Dell EqualLogic PS-M4110 Blade Arrays

Dell EqualLogic continues to drive innovation by delivering all the functionality and enterprise-class features of its traditional EqualLogic arrays in a new blade form factor.

The introduction of the PS-M4110 Blade Array enables a fully virtualized solution integrating storage, servers and networking within one blade chassis. With its unique peer scalability, all-inclusive software and ease of management, the PS-M4110 Blade Array is the industry's only fully redundant, enterprise class storage array designed to fit inside a blade chassis.[1]

Converge without compromise

Compute, network and store your Dell™ PowerEdge™ M-Series servers, Force10™ MXL switches and EqualLogic™ Blade Arrays in a single blade chassis. With the physical convergence of high-performing Dell servers, networking and storage, you receive a fully virtualized end-to-end 10GbE data-center-in-a-box solution—giving you the everyday simplicity you need to help reduce your physical footprint as well as your hardware, licenses, configuration and power/cooling costs. Dell's converged data center in a box is streamlined and easy to deploy with less than twenty minutes to configure—and in fewer than half the steps compared to a competitive solution.[2] By converging into a blade solution, you can respond more quickly to the challenges of your business.

Scale performance and capacity, seamlessly

Flexible and seamless scalability gives you a comprehensive enterprise-class solution, designed with EqualLogic's unique peer-scaling architecture that scales both performance and capacity simultaneously. And, as your storage demands grow, you can easily scale both inside and outside of the PowerEdge M1000e blade chassis. A Dell EqualLogic PS-M4110 blade storage solution has the ability to scale outside the server chassis to greater than 96% more usable capacity and dramatically better performance, with 40% more IOPS than competitive solutions in the market.[2]

Manage with ease

The EqualLogic PS-M4110 Blade Array harnesses EqualLogic's award-winning ease-of-use and all-inclusive software—all in a convenient blade form factor. Enterprise-class SAN features include EqualLogic array software (firmware), SAN Headquarters, and Host Integration Tools (HIT) for the Microsoft®, VMware® and Linux® platforms and applications you use every day. Additionally, server administrators now have EqualLogic Blade Array set-up and deployment capabilities tightly integrated with their existing Dell Chassis Management Controller (CMC).

Find your storage solution

With a variety of systems built for capacity and performance, there is a Dell EqualLogic solution designed to suit your needs. And with comprehensive Dell Data Management Services[3] that help plan, design, implement and support an efficient data management strategy and ecosystem, you can satisfy today's data availability, retention and recovery requirements while preparing to meet the demands of tomorrow.

> The industry's only fully redundant, enterprise-class storage array designed to fit inside a blade chassis

[1]Results based on June 2012 Internal Dell comparison research
[2]Principled Technologies, Inc. "Data Center in a Box Performance Test: Comparing Dell and HP Blade Solutions," August 2012 report commissioned by Dell
[3]Availability and terms of Dell Services vary by region. For more information, visit www.dell.com/servicedescriptions.

Dell EqualLogic Blade Array Features	PS-M4110E	PS-M4110X	PS-M4110XV	PS-M4110XS*
Product configurations				
Storage controllers	1 or 2 hot-swappable controller option available Each with 2GB of usable memory (4GB† of total memory) per controller & cache to flash for data protection			2 controller (only) Each with 2GB† of usable memory (4GB of total memory) & cache to flash for data protection
Network interfaces	Two (2) 10GbE connectivity with one dedicated management port accessible through chassis management controller (CMC)			
Hard disk drives	Fourteen (14) 2.5" hot pluggable hard disk drives			Nine (9) 10K SAS + Five (5) SSD
Drive capacities	500GB† or 1TB† 7.2K RPM NL- SAS	600GB† or 900GB† 10K RPM SAS	146GB† or 300GB† 15K RPM SAS	600GB† 10K RPM SAS + 400GB† SSD
System capacities	7TB† using fourteen (14) 500GB† 7.2K NL-SAS drives 14TB† using fourteen (14) 1TB 7.2K NL-SAS drives	8.4TB† using fourteen (14) 600GB 10K SAS drives 12.6TB† using fourteen (14) 900GB 10K SAS drives	2.5TB† using fourteen (14) 146GB 15K SAS drives 4.2TB† using fourteen (14) 300GB 15K SAS drives	7.4TB† using the allotted configuration Nine (9) 10K SAS drives and five (5) SSD drives
Technical highlights				
Host protocol	Any standards-compliant iSCSI initiators			
OS supported	Microsoft® Windows Server® 2003 R2 with SP2, Microsoft® Windows Server® 2008 SP2, Microsoft® Windows Server® 2008 R2, Microsoft® Windows® 8/Windows Server® 2012, VMware® vSphere™ 4.1, 5.0, 5.1, 5.1, Citrix® XenServer 6.0, Red Hat® Enterprise Linux® 5.7, 6.1, SUSE® Linux® Enterprise Server 10 SP4, 11 SP2, CentOS 5.6, Sun™ Solaris, IBM® AIX, HP-UX®, Mac OS® X, Novell® NetWare®			
RAID supported	RAID 5 (not recommended), RAID 6, RAID 10, and RAID 50			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 two (2) PS-M4110 Blade Arrays can be in a group, up to four (4) blade arrays per blade chassis. Additionally, the PS-M4110 can scale outside blade chassis to rack-mounted EqualLogic arrays for up to sixteen (16) in a SAN group.			
Reliability	Redundant hot-swappable controllers and hot-swappable disks Redundant network path with internal fabric wiring in M1000e chassis Redundant fans and power supplies provided by M1000e chassis			
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	Dell Chassis Management Console (CMC) integration EqualLogic Group Manager EqualLogic 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 RADIUS support IPSEC and SED			
Notification methods	SNMP traps, e-mail, syslog			
Physical	Half-height, double-wide storage blade Height: 189mm (7.44 inches), Width: 102mm (4.015 inches), Depth: 515mm (20.275 inches)			
Weight	27.54 lbs.(12.49 kg)	28.38 lbs. (12.87kg)	27.82 lbs.(12.62kg)	27.30 lbs.(12.38kg)
Power	Wattage: 450W; Voltage: 12VDC; Max power input: 450W; Input current: 37.5A			
Typical power	248.9W	261.0W	293.3W	230.4W
Dependencies and other components				
Blade enclosure	PowerEdge M1000e			
Blade I/O modules	Dell Force10 MXL, PowerConnect M8024-K, 8428-K and 10Gb-K Ethernet pass-through modules with external switches			
Power supplies and fans	Supplied by Dell PowerEdge M1000e Blade Enclosure			
Dell support and optional storage service offerings	3-year Dell Basic Service[3] 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.			

Simplify your storage at Dell.com/PSseries

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