Northwest Radiology Network builds resilience with IBM System x and IBM System Storage solutions

Overview

- ***Challenge***
  Increase redundancy and resiliency in Northwest Radiology's vital systems
- ***Solution***
  Consolidate and virtualize servers and storage with IBM System x3650 and IBM System Storage™ DS3400
- ***Key Benefits***
  Eliminates single points of failure, consolidates storage, expands capacity and simplifies systems maintenance and management

Northwest Radiology Network is a healthcare organization that provides comprehensive diagnostic reporting services throughout central Indiana. The diagnostic reports contain an array of patient health information, including medical exam results and imaging, such as mammography, ultrasound, CT, PET-CT, nuclear medicine, MRI and X-ray. In 2007, Northwest Radiology released over 135,000 reports with a staff of 180 employees including 40 physicians.

When Marty Buening was hired as Northwest Radiology's new Director of Information Technology, he quickly realized that the company's existing IT infrastructure was vulnerable at multiple single points of failure. The mission critical diagnostic reporting function lacked redundancy in the supporting systems. If a server or software component failed or needed maintenance, there was no automatic switchover to backup, and Northwest Radiology could not provide services until the component was repaired. "Radiology information systems have become a very integral part of health care," explains Buening. "A reliable IT infrastructure is key."

A first-tier solution

The diagnostic reporting function at Northwest Radiology was running in a mixed-vendor environment. Buening worked with IT service provider Software Information Systems (SIS), an IBM Premier Business Partner, to analyze the diagnostic reporting and storage infrastructure, and suggest options to address the single points of failure. After completing the analysis, SIS recommended a new solution featuring a cluster of two IBM System x3650 servers, a storage area network (SAN) with an IBM System Storage DS3400 device, and virtualization via VMware. Buening viewed IBM's solution as a first-tier option with better vendor support than competing solutions. Buening elaborates, "We felt that IBM was a more mature vendor in this marketplace, with more experienced service engineers in place to support the solution."

Eliminating single points of failure

With SIS providing implementation services, Northwest Radiology replaced seven existing servers with the two IBM System x3650 rack servers, load balanced over fibre channel connections. The functional hardware environment was virtualized with VMware ESX Server and expanded to 15 Microsoft® Windows® virtual machines—effectively more than doubling computer resources while increasing and consolidating storage space. The project team chose the x3650 model as the best value because it met their sizing and power requirements while remaining cost effective.

For a shared data storage solution, Northwest Radiology chose the DS3400, which is optimized for use with System x™ servers. "Inch per inch, the footprint of the SAN is more efficient," Buening says. "The DS3400 was everything we were looking for in terms of features, price and performance. Plus, it can continue to scale out as future needs require."

Protecting mission-critical applications

By implementing a new server cluster and storage solution from IBM, Northwest Radiology has eliminated the single points of failure that threatened their critical daily operations, and has gained the capability to easily repair, update and configure servers with no visible downtime. IT administrators can provision new virtual servers in a matter of minutes, a task which used to take weeks. The IBM solution has also given the company expanded capabilities for remote management—administrators can now manage 95 percent of their tasks remotely.

"Thanks to IBM, we now have a higher level of confidence in our ability to deliver services with fewer single points of failure," Buening reports. "We're protecting our central applications—and our brand: 'Trusted Imaging Since 1967.'"

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>
> – *Marty Buening, Director of Information Technology, Northwest Radiology Network*

For more information

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For more information about the Northwest Radiology Network, visit: www.northwestradiology.com

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