



Dell Storage PS6610 Series

Building on the industry-leading capabilities of the Dell Storage PS Series line, the Dell Storage PS6610 Series storage solution takes you to the next level by providing superior density and improved performance compared to the previous generation. This series can scale out to over 8PB of capacity, in a group of 16 arrays, while using less space in your data center.

More performance in less space

The Dell Storage PS6610 Series combines the power of 10GbE and dense storage, offering up to 3.5 times more capacity¹ and up to 7 times increased performance² compared to the previous generation. The dense design of the PS6610 easily fits in your data center while offering over a half a petabyte of capacity in one array. With next-generation controllers and advanced software, the PS6610 offers 16 times more memory than previous generation, and up to 50% space savings with compression of snapshots and replicas.³ The Dell Storage PS6610 is ideal for archival/secondary storage, mixed workload consolidation and video surveillance solutions.

Scale your solution to meet your storage needs

The Dell Storage PS6610 solution is designed to meet growing capacity requirements without the administrative overhead. PS Series arrays include SAN configuration features and capabilities that sense network connections, automatically build RAID sets, and conduct system health checks to help ensure that all components are fully functional. Based on a virtualized modular storage architecture — you purchase only the storage you need, when you need it — the PS Series arrays help prevent both underuse and over-provisioning in the data center. All PS Series arrays in a SAN work together to automatically manage data, load balance across all resources, and expand to meet your growing storage needs. With the addition of Dell Storage FS Series appliances, you can effectively store both block and file data in a unified storage solution. Plus, Dell Storage PS Series customers achieved up to a 513 percent return on investment in 6.2 months on average.⁴

Feature-rich software portfolio

The PS Series arrays include innovative firmware and host software with no additional cost or software licensing fees. PS Series host software extends the functionality of the array-based software enabling cooperation with the host. Host Integration Tools for Microsoft®, VMware®, and Linux® environments as well as SAN Headquarters (SAN HQ) management software are included with your PS Series array purchase. SAN HQ provides an interface for monitoring your groups of PS Series arrays, and offers a proactive and automated support process with SupportAssist to help improve productivity and accuracy, while helping you gain insight and control. In addition, Dell Storage Manager (DSM) offers common management and cross-platform replication capabilities between PS and SC Series arrays, allowing you to take advantage of new functionality while leveraging existing investments.

Up to 2.8x improved
density per U
compared to the
previous generation⁵

Features	PS6610E	PS6610X	PS6610ES
Product configurations	Provides affordable, high-capacity storage for data-intensive workloads such as archival/secondary storage.	Balances cost, performance and capacity for consolidating mixed workloads such as Microsoft Exchange and SharePoint.	Provides high-speed, low-latency solid-state drives (SSDs) and high-capacity hard disk drives (HDDs) together in a single array.
Storage controllers	Dual controllers with 32GB non-volatile memory per controller		
Network interfaces	10GbE connectivity; management network: 1 x 100BASE-TX per controller; interface ports: 2 x 10GBASE-T with RJ45 or 2 x 10GbE SFP+ for fibre or twin-ax copper cabling		
Drive types	42 x 2TB, 4TB or 6TB, or 84 x 4TB or 6TB hot-pluggable 3.5" 7.2K RPM NL-SAS drives	84 x 600GB, or 42 or 84 x 900GB, 1.2TB or 1.8TB hot-pluggable 2.5" 10K RPM SAS drives	14 x 400GB or 800GB hot-pluggable 2.5" SSDs + 70 x 2TB or 4TB hot-pluggable 3.5" 7.2K RPM NL-SAS drives
System capacities	Up to 504TB (up to 8.06PB with 16 arrays)	Up to 151.2TB (up to 2.4PB with 16 arrays)	Up to 291.2TB (up to 4.6PB with 16 arrays)
Self-encrypting drives (SED)	4TB NL-SAS SED in the 84 drive configuration	1.2TB SAS SED in the 84 drive configuration	NA
RAID	RAID 6, RAID 10	RAID 6, RAID 10	RAID 6 Accelerated

Technical highlights	
Host protocol	Any standards-compliant iSCSI initiator
Expansion option	Can be combined with other PS Series arrays in the same SAN group, online with up to 16 total members per group. With multigenerational capabilities, you can support up to 10 cross-generation types of controllers with multiple network configurations and drives types in a new or existing PS Series SAN resource pool, all managed by a single interface. Additionally, Dell Storage Manager (DSM) offers common management and cross-platform replication capabilities between PS Series and SC Series arrays, providing PS Series customers the flexibility to add SC Series arrays to their environment, if and when they choose.
Operating systems and hypervisors	Microsoft® Windows Server® including Hyper-V® VMware® ESX Server™ Red Hat® Enterprise Linux® (RHEL) SUSE® Enterprise Linux® (SLES) Oracle® Linux Citrix® XenServer® For a complete list of supported OS versions including software initiators, NICs/CNAs, and HBAs, please see the Dell Storage Compatibility Matrix on http://en.community.dell.com/dell-groups/dtcmedia/m/mediagallery/20438558 .
TCP network support	IPv4, IPv6 compliant. USGv6 certified.
Reliability	Redundant hot-swappable controllers; hot-swappable disks and power supplies
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	DSM for day-to-day tasks across SC Series and PS Series arrays from a single management interface; PS Series Group Manager; 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 lists and policies for iSCSI; Access control for management interfaces including Active Directory, LDAP or RADIUS support
Notification methods	SAN Headquarters alerting including Dell SupportAssist, SNMP traps, email, syslog
Physical	Height: 5U/22.23 cm (8.8 in), Width: 48.26 cm (19 in), Depth: 91.44 cm (36 in), Weight: 130.7 kg (287.5 lb) (max config)
Power	Dual 2800W, 200-240VAC, 50/60Hz (high AC line power source only)
Dell support and optional storage services	Dell ProSupport Plus for critical systems or Dell ProSupport for premium hardware and software support are recommended to provide you the right support services for your PS Series solution. ⁶ Contact your Dell representative today for more information.

¹ Based on internal Dell analysis of total capacity in October 2014 comparing PS6610 arrays to PS6510 arrays.

² Based on January 2015 Dell performance testing the PS6610ES hybrid-flash arrays and the PS6510ES hybrid-flash arrays using IOMeter with 4KB block and 70/30 read/write random IOs. Actual performance will vary depending on the workload and drive type.

³ Based on September 2014 internal Dell analysis of the PS Series Array Software 8.0 compression feature with PS6210 arrays, using real-world home share environment comprised of snapshots and replicas. Requires a PS6210 or PS6610 in the environment. Results will vary based on configuration, data types and usage.

⁴ Based on Dell Storage SC and PS Series customer interviews from the Dell-sponsored IDC Whitepaper: [Driving Business Value with Flash-Optimized Dell Storage Solutions; January 2015](#).

⁵ Based on internal Dell analysis of total density per unit in January 2015 comparing PS6610 arrays to PS6510 arrays.

⁶ Availability and terms of Dell Services vary by region. Dell Basic Service is included standard with EqualLogic units. For more information, visit Dell.com/ServiceDescriptions.

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