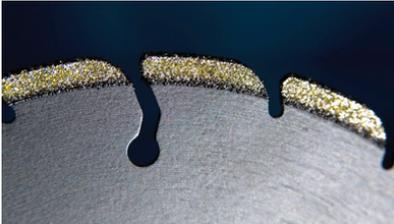# PARK INDUSTRIES

EMC VNXe unified storage and virtualization of mission-critical applications, such as Microsoft SQL, transform IT into a business asset

Park Industries is a leading manufacturer of stone working machines including granite saws, stone splitters, and stone polishing machines. Based in St. Cloud, Minnesota, the company has installed more than 7,000 stone working devices in more than 20 countries. Park Industries is the only completely U.S.-based company that builds, sells, and services its own equipment in the industry

Although IT has traditionally been viewed as a support function at Park Industries, recent years have seen a fundamental shift.

"It hasn't happened overnight, but gradually IT is becoming more of a strategic business partner with the other departments in the company," says Daniel Mettling, information technology manager, Park Industries. "We are now focused on technology investments that will solidify our infrastructure and enable our staff to focus on business solutions, rather than spending all of our time on hardware and software maintenance."

BUILDING A CASE FOR SERVER VIRTUALIZATION

This renewed business focus was the driver for the Park Industries IT team to explore virtualization technologies as a means of upgrading the company's aging data center. Previously, the data center consisted of up to 16 single-application servers that were highly underutilized; the server with the heaviest use was only at about 10 percent of processor utilization, while most of the others were at only one percent.

"With so many servers doing only one or two tasks, significant hard drive space and processor utilization were being wasted. We could not afford to continue having this valuable equipment sitting there, inactive for so much of the time," Mettling explains. "Our data center was a prime candidate for virtualization."

A FULLY INTEGRATED STORAGE ENVIRONMENT

Park Industries chose to base its new server virtualization environment on VMware® vSphere™, with the EMC® VNXe™ unified storage platform providing a simple, efficient, and affordable virtual storage solution. To date, the IT department has migrated from 16 physical servers to seven production virtual servers and two hosts running in the VMware software environment—with the ultimate goal of reducing the number of physical servers to three.

Applications supported in the new virtualized data center include Microsoft SQL Server, Microsoft Exchange, and Oracle JD Edwards. EMC partner, St. Croix Solutions, provided systems integration and installation for the VNXe solution.

An important criterion for Park Industries when they were evaluating storage solutions for the new virtual environment was the platform's ability to integrate with VMware and communicate seamlessly with the VMware vCenter™ Server. The VNXe storage provisioning and management interface, EMC Unisphere™ enables the IT staff to manage VMware hosts, view the breakdown of storage consumption by applications and virtual servers, and make decisions on storage allocation—all from a centralized management console.

"I really began to appreciate VNXe and Unisphere when I found I was able to manage a complete VMware software upgrade all within the VNXe environment. This level of flexibility, plus the fact that you can make software changes in the background without having to take any components offline, represents huge time savings in maintenance for me and my staff," states Mettling.

100 PERCENT UPTIME FOR CRITICAL BUSINESS SYSTEMS

Prior to server virtualization, the Park Industries server environment was operating above 99 percent availability, but at great cost to the IT staff, who were working overtime to nurse the aging servers and keep them running efficiently. For disaster recovery, the company had put a significant amount of capital into spare hard drives that were going unused. Now, Mettling reports that the applications in the virtual environment are running at 100 percent availability.

"Since SQL Server is the foundation for our ERP and CRM systems, any downtime means we can't log service calls, put sales orders in, or even track customer order histories," he says. "With virtualization, uptime is practically guaranteed—and we also have greatly simplified and improved our disaster recovery processes."

SIGNIFICANT PERFORMANCE IMPROVEMENTS

By comparing current metrics to those taken before virtualization, Park Industries' IT department has been able to document significant across-the-board performance improvements. These include comparing the time it takes local Outlook instances to connect to the Exchange Server, or the time required to deliver a mass email message to the entire company.

"As we continue to add virtual servers, we are constantly testing the system to ensure that resources are not being stolen from the Exchange server or SQL Server in such a way that the user experience would be affected. We've seen no efficiency or speed losses in our applications; in fact, everything is running faster than before virtualization," explains Mettling. "For instance, we've been able to document a nearly two-thirds reduction in mouse-click reaction times for our Oracle JD Edwards enterprise resource planning (ERP) system because data is getting transferred much faster."

With VNXe, Mettling estimates that disk reads are twice as fast as they once were in the previous, physical server environment. In one example, he was able to transfer a set of the marketing department's media files, some as large as 50 MB, from an old Windows 2000 storage application to the VNXe in less than half the time it would have taken in the previous environment.

ANNUAL COST OF OWNERSHIP REDUCED BY $30,000

Another important metric that has generated significant company support for virtualization is the cost of ownership, compared with the previous server environment. Taking into account the capital investment in equipment, power consumption, and the IT team's time to maintain and manage each physical server, Park Industries has documented annual savings of almost $30,000. This figure is expected to grow as the company continues to build out its virtual server environment and replace the remaining physical servers.

CHANGING THE ECONOMICS OF IT

"The new virtual server environment has changed the economics of how we manage IT projects. Because I'm now freed from day-to-day server maintenance and systems administration tasks, I can spend my time on higher-value projects that will have a real impact on the business," says Mettling. "If I need to put up a test server for our new website design, I can create a virtual server in a fraction of the time—and cost—of a piece of physical hardware. This type of flexibility has helped me focus more on strategic business requirements, and to react more quickly and be more responsive to our users' needs."

In one example of this flexibility and responsiveness, an employee in the Park Industries service department recently needed temporary storage for a collection of 30-gig databases. Mettling was able to create a 200-gig shared folder on the VNXe system and upload the data in a matter of minutes.

"Before, we might have opted to go out to an electronics store and buy this employee an external hard drive. Not only are those devices not reliable, but it would have taken days, or maybe weeks, to transfer the data through a USB connection," he says. "This is only a small example of how VNXe has helped us work smarter and more efficiently. VNXe and VMware are helping us to be a better company because they are so much easier to maintain—which allows us to be more responsive and focus more on the business."

LOOKING AHEAD: VIRTUAL END USER COMPUTING

With the success of the server virtualization project, Park Industries is now exploring options for a virtual end user computing infrastructure.

"Our business is a natural for virtual end user computing because much of the environment is very hard on physical machines; our shop floor, for instance, generates a large amount of metallic dust," says Mettling. "Since the lifespan of PCs there is so short, we typically deploy our older, slower machines—meaning the shop personnel have to live with less-than-optimal performance."

He continues, "With virtual end user computing, we'll be able to deliver high levels of performance to all areas of the business, and the VNXe will be absolutely critical in order to provide the high-performance storage and images to support all of our desktop machines. The VNXe will truly be the backbone for our entire virtual infrastructure."

"VNXe and the virtual server environment are helping us to be a better company because they are so much easier to maintain—which allows us to be more responsive and focus more on the business."

Daniel Mettling
Information Technology Manager

CONTACT US

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