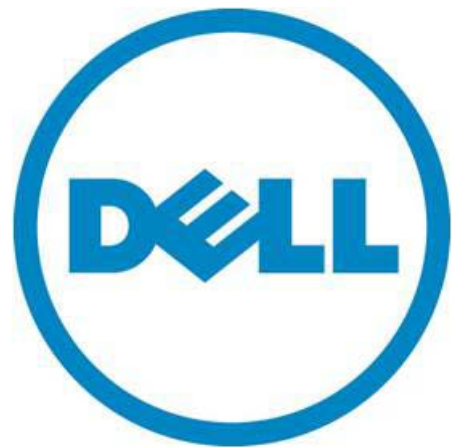


# **Dell™ PowerVault™ MD1000 Systems**

## **Support Matrix**

**Latest Update**

**April 2010**




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# Dell™ PowerVault™ MD1000 Systems Support Matrix

This document provides information on supported software and hardware for Dell PowerVault MD1000 Systems.

The PowerVault MD1000 supported software and hardware are directly tied to the RAID controller to which it is attached. If a PERC 5/E or PERC 6/E is supported in a server, then the PowerVault MD1000 is supported on that server.


 **NOTE:** For the latest driver and firmware releases, see the Downloads section at [support.dell.com](http://support.dell.com).


## Supported RAID Controllers


### PERC 5/E Adapter

**Table 1** PERC 5/E Minimum Revision Requirements for PowerVault MD1000 Systems (SAS/SATA)

Component	Minimum Revision	Notes
Firmware	5.2.1-0066	Firmware
Microsoft® Windows® 2003 Server and Windows Server 2008	2.14.0.32	Driver
Microsoft Windows Server® 2003 x64	2.14.0.64	Driver
Red Hat® Enterprise Linux® version 3 (x86)	00.00.03.16-1	Driver
Red Hat Enterprise Linux version 4 (x86 and x86-64)	00.00.03.16-1	Driver
Red Hat Enterprise Linux version 5 (x86 and x86-64)	00.00.03.16-1	Driver
SUSE® Linux Enterprise Server 9 (x86-64)	00.00.03.16-1	Driver
SUSE Linux Enterprise Server 10 (x86-64)	00.00.03.16-1	Driver

 **NOTE:** The MD1000 is not supported on SAS 5/E.

 **NOTE:** The MD1000 is not supported as a boot device.

 **NOTE:** Refer to Supported OS section below for additional support added after initial release.

# PERC 6/E Adapter

**Table 2. PERC 6/E Minimum Revision Requirements for PowerVault MD1000 Systems (SAS/SATA)**

Component	Minimum Revision	Notes
Firmware	6.0.1-0080	Firmware
Microsoft® Windows® 2003 Server and Windows Server 2008	2.14.0.32	Driver
Microsoft Windows Server® 2003 x64	2.14.0.64	Driver
Red Hat® Enterprise Linux® version 3 (x86)	00.00.03.16-1	Driver
Red Hat Enterprise Linux version 4 (x86 and x86-64)	00.00.03.16-1	Driver
Red Hat Enterprise Linux version 5 (x86 and x86-64)	00.00.03.16-1	Driver
SUSE® Linux Enterprise Server 9 (x86-64)	00.00.03.16-1	Driver
SUSE Linux Enterprise Server 10 (x86-64)	00.00.03.16-1	Driver



**NOTE:** The MD1000 is not supported on SAS 5/E.

**NOTE:** The MD1000 is not supported as a boot device.

**NOTE:** Refer to Supported OS section below for additional support added after initial release.

## Supported Servers

To see a current list of supported servers reference [www.dell.com/perc](http://www.dell.com/perc).

If a PERC 5/E or PERC 6/E is supported in a server then the PowerVault MD1000 is supported on that server.



**NOTE:** For the latest BIOS information, see the specific server website on [support.dell.com](http://support.dell.com).

# Supported Operating Systems

If a PERC 5/E or PERC 6/E is supported in a server then the PowerVault MD1000 is supported on that server.

To determine the latest supported operating system perform the following two steps:

- 1) Reference [www.dell.com/perc](http://www.dell.com/perc) to verify controller support within a platform.
- 2) Using the info from step one, reference [www.dell.com/ossupport](http://www.dell.com/ossupport) to see the latest supported Operating Systems for that platform.

# Supported Management Software


**Table 3. Minimum Supported Management Software for PowerVault MD1000 Systems**

Software	Minimum OMSA Revision	Notes
Dell OpenManage™	5.3	

The minimum supported OMSA version for MD1000 is 5.3. Refer to your server's specific documentation for minimum supported OMSA level.

# Supported Hard Drives

Table 4. below contains the latest supported Hard Drives at the time of this document publication.

 **NOTE:** If no minimum firmware level is displayed, then the drive has shipped with the required minimum firmware level for support


**Table 4. Supported Hard Drives for PowerVault MD1000 Systems**

Drive description	Model Number	Minimum Firmware Level
Maxtor SAS 73 GB 10K RPM	ATLAS10K5_073SAS	BP05
Maxtor SAS 146 GB 10K RPM	ATLAS10K5_147SAS	BP05
Maxtor SAS 300 GB 10K RPM	ATLAS10K5_300SAS	BP05
Maxtor SAS 36 GB 15K RPM	ATLAS15K2_036SAS	BP05
Maxtor SAS 73 GB 15K RPM	ATLAS15K2_073SAS	BP05
Maxtor SAS 146 GB 15K RPM	ATLAS15K2_147SAS	BP05
Fujitsu (AL9LX) SAS 36 GB 15K RPM	MAX3036RC	D206
Fujitsu (AL9LX) SAS 73 GB 15K RPM	MAX3073RC	D206
Fujitsu (AL9LX) SAS 146 GB 15K RPM	MAX303147RC	D206
Fujitsu (AL10LX) SAS 73 GB 15K RPM	MBA3073RC	
Fujitsu (AL10LX) SAS 146 GB 15K RPM	MBA3147RC	
Fujitsu (AL10LX) SAS 300 GB 15K RPM	MBA3300RC	
Hitachi (Ultrastar 15K147) SAS 36 GB 15K RPM	HUS151436VLS300	A280
Hitachi (Ultrastar 15K147) SAS 73 GB 15K RPM	HUS151473VLS300	A280
Hitachi (Ultrastar 15K147) SAS 146 GB 15K RPM	HUS151414VLS300	A280
Hitachi (Ultrastar 15K300) SAS 73 GB 15K RPM	HUS153073VLS300	
Hitachi (Ultrastar 15K300) SAS 146 GB 15K RPM	HUS153014VLS300	
Hitachi (Ultrastar 15K300) SAS 300 GB 15K RPM	HUS153030VLS300	
Hitachi (Ultrastar 15K450) SAS 300 GB 15K RPM	HUS154530VLS300	
Hitachi (Ultrastar 15K450) SAS 450 GB 15K RPM	HUS154545VLS300	
Hitachi SAS 300GB 15K RPM	HUS156030VLS600	
Hitachi SAS 450GB 15K RPM	HUS156045VLS600	
Hitachi SAS 600GB 15K RPM	HUS156060VLS600	
Seagate (15K.4) SAS 36 GB 15K RPM	ST336754SS	S410
Seagate (15K.4) SAS 73 GB 15K RPM	ST373454SS	S410
Seagate (15K.4) SAS 146 GB 15K RPM	ST3146854SS	S410
Seagate (15K.5) SAS 73 GB 15K RPM	ST373455SS	
Seagate (15K.5) SAS 146 GB 15K RPM	ST3146855SS	

Seagate (15K.5) SAS 300 GB 15K RPM	ST3300655SS	
Seagate (15K.6) SAS 146GB 15K RPM	ST3146356SS	
Seagate (15K.6) SAS 300GB 15K RPM	ST3300656SS	
Seagate (15K.6) SAS 450GB 15K RPM	ST3450856SS	
Seagate (Cheetah 15K.7) SAS 300GB 15K RPM	ST3300657SS	
Seagate (Cheetah 15K.7) SAS 450GB 15K RPM	ST3450857SS	
Seagate (Cheetah 15K.7) SAS 600GB 15K RPM	ST3600057SS	
Seagate (T10) SAS 73 GB 10K Performance	ST373355SS	
Seagate (T10) SAS 146 GB 10K Performance	ST3146755SS	
Seagate (T10) SAS 300 GB 10K Performance	ST3300555SS	
Seagate (TNS) SAS 400 GB 10K RPM	ST3400755SS	
Seagate (Cheetah NS 10K.2) SAS 600GB 10K RPM	ST3600002SS	
Hitachi (Ultrastar A7K1000) SATA 500 GB 7.2K RPM	HUA721050KLA330	A74A
Hitachi (Ultrastar A7K1000) SATA 750 GB 7.2K RPM	HUA721075KLA330	A74A
Hitachi (Ultrastar A7K1000) SATA 1 TB 7.2K RPM	HUA721010KLA330	A74A
Hitachi (Ultrastar A7K2000) SATA 2TB 7.2K RPM	HUA722020ALA330	
Hitachi (Deskstar 7K500) SATA 500 GB 7.2K RPM	HDS725050KLA360	
Seagate (Barracuda ES.1) SATA 250 GB 7.2K RPM	ST3250620NS	3.BKE
Seagate (Barracuda ES.1) SATA 500 GB 7.2K RPM	ST3500630NS	3.BKE
Seagate (Barracuda ES.1) SATA 750 GB 7.2K RPM	ST3750640NS	3.BKE
Seagate (Barracuda ES.2) SAS 500 GB 7.2K RPM	ST3500620SS	
Seagate (Barracuda ES.2) SAS 750 GB 7.2K RPM	ST3750630SS	
Seagate (Barracuda ES.2) SAS 1 TB 7.2K RPM	ST31000640SS	
Seagate (Barracuda ES.2) SATA 500 GB 7.2K RPM	ST3500320NS	
Seagate (Barracuda ES.2) SATA 750 GB 7.2K RPM	ST3750330NS	
Seagate (Barracuda ES.2) SATA 1 TB 7.2K RPM	ST31000340NS	
Seagate (Constellation ES) SAS 500GB 7.2K RPM	ST3500414SS	
Seagate (Constellation ES) SAS 1TB 7.2K RPM	ST31000424SS	
Seagate (Constellation ES) SAS 2TB 7.2K RPM	ST32000444SS	
Seagate (Constellation ES) SATA 500GB 7.2K RPM	ST3500514NS	
Seagate (Constellation ES) SATA 1TB 7.2K RPM	ST31000524NS	

Seagate (Constellation ES) SATA 2TB 7.2K RPM	ST32000544NS	
Western Digital (WD2500JS) SATA 250 GB 7.2K RPM	WD2500JS-75NCB3	2E04
Western Digital (WD2500YS) SATA 250 GB 7.2K RPM	WD2500YS-18SHB2	6C05
Western Digital (RE) SATA 500GB 7.2K RPM	WD5000YS-18MPB1	2E0A
Western Digital (RE1) SATA 500 GB 7.2K RPM	WD500YS-18MPB12	
Western Digital (RE2) SATA 500 GB 7.2K RPM	WD5001ABYS-18YNA0	
Western Digital (GP250RE2) SATA 1 TB 5.4K RPM	WD1000FYPS-18ZKB0	
Western Digital (XL320RE) SATA 500 GB 7.2K RPM	WD5002ABYS-18B1B0	
Western Digital (XL333RE) SATA 750GB 7.2K RPM	WD7502ABYS-18A6B0	
Western Digital (XL333RE) SATA 1TB 7.2K RPM	WD1002FBYS-18A6B0	
Western Digital (EP500M) SATA 2TB 5.4K RPM	WD2002FYPS-18U1B0	

## Supported Hardware Configurations

 **NOTE:** The following MD1000 hardware configurations are supported only on Dell-qualified hardware.

There is a limit of two RAID controllers (PERC 5/E and/or PERC 6/E) per PowerEdge server. There is a limit of three MD1000 enclosures per controller port. Therefore, the maximum number of supported enclosures is 12.

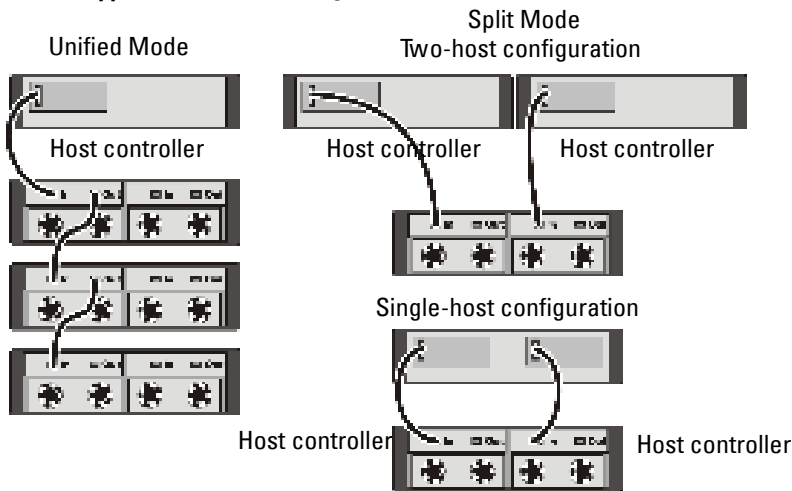
$$- [(2 \text{ controllers}) \times (2 \text{ ports}) \times (3 \text{ enclosures})] = 12 \text{ enclosures}$$

Supported Hardware Configuration shows typical hardware configurations for the PowerVault MD1000 enclosure.

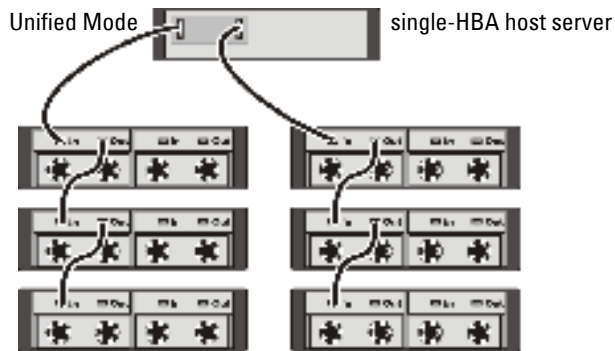
Max Configuration on a Single PERC 5/E or PERC 6/E Controller (both ports connected) shows the maximum configuration in a single PERC 5/E or PERC 6/E controller (three enclosures per port in unified mode) with both ports connected.



**Figure 1. Supported Hardware Configuration**



**Figure 2. Max Configuration on a Single PERC 5/E or PERC 6/E Controller (both ports connected)**

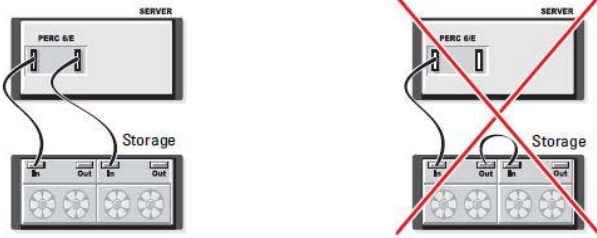


The PERC 6/E adapter can detect and use redundant paths to drives contained in an MD1000 enclosure. With redundant paths, if one path fails, another path can be used to communicate between the controller and the hard drive.

**NOTE:** Redundant Path connectivity is not supported on PERC 5/E

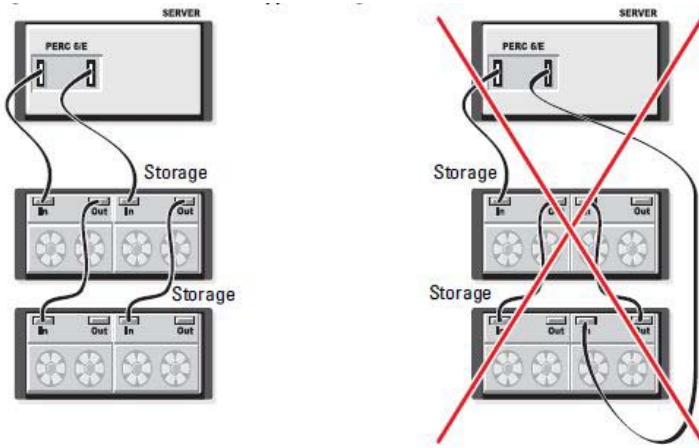
**Figure 3. Redundant Path with 1 Enclosure**

Supported Configuration/Setup      Unsupported Configuration/Setup



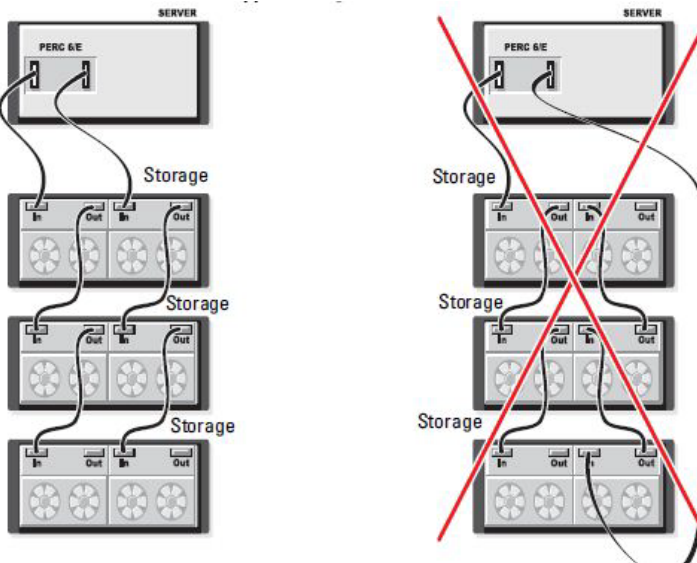
**Figure 4. Redundant Path with 2 Enclosures**

Supported Configuration/Setup      Unsupported Configuration/Setup



**Figure 5. Redundant Path with 3 Enclosures**

Supported Configuration/Setup      Unsupported Configuration/Setup



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