries and languages on the upper right side of the page. These pages only list the purchase requirements for Dell customers using the aforementioned supported PowerVault tape libraries.

<http://www-03.ibm.com/software/products/en/key-lifecycle-manager-dell>

For more information on the IBM SKLM software, please refer to the IBM SKLM Knowledge Center located at <http://www-01.ibm.com/support/knowledgecenter/#!/SSWPVP/welcome>.

The latest IBM Tivoli Key Lifecycle Manager Fix Pack (FP7 or greater) is required for migration from the Dell EKM 3.0 to the IBM SKLM software. This must be applied to the Dell EKM 3.0 software installation prior to starting the migration. This fix pack can be obtained at the IBM Fix Central at <http://www-933.ibm.com/support/fixcentral/>. Additional countries and languages can be selected at the upper right of the page. A user account must be created to access Fix Central if one does not already exist.

General encryption background

Dell tape libraries support both Application Managed Encryption and Library Managed Encryption. Licensing differs for the libraries depending on the method used.

Application Managed Encryption – Only requires an ISV application that supports AME. No additional library license is needed.

Library Managed Encryption- Requires a license to activate the LME feature within the library in addition to the SKLM software provided by IBM to manage the keys. To activate your TLxxxx or MLxxxx library for LME activation contact Dell/EMC sales. Additional information about SKLM can be found following the above links.

8 Media Compatibility

LTO media compatibility can be found in the LTO Media Handbook located at www.dell.com/support

RD1000 is not compatible with cartridges greater than 2TB

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