

INDUSTRY

- Health Care

CHALLENGE

- Optimize the IT environment to combat data center infrastructure challenges such as power, cooling, and space.

SOLUTION

- Use VMware to consolidate servers and provide a more efficient environment.

BENEFITS

- Reduced backup times
- Improved application response time
- Reduced cost of ownership

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Brad Gerrits
CIO/Director of Information Technology
Lakeview Medical Center

Server Virtualization Solution Using VMware

Lakeview Medical Center



The Customer

Lakeview Medical Center (www.lakeviewmedical.com) is an independent, nonprofit, 75-bed community hospital that serves northwest Wisconsin. The organization boasts modern facilities with state-of-the-art technology and offers the area's largest number of full-time, resident doctors and specialists on its staff.

The Business Challenge

Lakeview Medical Center was faced with the challenge of managing a rapidly growing organization with a data center that was originally designed to handle a fraction of the actual workload. This undue stress began to cause a number of day-to-day problems, the most critical of which was application availability. “Being a 24-hour healthcare facility, our need for high availability for our patient care applications is a must,” explained Brad Gerrits, CIO/Director of Information Technology for Lakeview Medical Center. “We simply couldn't afford to have patient information unavailable due to an infrastructure failure in our data center.”

Further extensions of Lakeview Medical Center's data center problems included reduced floor space, power and cooling issues, and server sprawl. The total cost of ownership for their data center needed to be controlled in order to grow within the existing footprint.

Lakeview Medical Center turned to CDW to design and implement a solution that would provide the needed results.

Leveraging CDW's Expertise

CDW's experience as a VMware Authorized Consulting Partner, a Microsoft Gold Partner, and an IBM Premier Partner allow its engineers to assist clients with everything from determining how virtualization will impact their business, to implementing the right virtualization solution for their environment. After assessing Lakeview Medical Center's needs and analyzing their current issues, CDW was able to illustrate how a VMware Infrastructure virtualization solution could consolidate physical systems in the data center onto fewer servers with VMware, allowing for:

NOTE: CDW acquired Berbee Information Networks in 2006.



ABOUT CDW

CDW has delivered technology solutions that drive bottom line results for our customers. Our entrepreneurial spirit and values guide us and we continue to set the standard for uncompromising customer support and technical leadership.

WHY CDW

CDW is a proven partner for IT solutions, including unified communications, security, remote managed services, information worker solutions, and virtualization and optimization. CDW is a leading provider of technology for business and is among a handful of companies to achieve the highest level of partnership with our strategic partners.

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- Application workload consolidation onto fewer servers and storage devices
- Lowered operating and acquisition costs typically by 30% - 45%
- Increased server hardware utilization
- Reduced power consumption
- Improved manageability
- Increased staff productivity
- Disaster Recovery readiness

Results: Availability, CPU Utilization, Freed Tech Time

Typically, health care organizations want their data center onsite rather than use an outsourced hosted solution. In this situation, servers are deployed at a 1:1 ratio (one server for one business application). While this model can provide a reliable environment, server utilization rates are typically low and valuable floor or rack space is inefficiently used. Using a 1:1 ratio also requires IT staff to spend a large amount of time servicing the environment to maintain reliability. To combat these issues, a growing trend is to implement a virtualization solution.

After understanding what virtualization had to offer, Lakeview Medical Center decided to adopt the industry trend and consolidate servers with a virtualization solution. During the initial roll out, Lakeview Medical Center consolidated two-thirds of its servers to achieve a 4:1 ratio.

"A big advantage that VMware gave us was the ability to go to a 4:1 ratio," commented Gerrits. "Being able to decommission under-utilized servers helped us save data center space and infrastructure resources, not to mention allowing us to standardize on servers. Our future plans call for up to an 8:1 ratio, and with less servers comes less risk of hardware failure."

The combination of VMware with VirtualCenter and vMotion provided dramatic results in application availability. Lakeview Medical Center staff now access two mission critical applications on a daily basis, Affinity and EDM, both of which provide patient information. Both of these were migrated to the VMware ESX servers to provide not only high availability in case of system failure, but also to ensure that

the applications remain online during routine hardware maintenance. "VMware has performed above and beyond our expectations in regards to high availability. We have utilized all the core functions of VMware ESX Server and are still amazed at the technology behind this product," said Gerrits.

A variety of tools were also provided to free up IT staff away from routine tasks. For example, VMware allowed Lakeview Medical Center to standardize its Operating System throughout its server environment, propagating a "build it once, deploy it to many" philosophy. New servers can now be built and old ones decommissioned in a fraction of the time it took before. In real world terms, server provisioning time has been reduced 75 percent and reboot time has dropped to under 30 seconds.

Other benefits that the VMware solution provided included additional manageability and improved application availability by allowing for:

- Automatic optimization and allocation of entire pools of resources for maximum hardware utilization, flexibility, and availability
- Proactive migration of virtual machines away from failing or under-performing servers
- Centralized management through VirtualCenter's single interface to manage and monitor the virtual environment

Because of the success of CDW's implemented VMware solution, Lakeview Medical Center is now developing a roadmap for its next phase of growth which includes upgrading its VMware solution to VMware Infrastructure 3, the latest release of ESX Server. "One of the major reasons we decided to go with a VMware solution was due to the impressive skills and knowledge that CDW's staff brought to the table from the conceptual and introductory phases through using virtualization as part of our disaster recovery strategy," comments Gerrits. "I would highly recommend CDW to any organization. It has been a pleasure doing business with CDW. We have piece of mind and confidence that we will be working with professional and competent resources. The job was done right from the start and support along the way has been second to none."