



## DELL EQUALLOGIC™ PS SERIES AND MICROSOFT WS2008 HYPER-V

### ENABLING THE NEXT GENERATION VIRTUALIZED DATA CENTER

#### BENEFITS OF DEPLOYING THE PS SERIES ARRAYS WITH WS 2008 HYPER-V

- **COST SAVINGS THROUGH SERVER & STORAGE CONSOLIDATION** – Reducing IT costs by consolidating storage capacity, increasing hardware utilization, and optimizing the server & storage infrastructure.
- **EASE OF DEPLOYMENT & MANAGEMENT** – The PS Series can be operational in minutes, providing storage for your WS 2008 Hyper-V virtual machines.
- **HIGH AVAILABILITY INFRASTRUCTURE** – The PS Series delivers fully redundant and hot-swappable components including dual controllers, fan trays & power supplies, and disk drives with hot sparing capability.
- **RELIABILITY AND RESILIENCY** – The PS Series includes a complete set of enterprise software features at no additional cost that provides Network Load Balancing and Path Failover (MPIO).

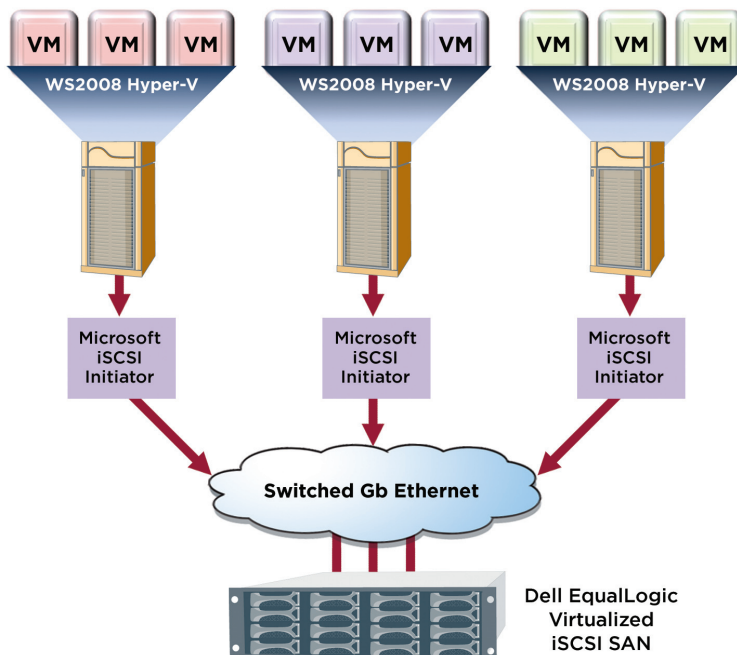
#### VIRTUALIZED STORAGE TO OPTIMIZE WS 2008 HYPER-V ENVIRONMENTS

Server virtualization is one of the most significant technology trends in IT environments today, and a key enabler of the next generation virtualized data center. Server virtualization relies on hypervisors to provide the abstraction layer between the operating systems and the physical hardware, allowing IT administrators the ability to consolidate server capacity, increase hardware utilization, and optimize their infrastructure all while improving service levels and network security.

With Microsoft® WS 2008 Hyper-V, server virtualization becomes truly pervasive, reaching all segments of the IT market, heightening the need for innovative, cost-effective storage solutions that can simplify SAN deployments and provide enterprise reliability. The Dell EqualLogic™ PS Series can provide a fully virtualized storage infrastructure that delivers high availability, resiliency, flexibility, and scalability that is simple and cost-effective to deploy, manage and grow.

#### DELIVERING AN ENTERPRISE-CLASS SERVER AND STORAGE INFRASTRUCTURE

In migrating to a virtualized data center, a mission-critical, enterprise-class infrastructure is paramount to ensure that critical business assets, residing on virtual machines, are protected against hardware failures, human errors, and natural tragedies. The infrastructure must support key capabilities including high-availability, reliability, and resiliency to provide for maximum uptime. The Dell EqualLogic PS Series is built on a fault tolerant architecture that includes redundant fan trays & power supplies, dual controllers with multiple gigabit Ethernet interface ports, and RAID-protected hot-swappable disk drives. In addition, an enclosure monitoring system provides component status, disk drive health and environmental conditions that alert administrators in the event of a potential or existing component failure.



The Dell EqualLogic PS Series provides a complete set of enterprise software features such as automatic load balancing, snapshot management, replication, volume cloning, volume management, storage virtualization, thin provisioning, SAN boot capability, roles-based administrative management, historical performance trending and reporting, tiering and pooling, and multi-path input-output (MPIO) with no additional licensing fees.

### **A HIGH PERFORMANCE, SCALABLE, INFRASTRUCTURE**

Built on a patented peer storage architecture, the Dell EqualLogic PS Series iSCSI SAN provides a high performance, reliable, scalable, storage platform particularly effective in Microsoft WS 2008 Hyper-V environments. The PS Series storage arrays function as peers, working together to share resources, evenly distribute workloads, and collaborate to help optimize application performance and provide comprehensive data protection for the virtual machines operating in a WS 2008 Hyper-V environment.

As workload demands shift or migrate between virtual machines and their physical host servers, the PS Series SAN automatically applies storage resources where and when needed without intervention or manual tuning. And as you add PS Series arrays, resources are automatically load balanced, allowing pre-existing workloads to seamlessly take advantage of new storage resources for enhanced performance.

In the Microsoft Hyper-V environment, performance is further optimized by advanced I/O multipathing integrated into standard Microsoft iSCSI drivers, developed by Dell engineering to optimally configure and enable the PS Series peer storage architecture, automatically monitoring and load balancing I/O across multiple arrays, network ports, and storage connections. Intelligent SAN balancing significantly improves the quality of load balancing, as path activity levels can be monitored and I/O loads shifted from heavily trafficked to less congested paths. The result: optimal performance automatic and easier management.

### **AUTO-SNAPSHOT MANAGER/MICROSOFT EDITION PROTECTS VIRTUALIZED TRANSACTIONAL WORKLOADS**

Many organizations are looking to deploy mission-critical transactional database applications (such as Microsoft SQL Server and Exchange) within a virtual server, however protecting these applications can be challenging. With high I/O and constantly changing information, making clean and consistent volume copies for backup and disaster recovery is difficult. The PS Series iSCSI solution automates these practices by including Auto-Snapshot Manager/Microsoft Edition (ASM/ME) with every array. With ASM/ME, administrators can attach data volumes directly to the iSCSI initiator in the virtual machine, to simply and easily create clean, consistent, hardware based snapshots of application datasets, quickly and easily recoverable to prior points in time. ASM/ME also integrates with standard backup software using the Microsoft VSS framework enabling you integrate into your standard backup processes and confidently deploy and protect transactional database applications in a virtualized IT environment.

### **THE MICROSOFT PARTNERSHIP**

Dell is a Microsoft Gold Certified Partner and works extensively to deliver tightly integrated solutions for Microsoft environments. The Dell EqualLogic PS Series product family has received Microsoft's WHCL certification and Simple SAN designation, meeting specific ease-of-use, ease-of-installation, and ease of management criteria. Advanced integration includes custom multipathing drivers optimized for performance and simplicity and Auto-Snapshot Manager/Microsoft Edition (ASM/ME), application level data management software delivering powerful and flexible data protection and rapid recovery for Microsoft Exchange and SQL environments.

SIMPLIFY YOUR STORAGE AT [WWW.DELL.COM/PSseries](http://WWW.DELL.COM/PSseries)

Dell Inc.  
300 Innovative Way  
Nashua, NH 03062 USA

Telephone: 603-579-9762  
Facsimile: 603-579-6910  
Toll Free USA and Canada:  
888-579-9762



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