

## Dell™ PowerVault™ MD3000i



**iSCSI SAN that simplifies data management and delivers enterprise data protection capabilities at a fraction of the cost of traditional storage consolidation solutions.**

### **Consolidation without Complexity**

Now small and medium-sized businesses and organisations can harness the storage-consolidation and data-management capabilities of a SAN, easily and cost effectively. The PowerVault MD3000i is an iSCSI SAN designed to simplify data management and delivers enterprise data protection capabilities at a fraction of the cost of traditional storage consolidation solutions. Dell's new PowerVault MD3000i networked storage array leverages the modularity and availability of the PowerVault series of disk arrays to deliver an IP network storage solution that can consolidate up to 16 fully redundant hosts.

### **Power and Performance**

The PowerVault MD3000i array delivers good performance at a fraction of the cost of traditional fibre channel consolidation solutions. With four host-side 1GB/s Ethernet interfaces and the excellent bandwidth of SAS disk drives, the PowerVault MD3000i array enables high-performance, capacity-efficient consolidation without the need of an expensive, complicated Fibre Channel storage network.

### **Flexible and Versatile**

The PowerVault MD3000i system's modular expandability provides you with pay-as-you-grow flexibility. The storage array can house up to fifteen 3.5-inch SAS disk drives, and you can add capacity using up to two PowerVault MD1000 expansion enclosures, for a total of 45 disk drives. The PowerVault MD3000i array is available in two models:

Standard model provides a lower-cost entry point. This model consists of a single controller with two 1GB/s Ethernet ports, for connecting up to two hosts directly, or up to 16 hosts when configured with an Ethernet switch.

High Availability model supports up to four 1GB/s Ethernet ports and features dual active/active controllers that mirror each other's cache. In the event of a controller failure, the LUNs owned by the failed controller are transferred to the surviving controller and operations continue.

### **Simple Yet Powerful Storage Management**

The PowerVault MD3000i delivers a seamless suite of intuitive, intelligent storage-management software capabilities. The modular Disk Storage Manager automatically configures the system for optimal performance and availability. The Recovery Guru tool diagnoses system problems and helps to determine an appropriate recovery procedure. Optional snapshot and virtual disk copy features are designed to enhance data protection.

### **Dell™ PowerEdge™ Server Commonality**

The PowerVault MD family uses the same 3.5-inch disk drive as PowerEdge servers, so you only need to stock and order a single type of spare drive. Dell PowerVault storage arrays are designed and engineered to pair perfectly with Dell PowerEdge servers—LEDs, displays, and other operational functions are common to both PowerEdge and PowerVault products. This commonality in a complete solution enhances usability and can make support and service easier.



Dell PowerVault MD3000i



# Dell™ PowerVault™ MD3000i

## Enterprise Support Services Suite

Robust, flexible support for server and storage systems

In today's environment, businesses need smooth and continuous running of their advanced server and storage systems. Maximum uptime is crucial. As an IT professional, you can rely on us for your success. Dell's Enterprise Support Services can help you to:

- eliminate problems before they happen,
- prepare in advance for any elevated IT demands,
- provide the flexibility to match support to the different needs of various end users and applications environments and
- most importantly smartly balancing quality and costs for your organisation.

### Choose the Level of Support That's Right for You

Dell offers "best-of-breed" Enterprise Support services at varying levels to help you strike just the right balance between maximum uptime and its associated cost. You can choose a plan that best fits your needs. And thanks to a new, unrivaled foundation we call the Dell ServiceSystem™, you will be backed by innovative best-practice resources.

**Platinum Plus Enterprise Support:** Dell's most comprehensive level of support. Customised account planning and reporting to proactively improve uptime.

**Gold Enterprise Support:** Provides rapid resolution of critical issues including escalation management and on-site Emergency Dispatch procedures.

**Silver Enterprise Support:** Provides convenient 7x24 phone access for hardware and core software troubleshooting with 4-hour 7x24 on-site services following completion of phone-based troubleshooting.

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## TECHNICAL SPECIFICATIONS

### DRIVES AND CAPACITY

Up to fifteen (15) 3.5-inch SAS hot-pluggable hard disk drives

### HARD DISK DRIVES

Drive Performance And Capacities

15K SAS drives available in 36GB<sup>1</sup>, 73GB<sup>1</sup>, 146GB<sup>1</sup>, or 300GB<sup>1</sup> capacities  
10K SAS drives available in 73GB<sup>1</sup>, 146GB<sup>1</sup>, 300GB<sup>1</sup>, and 400GB<sup>1</sup> capacities

Minimum capacity (per enclosure)

72GB<sup>1</sup> using two 36GB<sup>1</sup> 15K SAS drives

Maximum capacity (per enclosure)

16,000GB<sup>1</sup> using fifteen 400GB<sup>1</sup> SAS drives

*Additional storage capacity can be achieved by adding up to two MD1000 expansion units for up to 45 SAS drives.*

*Available only from Q4 2007. Date is estimate only and is subject to delays*

### CONNECTIVITY

Standard model supports up to 2 hosts connected directly or up to 16 hosts when configured with an Ethernet switch

High Availability model supports 2 hosts directly connected, or up to 16 fully redundant hosts when configured with Ethernet switches

### STORAGE CONTROLLERS AND RAID LEVELS

Standard

- Single controller with 512 MB of battery-backed cache

High Availability

- Dual active/active controllers with a total of 1GB mirrored, battery-backed cache
- Batteries for cache provide up to 72 hours of data protection
- Support for RAID levels 0, 1, 5, 10
- Up to 30 physical disks per group
- Up to 256 virtual disks

### ARRAY MANAGEMENT AND OPTIONAL SOFTWARE

- Modular Disk Storage Manager, Java-based task-oriented user interface
- Multi-path software provides failover management of redundant data paths between the host server and storage array
- **Virtual disk snapshots (optional):** up to four snapshots per virtual disk and 128 snapshots per system
- **Virtual disk copy (optional):** up to eight simultaneous virtual disk copies and a total of 255 per system

### BACK-PANEL CONNECTORS

Each MD3000i controller has the following external connections:

- Two RJ-45 1Gb Ethernet ports for host connectivity
- One x4 (12 Gbps) SAS port for capacity expansion
- One RJ-45 10/100Mb Ethernet connection for remote management
- One PS/2 serial interface for service

### LED INDICATORS

Front Panel

1 two-color LED indicator for system status, 1 single-color LED indicator for power, 1 LED unused in this system

Hard-drive Carrier Storage Controller

1 single-color activity LED, 1 two-color LED status indicator per drive  
1 two-color LED status indicator per SAS IN/OUT port (total 3 on dual-port option, 2 on single-port option), 1 one-color battery fault LED for battery-backed cache, 1 one-color cache activity LED, 2 one-color controller fault and controller power LEDs, 2 one-color LEDs for Ethernet link and speed

Power Supply/Cooling Fan Module

3 LED status indicators for power supply status, power supply/fan fault and AC status

### POWER SUPPLIES (PER SUPPLY)

Wattage

478W (maximum continuous); 550W (peak)

Maximum Heat Dissipation

1430 BTU/hour (maximum)

Input Voltage Range

100-240V rated (actual 90-264V)

Frequency Range

47-63Hz

Maximum Input Current At Rated Power

7.93A at 90V; 3.96A at 180V

### AVAILABLE HARD-DRIVE POWER (PER SLOT)

Supported Continuous Consumption

Up to 1.3A at +12V; Up to 1.5A at +5V

### PHYSICAL

Height

13.11 cm (5.16 inches)

Width

44.63 cm (17.57 inches)

Depth

48.01 cm (18.9 inches)

Weight

35.37 kg (78 lbs) (maximum configuration)

### ENVIRONMENTAL

Temperature

Operating: 10° to 35°C (50° to 95°F), Storage: -40° to 65°C (-40° to 149°F)

Relative Humidity

Operating: 20% to 80% (non-condensing), Storage: 5% to 95% (non-condensing)

Altitude

Operating: -15 to 3048 m (-50 to 10,000 ft), Storage: -15 to 10,668 m (-50 to 35,000 ft)

1 For hard drives, GB means 1 billion bytes; actual capacity varies with preloaded material and operating environment and will be less.

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