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Leading Home Accessories Company Makes Emulex Connectivity a Keystone in Virtualization Strategy

Emulex's proven device compatibility and Virtual HBA technology supports continued use of SAN best practices

About Home Interiors & Gifts

Home Interiors & Gifts, Inc. is a member of the Direct Selling Association, and markets exclusive home decorative products through more than 100,000 independent decorating consultants in the United States, Puerto Rico, Mexico and Canada. Founded in 1957, the Dallas-based company's premium brands include Thomas Kinkade, Boehm at Home™ and the Better Homes and Gardens™ Collection. For more information, please visit Home Interiors on the Web at www.homeinteriors.com.

Home Interiors & Gifts, Inc. Virtualizes Information Technology Infrastructure for Cost Savings, Increased Efficiency and Flexibility

Home Interiors & Gifts, Inc., the largest direct seller of home accessories in North America, is virtualizing its compute infrastructure to provide the efficiency and flexibility it needs to support continued growth and financial success.

The privately-held company has more than 100,000 independent sellers, known as home interior consultants, who sell its exclusive line of home decoration and specialty items. The independent contractor consultants are compensated via a complex commissioning system, and all data related to order fulfillment and sales resides in the data center at the Company's headquarters in Carrolton, Texas. The IT organization also supports more than 500 employees working at four company facilities, including an automated warehouse and three operating offices. With a workload typical of a merchandising business—a mix of Windows, Office, CITRIX, ERP databases on Linux systems and some UNIX/Solaris applications—responsiveness and always ready access are critical.

Steven Ham, Senior Windows System Administrator at Home Interiors & Gifts, Inc., is transitioning the Windows server data center to a virtualized environment. While meeting initial management goals of cost savings through consolidation, the IT group is finding that deployment flexibility, dynamic allocation of resources and business continuity efficiencies are a major part of the payback equation for the project. As applications are migrated from standalone systems onto ESX servers, application data moves to the enterprise SAN. Looking forward, Ham expects this will yield benefits by reducing "hot spare" costs and speeding recovery in any failover event.

"The virtualization project began with the goal of consolidating platforms for more effective utilization of resources," says Ham. "We quickly discovered that being able to dynamically allocate resources to systems is a huge benefit. Another key benefit is recoverability; we no longer have to keep dedicated systems available for a disaster recovery situation when the time it takes to bring up a virtualized server is just 15-20 minutes."

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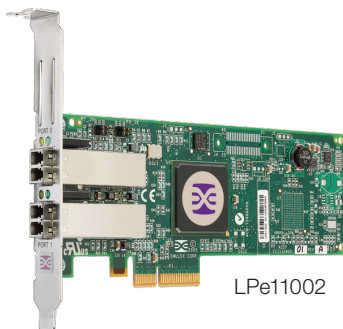
A Deliberate Approach

To make optimal use of current infrastructure, while planning for the future, the Home Interiors' IT team took a phased approach to its data center evolution. The virtualization decision was validated in development using VMware GSX. This was followed by deployment of the SAN-connected VMware ESX Server environment starting in late 2006. By the end of 2007, approximately 75 of 125 servers were ESX virtual machines, residing on Dell 2950 servers, with two Dell PE 1855 blade servers hosting additional stand-alone applications.

The Company's SAN architecture includes an EMC CLARiiON EX300 storage array, equipped with 6+ Terabytes (TB) each of SCSI and ATA disk drives and McDATA Spherion 2 Gigabit per second (Gb/s) switches. Back-up and archiving of lower priority data are handled with scheduled removal to an LTO (Linear Tape Open) system. As the virtualization implementation progressed, Home Interiors chose Emulex LightPulse® host bus adapters (HBAs) to leverage the native VMWare support and robust management tools, marking a change from its previous HBA technology.

"We looked at the capability of the Emulex Fibre Channel HBAs and management tools and saw features that were not available from other suppliers," says Ham. "On the hardware side, there is the native support of VMware. Fibre Channel should just work, and that's what we see with Emulex HBAs. With the HBA management tools, we get discovery and dynamic configuration capabilities that would otherwise require additional investment in tools running on other SAN components."

Ham anticipates further benefits from standardizing on Emulex, such as the company's strong relationships with other storage and network infrastructure suppliers. He cites the capabilities of Emulex tools to support consolidation and pooling of resources by providing a dashboard view of all connections in the SAN. And he notes that with a future move to a director-class core networking component, Emulex's proven device compatibility and Virtual HBA technology will support continued use of SAN best practices.

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Growing Demands on the SAN

A move to 4Gb/s SAN switching will support the faster network data rates that Ham anticipates will be needed to handle back-ups and I/O intensive applications such as Microsoft Exchange server. Through the first year of the virtualization project, ESX Server guests were migrated from standalone servers with localized, non-SAN attached storage. Thus, while initial measurements of SAN load at the start of the project showed utilization of 15-20 percent, the steady increase of connected hosts is driving the average utilization up to or above optimal rates.

In 2008, Home Interiors & Gifts plans to migrate applications such as the company's Exchange mailbox and SQL servers, which currently reside on standalone platforms. At that point, higher throughput will help to meet back-up window requirements while not impacting availability. Additional disk storage (approximately 4TB) will also be added.

"Our plan is to virtualize our large data repositories to gain mobility and recoverability," says Ham. "This will give us the capability to run such applications as Microsoft Exchange and SQL Server on one node during low use periods. This provides a window for maintenance, or to keep systems available in the event of an unexpected failure."

Ultimately, Ham sees the network evolving from its current heterogeneous architecture to a unified data and storage connectivity platform running on Cisco switching technology. Network attached storage is likely to move to a bladed solution and Solaris/Linux guests will migrate to VMware ESX Server. At that point, features such as industry-standard N_Port ID virtualization (NPIV) technology, which Emulex co-developed and helped to standardize, will enable dynamic allocation of storage, enhanced Fibre Channel I/O security and deployment of SAN best practices in virtualized server environments.

"We are impressed with the partnership between Emulex, Cisco and VMWare, and see the value of Emulex LightPulse Virtual HBA technology with industry-standard NPIV support as we make the transition to a virtualized data center environment," says Ham.

"When you plug in to a unified architecture, you clearly need to have I/O segregation and the security features provided by NPIV, and Emulex's support for this technology will be critical going forward. And the company's strong relationship with VMware and major storage providers gives us confidence that we have a connectivity solution that we can build on."

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