Dell, Violin Memory, Emulex and Brocade: Open Database Acceleration Solution

Key Benefits

- Open platform for all databases and use cases

- Pre-configured, pre-validated and pre-tested open architecture

- Modular and scalable architecture for in-memory databases

- Economics to match business objectives

Highlights

- Up to 176TB of usable flash storage capacity

- Up to 4 million IOPS

- Up to 8 database PowerEdge servers with 384 cores

- 35¢ per transaction proven and tested in the Dell Solution Center

- Lower costs by reducing server core count and licenses by consolidating on this high performance platform

- Open, modular building block approach to large scale database

- Built in high availability and enterprise class management features

- Improve density by 90% - replace 3 racks with 3RUs

- Configuration and tuning included

- 16Gb/s GEN5 infrastructure included

This in-memory database solution provides an open-architecture solution that delivers extreme performance for all your database workloads, pre-built and pre-tested using best-of-breed technologies from Violin Memory, Dell, Emulex and Brocade.

The Solution

The Violin Memory and Dell joint solution is an open system with PowerEdge servers, storage and network pre-configured, pre-tuned, and pre-tested to run your choice of databases and applications, wth additional technology from Brocade and Emulex. This open system configuration results in:

- 50% application performance increase
- A highly available, fully redundant memory platform
- Dramatic reduction in infrastructure costs

The all-flash storage based architecture supports all workloads and is optimized for running high-performance data analytics, online transactional workloads, or data warehouse workloads. Reduce the time to build your database infrastructure by using a modular architecture, tested and validated by industry experts.

Achieve Resilient Database Performance

The database PowerEdge servers are comprised of Dell R820 that are compute-intensive platforms. We are also using 16Gb best-in-class Emulex GEN5 dual-port HBAs. Paring the Dell R820s with Violin All Flash Arrays results in a platform that provides memory-like performance at consistent low-latency. This is critical in environments where there are multiple read/write operations to your indexes, logs or any temporary databases, providing in-memory like experience.

In addition to performance and low latency, reliability is indispensable in mission-critical application environments. Violin All Flash Arrays are fully hot swappable and designed with full redundancy of all components to meet enterprise design demands. Combined, both Dell and Violin provide next-generation reliability, availability, and serviceability.

Dramatically Reduce Infrastructure Costs

To achieve the minimum latency and the highest throughput, administrators generally overprovision hardware or use software to mitigate but not fully eliminate performance issues. These workarounds are generally expensive in both capital as well as operation expenditures.

The open-system solution from Violin and Dell provides high throughput and maximized system resources, reducing the number of database instances and thereby reduce the number of licenses. A combined footprint that is lower than even purpose-built appliance, the Dell-Violin Memory Database machine reduces your total cost of ownership in terms of power, cooling and space.

Open Database Configuration

	2x Dell PowerEdge R820 Intel(R) Xeon(R) CPU E5-2697 v2 2 Sockets / 24 Cores / 48 Threads 256GB, 8 X 32GB DIMMs VMwareESXi 5.1.0 U2 Build 1900470 VMware vCenter Server 5.1.0 Build 947673 Total sockets/cores/threads in test: 4/48/96 Processor Speed 2.7 GHz DDR-3, 1600 MHz 4x Brocade M6505 16Gb fabric 2x Emulex LPe16002 - Dual Port 16Gb HBAs 2x Violin Memory 6616 All Flash Array 8 x 8Gb/sec FC ports vMOS 5.5.2

About Violin Memory

Business in a flash. Violin Memory transforms the speed of business with high performance, always available, low cost management of critical business information and applications. Violin's All Flash optimized solutions accelerate breakthrough CAPEX and OPEX savings for building the next generation data center. Violin's Flash Fabric Architecture™ (FFA) speeds data delivery with chip-to-chassis performance optimization that achieves lower consistent latency and cost per transaction for Cloud, Enterprise and Virtualized mission-critical applications. Violin's All Flash Arrays and Appliances, and enterprise data management software solutions enhance agility and mobility while revolutionizing data center economics. Founded in 2005, Violin Memory is headquartered in Santa Clara, California. For more information, visit www.violin-memory.com. Follow us on Twitter at twitter.com/violinmemory.

About Brocade

Brocade networking solutions help the world's leading organizations transition smoothly to a world where applications and information reside anywhere. For more information about Brocade (NASDAQ: BRCD) please visit: www.brocade.com.

About Emulex

Emulex, a leader in network connectivity, monitoring and management, provides hardware and software solutions for global networks that support enterprise, cloud, government and telecommunications. Emulex's products enable unrivaled end-to-end application visibility, optimization and acceleration. For more information about Emulex (NYSE:ELX) please visit: http://www.Emulex.com.

The Dell Technology Partner Program

Violin Memory, Brocade and Emulex are Dell Technology Partners and the Open Database Acceleration Solution is certified by Dell to run on the Dell platforms specified in the technical architecture section.

The Dell Technology Partner program is a multi-tier program that includes ISVs, IHVs and Solution Providers. This global program helps partners build innovative and competitive business solutions using Dell platforms. Program resources keep customer costs low and help to sustain competitiveness.

The program has a structured and streamlined process that combines technology and business strategies with Dell Solution Center expertise to onboard and test partner products on Dell platforms. This testing process helps ensure that products have met the technical requirements to perform well on Dell platforms.