



KEY HIGHLIGHTS
INDUSTRY: TECHNOLOGY



CHALLENGE

Reduce IT costs (human & capital) and deliver fast, reliable, end-to-end business continuity

SOLUTION

VMware Infrastructure 3 and Dell EqualLogic iSCSI SANs deliver a flexible, scalable, and highly available virtual infrastructure that provides the IT agility that Lulu requires to effectively run its business

VMWARE AT WORK

VMware Infrastructure 3 Enterprise, featuring:

- ESX Server 3 with VMFS
- VirtualCenter 2
- VMotion
- Distributed Resource Scheduler (DRS)
- High Availability (HA)

EqualLogic PS Series storage arrays, featuring:

- All-inclusive software features including snapshots, clones, replication
- Automated load balancing and seamless scalability

DEPLOYMENT ENVIRONMENT

- ESX Server running on a blade server environment
- Guest operating systems: Red Hat Enterprise Linux 3, 4, and 5, Windows 2000, Windows 2003
- Virtualized Production Applications: Proprietary applications that run the Lulu.com website, Apache web servers, FTP, Nagios and Cacti network monitoring, DNS, LDAP, Perforce source control, Cruise Control automated testing, OpenFire collaboration server.
- Virtualized Pre-Production Applications: the in-house code that makes up Lulu.com

“Dell EqualLogic SANs make it incredibly easy to provision and manage storage for a VMware cluster. As a result, almost all our new servers get deployed onto the VMware platform.”

Bill Montgomery

Manager of Information Systems, Lulu.com

Lulu.com

Lulu.com (Lulu) is a digital marketplace that eliminates traditional entry barriers to publishing by enabling content creators to bring their work directly to their audience. The company has approximately 125 employees.

“We are selling the technology that enables an author to distribute their intellectual property,” says Bill Montgomery, manager of information systems at Lulu. “If our mission-critical development servers—such as the source control server that provides testing and staging for the lulu.com application—were down for a day we’d suffer huge productivity losses.”

To help ensure that doesn’t happen, Lulu utilizes the VMware® Infrastructure 3 virtualization platform in conjunction with EqualLogic iSCSI SANs to provide a solid foundation for its core IT services. In its production environment, Lulu has approximately 120 virtual machines running on eight VMware ESX hypervisors—all of which is supported by three EqualLogic PS Series storage arrays.

By combining Dell’s advanced virtualized iSCSI SANs with VMware, Lulu has created an intelligent, fully virtual IT infrastructure that is easy to manage, auto-load balancing and seamless to scale. This advanced virtualized storage infrastructure also makes it easy for Lulu to take advantage of advanced features like VMware® High Availability and VMware vMotion—which enable auto restart of physical servers and live migration of virtual machines, respectively—ensuring protection and recoverability of ESX virtual machines.

Lulu’s successful use of VMware and Dell EqualLogic technologies was recognized by Nemertes Research, which awarded Lulu one of its 2008 Nemertes PilotHouse Awards for superior achievement in virtualization. “We want to be smart about how we use IT,” says Montgomery. “And virtualizing with VMware and Dell’s technologies has helped us do that.”

Results

- **Streamline IT administration.** “We use VMware Distributed Resource Scheduler (DRS) to handle the day-to-day fluctuations in server load that every IT organization deals with,” says Montgomery. “The difference is that the DRS software does this for us, with no system administrator intervention.”
- **Execute DR plans 83 percent faster.** “It takes an average of three hours to restore a physical server versus 30 minutes to restore a virtual machine,” says Montgomery. “That makes the actual execution of a DR plan a whole lot more manageable and less time consuming.”
- **Save hundreds of thousands of dollars in hardware costs.** “You only need to look at the consolidation ratio that VMware Infrastructure 3 gives us and compare that to the cost of buying and maintaining 120 rack mounted servers to see that it is a no-brainer,” says Montgomery.