Dell EMC Storage Enclosure

PowerVault ME484 JBOD Support Matrix

DELL EMC

Notes, cautions, and warnings

NOTE: A NOTE indicates important information that helps you make better use of your product.

CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

2018 - 12

Rev. A01

Contents

1

Introduction

When you use an enclosure for server expansion, and connect the enclosure to servers or other enclosures, it is referred to as a storage enclosure. This document provides information about supported software, firmware, and hardware for Dell Storage when used as a storage enclosure.

NOTE:

- **When the Dell PowerVault ME484 is used for ME4 Series Storage Array expansion, it is referred to as an expansion enclosure. For information about the Dell PowerVault ME484 when used as an expansion enclosure, refer to the ME4 Series Storage Array support matrix.**
- **This Support Matrix contains the latest compatibility and interoperability information. This document supersedes all other documentation information.**
- **This document refers to I/O modules as IOMs. Other Dell EMC documentation might contain references to EMMs (Enclosure Management Modules). For Dell EMC JBOD products, these two terms are interchangeable; they refer to the same module.**

Revision history

Date	Description
December 2018	Initial release

2

Dell PowerVault ME484 enclosure rules

This section contains consideration rules for the DellPowerVault ME484 enclosures.

NOTE: Clustering is not supported in ME484 JBOD configurations.

Table 1. Dell PowerVault ME484 enclosure rules

Components	Dell PowerVault ME484 JBOD
Maximum number of servers: • 1 Windows server • 1 Linux server	✓
Maximum SAS cable length	4 m
Maximum number of Dell Storage enclosures per HBA	2
Maximum number of HBAs per server	2
Recommended Linux Multipath Policy. (On Linux systems, Device Mapper Multipath is required with multipath configurations).	Failover
Recommended Windows failover policy. (On Windows systems, MPIO is required with multipath configurations).	Failover-only

3

JBOD controller support

Controller	Support
Dell 12 Gb SAS HBA	Dell PowerEdge 13th & 14th generation servers.

4

Management Tools

In supported server direct attach environments, the PowerVault ME484 is managed by PowerTools Server Hardware Manager, visit https://www.dell.com/support/ for additional details. The PowerVault ME484 is not integrated with Dell OpenManage or the Dell Remote Access Controller (iDRAC) and may require changes to customer systems management methods. Refer to the ME484 Deployment Guide for further information regarding Storage Enclosure Management Software.

5

Supported storage enclosure firmware

Dell Storage enclosures have two Enclosure Management Modules (EMMs). You must have both EMMs at the same firmware level and you must upgrade each EMM individually. EMMs do not automatically synchronize firmware versions.

Enclosure Model	Minimum version required
Dell PowerVault ME484 JBOD	5.2.0.26

6

Supported operating systems

Table 2. Operating system support

Operating system	SAS host server	Notes and required hotfixes
Microsoft Windows		
Windows Server 2012 R2 Standard Server and Core	✓	Ensure you apply the latest OS updates.
Windows Server 2016 Server and Core	✓	Ensure you apply the latest OS updates.
Linux		
Red Hat Enterprise Linux 7.x	✓	Ensure you apply the latest OS updates.
Red Hat Enterprise Linux 6.9 or later	✓	Ensure you apply the latest OS updates.
SUSE Linux Enterprise Server 12.x	✓	Ensure you apply the latest OS updates.

7

Supported SAS host bus adapters (HBAs)

The following HBAs are supported with the Dell storage enclosures:

- Dell 12 Gbps SAS HBA (for Dell PowerEdge 13th & 14th generation servers)

You can obtain the supported HBA drivers and firmware from the Dell support website. See the server Owner's Manual for HBA slot location and height requirements.

Table 3. Supported SAS HBAs

Vendor	Model	Component	Minimum version required
Dell	12 Gbps SAS HBA	Firmware	15.17.09.06
		Windows driver	2.51.21.2
		RHEL or SLES driver	22.00.04.00

8

Supported physical disk drives

Refer to the specific Dell storage enclosure **Drivers and Downloads** section on **support.dell.com** for the latest available physical disk drive firmware.

Table 4. Supported Physical Disk Drive Models for the Dell PowerVault ME484 JBOD

Dell P/N	Form Factor	Model	Capacity	Speed	Vendor	SED	Firmware
R1ND2	2.5"	MZILT960HAHQ0D3	960GB	SSD	Samsung	No	DSF8
F0VFY	2.5"	MZILT1T9HAJQ0D3	1.92TB	SSD	Samsung	No	DSF8
43PCJ	2.5"	PX05SVB048Y	480GB	SSD	Toshiba	No	AS0E
MWGK7	2.5"	PX05SRB096Y	960GB	SSD	Toshiba	No	AS0E
0FYFW	2.5"	PX05SRB192Y	1.92TB	SSD	Toshiba	No	AS0E
1N61H	2.5"	PX05SVQ192B	1.92TB	SSD	Toshiba	Yes	AX09
XTH17	2.5"	ST900MP0026	900GB	15K	Seagate	No	KT37
N9WXC	2.5"	ST900MP0126	900GB	15K	Seagate	Yes	KSC6
G2G54	2.5"	ST1200MM0099	1.2TB	10K	Seagate	No	ST31
JY57X	2.5"	DL1800MM0159	1.8TB	10K	Seagate	No	ST51
RWR8F	2.5"	DL2400MM0159	2.4TB	10K	Seagate	No	ST51
8YWH3	2.5"	ST2400MM0149	2.4TB	10K	Seagate	Yes	SSE1
TMVN7	2.5"	ST2000NX0463	2TB	7.2K	Seagate	No	NT32
Y6W8N	2.5"	ST2000NX0453	2TB	7.2K	Seagate	Yes	NSF1
YKT0W	2.5"	AL14SXB90ENY	900GB	15K	Toshiba	No	EE05
01M0D	2.5"	AL15SEB120NY	1.2GB	10K	Toshiba	No	EF03
0WRRF	2.5"	AL15SEB18EQY	1.8TB	10K	Toshiba	No	EF03
F9NWJ	2.5"	AL15SEB24EQY	2.4TB	10K	Toshiba	No	EF03
9HXK6	3.5"	HUH721212AL5200	12TB	7.2K	HGST	No	NS01
0JHTD	3.5"	HUH721212AL5205	12TB	7.2K	HGST	Yes	NM02
5JH5X	3.5"	ST4000NM0295	4TB	7.2K	Seagate	No	DT31
M40TH	3.5"	ST8000NM0185	8TB	7.2K	Seagate	No	PT51
YF87J	3.5"	ST10000NM0256	10TB	7.2K	Seagate	No	TT54

Dell EMC Storage Support Policy

Level 1: Full Contractual Support

For tested devices listed in this Support Matrix, (and for the specific version listed), Dell EMC will provide solution support, under an active support contract assuming that all other components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.

Level 2: Conditional Support

In addition to the product versions tested by Dell EMC and listed in this Support Matrix, the compatibility of comparable hardware models and newer firmware versions can be projected based upon the results for the systems actually tested and will be designated as "**conditionally supported**".

Dell EMC will provide full contractual support for the storage solution under an active support contract, assuming that all components in the storage solution are also under contracted support with their respective manufacturers and that documented recommended design best practices are followed.

Resolution of functional and/or performance issues may be out of Dell EMC's control. In such cases, these issues will need to be addressed by the applicable device or software/firmware vendor. Dell EMC may require, in its sole discretion, as a condition of continuing support, that the customer replace the component with one that was tested and/or upgrade/downgrade to a supported software version.

Examples of Conditional Support situations include, but are not limited to:

- If a switch or server adapter shares the same underlying ASIC or chipset and is from the same vendor as a tested configuration, then it may produce similar results.
- If a component is an identical model of a component listed, but differs in firmware version, then it may produce similar results for any firmware and/or drivers that are newer than those listed. For example, if version X of firmware has been tested and is listed as compatible, then versions newer than version X are expected to continue to work.

Failure of a "**conditionally supported**" component to provide the same service level as the similar device listed, unless Dell EMC has communicated end of support or a specific incompatibility for a particular product, firmware or software version, would be treated as a bug that needs to be fixed by the device or software/firmware vendor.

Level 3: Commercially Reasonable Effort

For components not listed within this Support Matrix, OR where customer has not, or is not willing to apply accepted Dell EMC recommended best practices for the specific storage family's SAN design and implementation, as long as the customer has an active support contract with the appropriate vendor(s), and an active support contract, Dell EMC will provide storage solution support for any untested component of the configuration, until such time as it is determined, in Dell EMC's sole discretion, that a problem lies within the untested component(s) or the way they interoperate with Dell EMC.

Once an untested component has been determined to be the source of the issue, Dell EMC will only provide support for the storage solution on a Commercially Reasonable Effort (CRE) basis. CRE support may be limited to certain days of the week and during normal business hours only.

Dell EMC does not guarantee that issues undertaken on a CRE basis will be resolved in a timely fashion, or at all. There is a possibility that the customer would need to replace an untested component or take the affected system out of production to resolve the issues.