

# DELL EQUALLOGIC™ PS5000E



Dell EqualLogic PS5000E is a virtualized iSCSI SAN that combines intelligence and automation with fault tolerance to provide simplified administration, rapid deployment, enterprise performance and reliability, and seamless scalability. With SATA disk drives, the PS5000E delivers excellent cost-per-gigabyte and up to 16 TBs of high-capacity storage.

## EXCEPTIONAL EASE OF USE

The PS5000E is an intelligent storage array that is designed to provide rapid installation, simple management, and seamless expansion. All PS Series storage arrays include SAN configuration features and capabilities that sense network topology, automatically build RAID sets, and conduct system health checks to help ensure that all components are fully functional. A PS5000E is designed to be installed, configured, and serving storage in less than one hour.

## MODULAR DESIGN WITH ENTERPRISE RELIABILITY

EqualLogic PS Series arrays are based on a virtualized modular storage architecture that enables IT managers to purchase only the storage they need, when they need it — preventing both underutilization and over-provisioning. Using innovative data movement technology, all EqualLogic PS Series arrays in a SAN work together to automatically manage data, load balance across all resources, and expand to meet growing storage needs.

The EqualLogic PS5000E Series is designed to meet and exceed the rugged requirements of the data center. The PS5000E includes fault tolerance capabilities through fully redundant and hot-swappable components — optional dual-controllers, standard dual fan trays, dual power supplies, and disk drives with hot spares.

## ENTERPRISE DATA SERVICES WITHOUT ADDITIONAL COST

The PS5000E has built-in storage features once relegated to top-tier data centers, enabling best practice storage for every size organization. The EqualLogic PS Series arrays include the following enterprise data services and software features with no additional software licensing fees:

**MANAGEMENT** | PS Group Manager • Rapid Provisioning • Remote Setup Wizard • Roles-Based Administration • Volume Management

**DATA PROTECTION, AVAILABILITY AND RECOVERY** | Auto-Replication, Multi-Way • Instant Volume Restore • Multi-Path I/O<sup>1</sup> • Multi-Volume, Writeable Snapshots • Snapshot and Auto-Replication Scheduler • Volume Cloning • Volume Consistency Sets

**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

**MAINTENANCE** | Auto-Stat Disk Monitoring System • E-mail Home • Enclosure Monitoring System • Performance Monitoring

**SERVER MANAGEMENT AND PROTECTION INTEGRATION** | Auto-Snapshot Manager/Microsoft Edition<sup>2</sup> • Auto-Snapshot Manager/VMware Edition<sup>3</sup> • Automatic MPIO Connection Management • Microsoft VSS and VDS Providers • Smart Copy for Microsoft<sup>®</sup> Exchange<sup>®</sup>, SQL Server<sup>®</sup>, Windows<sup>®</sup> File Systems and VMware<sup>®</sup> VMFS • VMware<sup>®</sup> Site Recovery Manager Adapter

## FLEXIBILITY WITH LOW COST OF OWNERSHIP

The Dell EqualLogic PS Series arrays represent a breakthrough in storage economics, from purchase and setup to operation and upgrades. Unlike traditional SANs, the EqualLogic PS Series comes complete with the available software and applications expected from an enterprise-level SAN. The PS Series scales on-demand — and online — allowing storage growth without disrupting applications. As a result, EqualLogic PS5000E arrays provide exceptional flexibility at a low total cost of ownership.

Whether consolidating a direct-attached storage (DAS) infrastructure, migrating data from an existing SAN or NAS system, streamlining data protection processes, or simply adding storage capacity, the EqualLogic PS Series from Dell offers a family of proven, high-performance, self-managing storage arrays designed to meet the requirements of today's critical datacenter environments.

<sup>1</sup>Qualified for Microsoft Windows Server 2000 and 2003, VMware<sup>®</sup>, Linux<sup>®</sup> and Sun<sup>™</sup> Solaris<sup>™</sup> Operating Systems

<sup>2</sup>Qualified for Microsoft Windows Server<sup>®</sup> 2003 and Windows Server<sup>®</sup> 2008

<sup>3</sup>Qualified for VMware<sup>®</sup> ESX 3.5, ESXi 3.5 and ESX 3



FEATURES		DELL EQUALLOGIC™ PS5000E	
<b>Product Configurations</b>			
Storage Controllers	Base Model: Single controller with 1 GB battery-backed memory, only available with 250 GB disk drive options High Availability Model: Dual controllers with a total of 2 GB battery-backed memory Battery-backed memory provides up to 72 hours of data protection		
Hard Disk Drives	Eight (8) or sixteen (16) SATA hot-pluggable hard disk drives		
Drive Capacities	7,200 RPM SATA II drives available in 250 GB, 500 GB, 750 GB, or 1 TB		
System Capacities	<b>Base Models:</b> 2 TB using eight (8) 250 GB SATA disk drives 4 TB using sixteen (16) 250 GB SATA disk drives	<b>High Availability Models:</b> 4 TB using sixteen (16) 250 GB SATA disk drives 8 TB using sixteen (16) 500 GB SATA disk drives 12 TB using sixteen (16) 750 GB SATA disk drives 16 TB using sixteen (16) 1 TB SATA disk drives	
<b>Technical Highlights</b>			
Volumes	Up to 1,024		
Snapshots	512 per volume / up to 10,000 total		
Hosts Accessing PS Series Group	Up to 512 per pool / 2,048 per group		
Host Protocol	Any standards-compliant iSCSI initiator		
Operating Systems Supported	Windows® 2000 Server, Windows Server® 2003, Windows Server® 2008, including Hyper-V™, Windows Vista®, Windows XP®, Red Hat® Enterprise Linux®, SUSE® Linux Enterprise, Linux, Sun™ Solaris, UNIX®, IBM® AIX®, HP-UX, Mac OS® X, VMware® ESX Server 3 / 3.5 / ESXi 3.5, Citrix XenServer, Virtual Iron®, Novell® Netware®		
RAID Support	Automatic RAID 5, RAID 10, and RAID 50		
GbE Network Interfaces	Three (3) copper per controller		
TCP Network Support	IPv4, IPv6 core support including JITC		
Expansion Option	Can be combined with other EqualLogic PS Series online		
<b>Reliability</b>	Redundant, hot-swappable controllers, power supplies / cooling fans, and disks Individual disk drive slot power control		
<b>Enclosure Monitoring System</b>	Automatic spare configuration and utilization SMART Automatic bad block replacement Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives		
<b>Management Interfaces</b>	SNMP, telnet, SSH, HTTP, Web (SSL), host scripting Serial console Multi-administrator support Ability to configure a separate management network		
<b>Security</b>	CHAP authentication Access control for iSCSI Access control for management interfaces including RADIUS support		
<b>Notification Methods</b>	SNMP traps, e-mail, syslog		
<b>Power</b>	AC voltage: 100-240 VAC ±10% single phase Frequency: 47-63 Hz Power factor: 0.98 (minimum) Power consumption: 450 VA, 530 Peak VA (operating maximum) Heat dissipation: 1,550 BTU per hour (maximum) Power supplies: Dual 440W dc		
<b>Environmental</b>	Temperature range: 5 to 35°C / 41 to 95°F Storage temperature: -20 to 60°C / -22 to 140°F Altitude: -70 to 3,048 m operational / -305 to 12,192 m non-operational Relative humidity: 20 to 80% non-condensing operational / 5 to 95% non-condensing non-operational Shock: 5 g 10 ms ½ sine operational / 30 g 10 ms ½ sine non-operational Vibration: Random .21 grms @ 5-500Hz operational / Random 1.04 grms 2-200Hz non-operational Acoustics: Sound Power Operating: <5.8 db LpA @ 20°C Air Quality: Airborne contaminant level of G2 or lower as defined by ISA-S71.04-1985		
<b>Physical</b>	Height: 13 cm / 5.12 in / 3 EIA units Width: 48.26 cm / 19.0 in / 1EC Rack Compliant Depth: 55.1 cm / 21.7 in Weight: 35 kg / 77.6 lb (maximum configuration)		
<b>Customer Care Services Programs</b>	<b>Dell EqualLogic PS5000 Customer Care Plus:</b> 24-hour priority online/telephone access, software maintenance and updates, 4-hour onsite advance hardware replacement <b>Dell EqualLogic PS5000 Customer Care:</b> 24-hour priority online/telephone access, software maintenance and updates, next business day advance hardware replacement <b>Limited Warranty*:</b> 2 years telephone support (business hours 9AM-5PM EDT/EST USA); 1 year software maintenance and updates; 2 years hardware (return to factory, first 90 days advance replacement, pass through of drive manufacturer warranty)		
<b>Additional Services**</b>	<b>Dell Services</b> can architect, deploy and optimize an IT environment for your business ensuring that the data you need is available to keep your business running and secure. <b>Keep Your Hard Drive:</b> Available for customers who want to retain control over sensitive data.		

\* For copy of Ltd Hardware Warranty, write Dell Inc., Attn: Customer Service, 300 Innovative Way, Suite 301, Nashua, NH 03062 USA or see HYPERLINK <http://www.equallogic.com/services/view.aspx>.

\*\* Services may vary by region.



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