



## Easily-managed Connectivity Accelerates Storage Network for Leading Provider of Power Wheelchairs and Scooters

Emulex technology saves time and improves management of SAN connectivity in virtualized environment

### About The SCOOTER Store

Based in South Texas, The SCOOTER Store is the leading supplier of power mobility devices (including power wheelchairs and scooters) in the United States, with 60 locations in 48 states and Puerto Rico, and a nationwide network of service specialists. Since 1991, The SCOOTER Store has worked with approximately 130,000 physicians across the United States to help more than 350,000 people with limited mobility maintain their personal freedom and independence.

[www.thescooterstore.com](http://www.thescooterstore.com)

### Emulex LightPulse® Fibre Channel HBAs and vPort Management Application Play Key Role as The SCOOTER Store Virtualizes its Data Center

As a leading supplier of personal mobility products to elderly and physically challenged Americans, The SCOOTER Store has helped more than 350,000 people with limited mobility maintain their personal freedom and independence. The company relies on its data center to drive critical marketing, sales and customer support functions. However, from an information technology (IT) perspective, maintaining accurate patient and billing records as well as ensuring compliance with strict privacy regulations was a challenge. At the same time, The SCOOTER Store needed to manage costs more efficiently with best practice operations. The company realized that it needed a more dynamic and effective way to utilize its strategic data center to improve responsiveness to business demands.

With a key goal of 99.9 percent uptime and zero unplanned outages, The SCOOTER Store began moving to a virtualized data center infrastructure, aiming to maintain or even reduce its physical server count while increasing flexibility. Using Microsoft Virtual Server 2005, the company consolidated approximately 87 percent of its test and deployment environment to run on 18 servers, which host 50-55 virtual servers. The data center team is now moving to consolidate physical servers that support production applications, using Windows Server 2008 Hyper-V™ and Microsoft® System Center Virtual Machine Manager 2008.

In tandem with the Microsoft virtualization solution, The SCOOTER Store is using Emulex LightPulse Host Bus Adapters (HBAs) and Emulex LightPulse Virtual HBA technology to provision and manage its server-to-SAN connectivity. Emulex's LightPulse Virtual HBA technology, which was the first commercially available under the product name VMPIlot, enabled N\_Port Virtualization (NPIV) with Microsoft Virtual Server, automatically providing a unique HBA connection and SAN identity for each virtual machine.

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### Time and Management Advantage

With the implementation of System Center Virtual Machine Manager in its test and deployment environment, The SCOOTER Store realized productivity gains in both time savings and flexibility. By consolidating its servers from 53 to 13, The SCOOTER Store allowed its data center staff to virtually duplicate the production environment in an integration network that allows full evaluation of new applications before deployment.

With this initial virtualization project, The SCOOTER Store saved between \$150,000 and \$200,000 in IT hardware costs, yielding a 50 percent increase in return-on-investment, even before considering savings in energy costs. Additionally, the virtualization and management software solution is saving the company the equivalent cost of employing one to two full-time employees. These savings validate The SCOOTER Store's decision to move ahead with consolidation of production servers, using the next-generation of Microsoft virtualization technology and Emulex SAN connectivity solutions.

According to The SCOOTER Store, the time required to bring up a new server in the virtual integration network is about 30 minutes. Previously, the company needed half a day to build a physical system. The company will save even more time as the technology is deployed in its production environment.

"In the transition to Microsoft System Virtual Machine Manager and Hyper-V, Emulex technology is saving us time and improving management of SAN connectivity in the virtualized environments," said Eric Murcia, senior system administrator at The SCOOTER Store. "Emulex LightPulse Virtual HBA technology cuts provisioning time for a server-to-SAN connection by a factor of 10, which reduces time from 45 minutes to an average of three to five minutes. Emulex's application gets the job done the way it should be done, automating what used to be a time-consuming job and giving us great visibility to systems on the SAN."

### Growing Application Load

Founded in 1991, The SCOOTER Store is a unique service-oriented business that creates demanding requirements for its IT team. Business development involves a great deal of interaction with health care providers and beneficiaries, while compliance with federal and state regulations and billing/payment procedures is critical to its success. As a result, the bulk of applications are customized and developed in-house.

The operational data at the core of the data center environment primarily resides on HP EVA (Enterprise Virtual Array) Fibre Channel disk arrays with Cisco switches incorporated in the Storage Area Network (SAN). Storage is configured for high availability in support of the 99-percent-uptime goal for the data center.

With an increasing percentage of the nation's population aging, the strong historical growth of The SCOOTER Store is expected to accelerate within the next decade. The anticipated need for more mobility solutions is The SCOOTER Store's principal motivation behind a virtualization strategy to consolidate its data center production environment.

With Hyper-V technology in the Windows Server 2008 operating system, The SCOOTER Store plans to consolidate multiple server roles as separate virtual machines, and even run multiple operating systems as needed, on a single virtual machine. Prior to the virtualization project, a new server would be put in place to support each new application deployment. The company now expects that it can virtualize up to 70 percent of this environment in the next few years.

"We are implementing one or two new virtual machines a week," said Murcia. "The last physical server installed was an HP Blade Server in 2008. While we may need to replace older hardware in some instances, we are well on the way to holding the hardware count at approximately 155 physical servers, even as we grow the number of virtual machines on-line."

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### Front-Line Applications

The improvements in server and application management realized in the virtualization project will translate into new capabilities offered by the IT team in coming years. For example, The SCOOTER Store will deploy a high availability cluster running Hyper-V to support outbound business development through the company's call center, beginning with an automated dialer solution.

The SCOOTER Store's Murcia sees a big role for Emulex's management application in this and other deployments, leveraging its support for NPIV with Microsoft Virtual Server and Virtual Machine Manager. Emulex's management application allows storage administrators to create Virtual Ports (VPorts) with an attached LUN (Logical Unit Number). This virtualized LUN connection can then be used to create and manage VMs using Virtual Machine Manager.

"In the high availability clustering that we are planning, having LUNs associated with virtual machines will let us move applications to the virtual environments with more confidence," added Murcia.

Emulex's LightPulse Virtual HBA technology supports Emulex LightPulse Host Bus Adapters (HBAs) and Converged Network Adapters (CNAs) operating with NPIV-enabled firmware, including the company's 4Gb/s and 8Gb/s Fibre Channel HBAs. At The SCOOTER Store, Emulex NPIV-supported HBAs are being phased in, replacing earlier generation 2Gb/s Emulex HBAs, as part of the rolling data center and network re-refresh. The VPort management capability is now a feature of HBAnyware,® which has been used for several years to provision and manage earlier generation network cards.

"Additionally, the latest version of Emulex HBAnyware gives us the ability to see and manage each of the server-to-SAN connectivity points," said Murcia. "Having the ability to see which ports are connected and which are active at any time is an absolute benefit for us."

The SCOOTER Store is also looking at the capability to introduce Emulex CNAs into its SAN architecture. The new Fibre Channel over Ethernet (FCoE) technology supports integration with next-generation Cisco products that the company plans to deploy in coming years. Equally important, Emulex CNAs use the proven LightPulse common driver model implemented in the company's Fibre Channel HBAs, ensuring interoperability, ease-of-use and all of the visibility and connectivity management benefits realized in multiple generations of Emulex adapters.

"Overall, Emulex connectivity is making a significant contribution to a more dynamic and effective data center that is increasingly seen as a strategic asset to The SCOOTER Store," concluded Murcia.



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