



# **EqualLogic PS6110 Series**

The Dell™ EqualLogic™ PS Series storage arrays offer enterprise power with everyday simplicity. The PS6110 Series offer exceptional performance and increased throughput with 10GbE and the flexibility of using SFP+ or 10GBASE-T (copper)—so you can leverage your existing infrastructure or build out lowercost 10GBASE-T.

## Performance where and when you need it

The EqualLogic PS6110 Series doesn't force you to make a choice between scaling storage performance or expanding capacity. A virtualized, peer-scale architecture delivers high-performance to demanding enterprise applications, even as they grow. PS Series arrays make it possible to purchase only the storage you need when you need it. Sophisticated yet simple management features speed SAN configuration while built-in intelligence senses network connections, automatically builds RAID sets and conducts system health checks. Even multi-generations of PS Series arrays can work together to automatically manage data, load balance across all resources or seamlessly expand the storage pool when you add a new array. The reliable PS6110 Series arrays reduce single points of failure with fully redundant and hot-swappable controllers, fan trays, power supplies, disk drives with hot spares, and vertical port sharing.

#### Feature-rich software portfolio

The EqualLogic PS Series arrays include innovative firmware and host software with no additional cost or software licensing fees. What's more, EqualLogic's unique all-inclusive software licensing model allows you to continue to add new features and functionality to your existing hardware as they become available—without charge. So, you can deploy the latest storage innovations without a costly rip-and-replace upgrade. PS Series arrays include enterprise-class storage software features like sub-volume automated tiering, thin provisioning and pointer-based snapshots so you can efficiently deliver the right data to the right place at the right time. In addition, 10GbE arrays feature Data Center Bridging designed to greatly reduce or eliminate dropped packets by standardizing performance over your converged SAN and LAN network.

EqualLogic Host Software extends the functionality of the array-based software, optimizing server and storage cooperation. Host Integration Tools are available for major OS and hypervisor providers, including Microsoft®, VMware® and Linux®.

EqualLogic SAN Headquarters (SAN HQ) gives you in-depth reporting and analysis, consolidated performance and robust event monitoring across multiple EqualLogic groups so you have a well-tuned EqualLogic SAN to meet and surpass your business requirements.

## Find your end-to-end solution

With a variety of system configurations, built for a range of capacity and performance requirements, there is an EqualLogic solution designed to suit your needs. Reduce IT complexity, lower costs, and eliminate inefficiencies by making IT and business solutions work harder for you. You can count on Dell for end-to-end solutions to maximize your performance and uptime. A proven leader in Servers, Storage and Networking, Dell Enterprise Solutions deliver innovation at any scale. Contact your Dell Sales Representative for more information.

Dell EqualLogic PS Series storage solution has the lowest total cost of ownership over a five year period compared to comparable SAN arrays in the market.\*

<sup>\*</sup> Source: ESG Lab Report, \*Dell EqualLogic TCO Analysis-Multi-generational Manageability and Efficiency at a Low Cost, \* an April 2012 report sponsored by Dell

PS6110 Series Features	PS6110E/PS6110X	PS6110S/PS6110XS	PS6110XV/PS6110XV 3.5*
Product configurations	Capacity for your data-hungry applications	High performance for your demanding enterprise applications	High-performance storage optimized for your most critical applications
Storage controllers	Dual controllers with a total of 8GB' backup cache data to flash memory for data protection		
Network interfaces	10GbE connectivity with one (1) 10GBASE-T with RJ45, one (1) 10GbE SFP+ for fibre or twin-ax copper cabling, and one (1) 100BASE-TX dedicated management port per controller		
Hard disk drives	PS6110E: Twenty-four (24) NL-SAS hot-pluggable hard disk drives. Twelve (12) drive configuration available PS6110X: Twenty-four (24) 10K SAS hot-pluggable hard disk drives. Twelve (12) drive configuration available	PS6110S: Twenty-four (24) SSD hot-pluggable hard disk drives. Twelve (12) drive configuration available. PS6110XS: Seven (7) hot-pluggable SSD drives and seventeen (17) hot-pluggable SAS hard disk drives	PS6110XV/PS6110XV 3.5*: Twenty-four (24) 15K SAS hot-pluggable hard disk drives. Twelve (12) drive configuration available.
Drive capacities	PS6110E: 3.5" 7,200 RPM NL-SAS drives available in 1TB!, 2TB! or 3TB! 1TB, 2TB, 3TB or 4TB (3TB and 4TB available in NL-SAS SED)  PS6110X: 2.5" 10,000 RPM SAS drives available in 300GB!, 600GB! and 900GB! (900GB also available in SAS SED)	PS6110S: 2.5" SSD drives available in 200GBt and 400GBt PS6110XS: Combines 2.5" 400GBt SSD drives and 2.5" 600GBt 10,000 RPM SAS drives	PS6110XV: 2.5" 15,000 RPM SAS drives available in 146GB' and 300GB' (300GB also available in SAS SED) PS6110XV 3.5": 3.5" 15,000 RPM SAS disk drives available in 600GB' (600GB also avail- able in SAS SED)
System capacities	PS6110E: Up to 96TB <sup>1</sup> PS6110X: Up to 21.6TB <sup>1</sup>	PS6110S: Up to 9.6TB <sup>†</sup> PS6110XS: Up to 13.0TB <sup>†</sup>	PS6110XV: Up to 7.2TB† PS6110XV 3.5": Up to 14.4TB†
Self-Encrypting Drives (SED)	PS6110E: 96TB¹ using twenty-four (24) 4TB¹ NL-SAS disk drives PS6110X: 21.6TB¹ using twenty-four (24) 900GB¹ 10,000 SAS disk drives	N/A	PS6110XV: 7.2 TB <sup>1</sup> using twenty-four (24) 300GB† 15,000 SAS disk drives PS6110XV 3.5:14.4TB <sup>1</sup> using twenty-four (24) 600GB† 15,000 3.5* SAS disk drives
Technical highlights			
Host protocol	Any standards-compliant iSCSI initiator		
OS supported <sup>1</sup>	Windows® 2000 Server, Windows Server® 2003, Windows Server® 2008, including Hyper-V™, Windows Vista®, Windows Server® 2008 R2 including Hyper-V™, Windows XP®, Red Hat® Enterprise Linux®, SUSE® Linux® Enterprise, Sun™ Solaris™, IBM®AIX®, HP-UX, Mac OS® X, VMware® ESX Server 3 / 3.5 / 4 / 4.1, ESXi 3.5 / 4 / 4.1, Citrix® XenServer™, Novell® NetWare®		
RAID supported	All PS series except PS6110XS: RAID 5, RAID 6, RAID 10, and RAID 50 PS6110XS: RAID-6 Accelerated		
TCP network support	IPv4, IPv6 core support		
Expansion option	Can be combined with other EqualLogic PS Series arrays in the same SAN group, online. A maximum of 16 total members per group.		
Reliability	Vertical port sharing Redundant hot-swappable controllers, power supplies/cooling fans and hot-swappable disks Individual disk drive slot power control		
Enclosure monitoring system	Automatic spare configuration and utilization; SMART; Automatic bad block replacement; Auto-Stat Disk Monitoring System (ADMS) to monitor health of data on disk drives		
Management interfaces	SAN Headquarters multi-group performance and event monitoring tool; Serial console; Ability to configure a separate management network; SNMP, telnet, SSH, HTTP, Web (SSL), host scripting; Multi-administrator support		
Security	CHAP authentication ; Access control for iSCSI; Access control for management interfaces including Active Directory, LDAP, or RADIUS support		
Notification methods	SNMP traps, e-mail, syslog		
Physical	PS6110X, PS6110S, P6110XS & PS6110XV Height: 2U/8.68 cm (3.41 inches) Width 44.63 cm (17.57 inches) Depth: 54.1 cm (21.3 inches) Weight: 24.1 kg (53.1 lb)	PS6110E & PS6110XV 3.5 Height: 4U/17.5cm (6.89 inches) Width 44.63cm (17.57 inches) Depth: 57.5cm (22.6 inches) Weight: 44.45kg (98 pounds)	
Power	PS6110E & PS6110XV 3.5: Power supplies: Dual 1080W; PS6110X, PS6110X, PS6110XS & PS6110XV: Power supplies: Dual 700W DC Voltage: -48 to -60 DC		
Rack support	ReadyRails™ II static rails for tool-less mounting in 4-post racks with square or unthreaded round holes or tooled mounting in 4-post threaded-hole racks		
Dell support and optional storage service offerings	3-year Dell Basic Service <sup>2</sup> is included with this EqualLogic purchase. This service covers essential telephone support during local business hours, service parts logistics available in the locality, and access to software/firmware updates. Service upgrades are available. Contact your Dell representative today for more information.		

GB means 1 billion bytes, TB equals 1 trillion bytes and PB equals 1 quadrillion bytes; actual capacity varies with preloaded material and operating environment and will be less.

# Learn more at dell.com/EqualLogic



For a complete list of supported operating systems, please visit www.dell.com/sequallogic/swsupport.

Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/servicedescriptions.

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