# **SIMPLIFYING IT**

The Dell™ EqualLogic™ PS Series is fundamentally changing the way IT organizations think about purchasing and managing storage. Built on a breakthrough storage virtualization architecture, the EqualLogic PS Series combines an intelligent, automated framework with a fault-tolerant hardware architecture to offer rapid deployment, enterprise quality performance and reliability, simplified storage management, and transparent SAN expansion.

### THE PS SERIES...

Supports a broad range of operating systems:

- Microsoft® Windows®, including Hyper-V™
- VMware® ESX / ESXi
- Citrix® XenServer™
- Red Hat® Enterprise Linux®
- SUSE<sup>™</sup> Linux Enterprise

- Linux
- Sun Solaris<sup>™</sup>
- UNIX®
- HP-UX
- IBM AIX®
- Novell® NetWare®
- Mac OS® X

### **ENTERPRISE DATA SERVICES**

Data Protection, Availability & Recovery

- Auto-Replication, Multi-Way
- Instant Volume Restore
- Multi-Path I/0¹
   Multi-Volume,
   Writeable Snapshots
- Snapshot and Auto-Replication Scheduler
- Volume Cloning
- Volume Consistency Sets

### Management

- PS Group Manager
- Rapid Provisioning
- Remote Setup Wizard
- Roles-Based Administration
- Volume Management

### Maintenance

- Auto-Stat Disk Monitoring System
- E-mail Home
- Enclosure Monitoring System
- SAN HeadQuarters Historical Performance and Event Monitoring

### Storage Virtualization

- Array Evacuation
- Automatic Load Balancing
- Automatic or Manual Storage Tiering
- Complete SAN Virtualization
- Online Data and Volume Movement
- RAID Load Balancing
- Storage Pools
- Thin Provisioning

Server Management & Protection Integration

- Auto-Snapshot Manager/ Microsoft® Edition²
- Auto-Snapshot Manager/ VMware<sup>®</sup> Edition<sup>3</sup>
- Automatic MPIO Connection Management
- Microsoft® VSS and VDS Providers
- Smart Copy for Microsoft®
   Hyper-V™, Exchange®, SQL
   Server®, Windows® File Systems
   and VMware® VMFS
- VMware® Site Recovery Manager Adapter

'Qualified for Microsoft® Windows Server® 2003, Windows Server® 2008, including Hyper-V, Windows Server® 2008 R2, including Hyper-V, VMware®, Linux® and Sun™ Solaris™ Operating Systems and Sun™ Solaris™ Operating Systems and Sun™ Solaris™ Operating Systems and Sun™ Solaris™ Operating Hyper-V™ and Windows Server® 2008 R2 including Hyper-V™ and Windows Server® 2008 R2 including Hyper-V™ 30 and ESX 4

SIMPLIFY STORAGE AT DELL.COM/PSseries

# INTELLIGENT ISCSI STORAGE ARRAYS

# THE DELL DIFFERENCE

### **EASE OF USE**

- Intelligent, automated management minimizes tedious administrative tasks
- · From box to operating SAN in minutes
- Monitor petabytes of storage across dozens of SANs from a single console

### **ENTERPRISE PERFORMANCE**

- Exceptional performance for both sequential and transactional applications with linear scalability as arrays are added
- Automated, real-time load balancing across drives, RAID sets, connections, cache and controllers for optimized performance and resource utilization
- Pooling capability enables appropriate service levels for individual applications

### RELIABILITY

- Fault-tolerant, fully-redundant dual controller design for no single point of failure
- Designed for 99.999% availability
- Enterprise-class RAID protection (RAID 5/6/10/50)
- Hot-swappable components, flexible online redeployment of arrays

### **SCALABILITY**

- · Modular design allows growth when needed
- Online expansion between hardware generations without affecting data availability
- Linear scalability—scale capacity and performance together
- Manage a growing pool of storage from one single user interface

### **AFFORDABILITY**

- All-inclusive enterprise features and functionality with no additional software licenses to purchase
- Easy connection via iSCSI
- Automated features help to eliminate highly specialized administrative costs
- Adopt 10GbE and run both 1GbE and 10GbE in the same environment without de-valuing legacy equipment
- EqualLogic SANs have the lowest TCO of common storage array architectures—fully 1/3 to 1/2 the total cost of competitors over a five year period\*

### **ENTERPRISE EFFICIENCY**

- Addition of 10GbE supports high-performance, high-bandwidth applications such as data warehouses and streaming media
- Maximize your IT investments with an end-to-end unified fabric data center encompassing servers, EqualLogic storage and Networking
- Enterprise level virtualized storage that matches virtualized server environments
- \*Source: ESG Lab Report "Dell EqualLogic TCO Analysis", July 2009.

## PS SERIES ISCSI STORAGE ARRAYS

### PS6000 SERIES: VIRTUALIZED ARRAYS DESIGNED FOR THE ENTERPRISE DATA CENTER

### PS4000 SERIES: VIRTUALIZED ARRAYS DESIGNED FOR BRANCH OFFICE AND SMB NEEDS

### **PS6000E**

- · Enterprise performance offering great cost-per-Gigabyte
- High capacity configurations for data intensive applications

Array Capacity	Storage Controllers	Disk Drives & Capacities
2 TB	Single	8-250 GB/7,200 RPM SATA drives
4 TB	Single	16-250 GB/7,200 RPM SATA drives
4 TB	Dual	16-250 GB/7,200 RPM SATA drives
8 TB	Dual	16-500 GB/7,200 RPM SATA drives
16 TB	Dual	16-1 TB/7,200 RPM SATA drives

### **PS6000X**

Balance of great performance and capacity for the enterprise Array Capacity
 Storage Controllers
 Disk Drives & Capacities
 16-400 GB/10,000 RPM SAS drives
 TB
 Dual
 16-450 GB/10,000 RPM SAS drives
 GB/10,000 RPM SAS drives
 GB/10,000 RPM SAS drives
 GB/10,000 RPM SAS drives

### PS6000XV

High performance for demanding enterprise applications
 Array Capacity
 Storage Controllers
 Disk Drives & Capacities

 4.8 TB
 Dual
 16-300 GB/15,000 RPM SAS drives
 7.2 TB
 Dual
 16-450 GB/15,000 RPM SAS drives
 9.6 TB
 Dual
 16-600 GB/15,000 RPM SAS drives

### **PS6000S**

 SSD system for exceptional low-latency, high-IOPS performance at affordable value

Array Capacity	Storage Controllers	Disk Drives & Capacities
400 GB	Dual	8-50 GB SSD Drives
800 GB	Dual	16-50 GB or 8-100 GB SSD Drives
1.6 TB	Dual	16-100 GB SSD Drives

### **PS6500E**

 High-density system for huge capacity and scalability at best cost-per-Gigabyte in PS Series

Array Capacity	Storage Controllers	Disk Drives & Capacities
24 TB	Dual	48-500 GB/7,200 RPM SATA drives
48 TB	Dual	48-1 TB/7,200 RPM SATA drives

### **PS6500X**

High-density, high-performance for capacity-intensive, primary applications

Array Capacity	Storage Controllers	Disk Drives & Capacities
28.8 TB	Dual	48 - 600GB/10,000 RPM SAS Drives

### **PS6510E**

Great for tiered storage applications with strong random IOPS performance

Array Capacity	Storage Controllers	Disk Drives & Capacities
48 TB	Dual 10GbE	48-1TB/7,200 RPM SATA drives

### PS6510X

Performance and capacity for bandwidth hungry applications such as video streaming

Array Capacity	Storage Controllers	Disk Drives & Capacities
28.8 TB	Dual 10GbE	48-600 GB/10,000 RPM SAS drives

### PS6010E

 Entry-level, highest capacity front-loading 3U array with 10GbE bandwidth

Array Capacity	Storage Controllers	Disk Drives & Capacities
4 TB	Dual 10GbE	8-500 GB/7,200 RPM SATA drives
8 TB	Dual 10GbE	16-500 GB or 8-1TB/7,200
		RPM SATA drives
16 TB	Dual 10GbE	16-1TB GB/7,200 RPM SATA drives

### PS6010S

High performance and capacity at a low cost per Gibabyte
 Array Capacity Storage Controllers Disk Drives & Capacities

 800GB Dual 10GbE 8-100 GB SSD drives
 1.6 TB Dual 10GbE 16-100 GB SSD drives

### PS6010X

Balanced value for performance, cost and capacity
 Array Capacity
 Storage Controllers
 Disk Drives & Capacities
 8-600 GB/10,000 RPM SAS drives
 9.6 TB
 Dual 10GbE
 16-600 GB/10,000 RPM SAS drives

### **PS6010XV**

The premium high-performance, high-capacity array in 10GbE series
 Array Capacity Storage Controllers Disk Drives & Capacities

 4.8 TB Dual 10GbE 8-600 GB/15,000 RPM SAS drives
 9.6 TB Dual 10GbE 16-600 GB/15,000 RPM SAS drives

### **PS4000E**

• Entry configuration for affordable capacity

Array Capacity	Storage Controllers	Disk Drives & Capacities
2 TB	Single	8-250 GB/7,200 RPM SATA drives
4 TB	Single/Dual	16-250 GB/7,200 RPM SATA drives
8 TB	Dual	16-500 GB/7,200 RPM SATA drives
16 TB	Dual	16-1 TB/7,200 RPM SATA drives

### PS4000X

Great balance of cost effective performance and capacity
 Array Capacity
 Storage Controllers
 Disk Drives & Capacities

 6.4 TB
 Dual
 16-400 GB/10,000 RPM SAS drives
 7.2 TB
 Dual
 16-450 GB/10,000 RPM SAS drives
 9.6 TB
 Dual
 16-600 GB/15,000 RPM SAS drives

### **PS4000XV**

High performance for demanding remote office applications
 Array Capacity
 Storage Controllers
 Disk Drives & Capacities

 4.8 TB
 Dual
 16-300 GB/15,000 RPM SAS drives
 7.2 TB
 Dual
 16-450 GB/15,000 RPM SAS drives
 9.6 TB
 Dual
 16-600GB/15,000 RPM SAS drives