

Berkshire Health Systems increases performance and provides disaster recovery with IBM storage and server technology



Overview

■ **The Challenge**

Build a new data center for disaster recovery and refresh the hardware in the current center

■ **The Solution**

Replace a Meditech installation with an IBM System Storage™ DS4800; build a new production center to mirror and connect via fiber optics to the first center for disaster recovery and deploy a storage area network (SAN) with IBM System Storage DS4800; and replace non-Meditech infrastructure with 65 IBM BladeCenter® servers and an IBM TotalStorage DS4500

■ **The Benefits**

Five-fold increase in performance of the Meditech hospital information system and the ability to recover from downtime within seconds—reducing risk tenfold.

The facility that now houses one of Berkshire Health Systems' two data centers may have been built in 1901, but any indication of antiquity stops there. Berkshire Health System, a private, not-for-profit regional healthcare system in rural western Massachusetts, is composed of two distinguished hospitals that provide advanced medical services usually found in large urban areas. Berkshire also comprises 70 physicians' offices and 20 nursing homes and assisted living facilities, giving Berkshire County and the surrounding communities the most comprehensive medical care available.

To support such an impressive and far-flung medical network, Berkshire's information systems had to be equal to the task. But because of limited funding, for years the IS group was making due with a single data center composed of a mix of aging equipment that proved risky as the healthcare industry rapidly became more dependent on information systems. For example, standard healthcare applications such as laboratory and pharmacy became extraordinarily complex and entirely automated, putting enormous strain on Berkshire's lone computer system's performance and storage.

That all changed when Berkshire began discussions with Park Place International, an IBM Business Partner. In 2006, Berkshire will have completed a three-phased project that will refresh the equipment in the current data center, build a new data center to mirror the first for disaster recovery and install three high-performance storage area networks (SAN).

“With the installation of the new data center, we are better prepared to maintain and access information—a critical task given that the data center needs to support two hospitals, a long-term care facility, 70 physician offices and two payroll systems. Now, we can access the production center within minutes.”

—Joe Diver

Berkshire Medical Center Chief Information Officer

Finding the right systems integrator

Berkshire Health Systems' sole data center consisted primarily of a patchwork of 100 Intel®-based servers that included approximately 35 servers running a Meditech hospital information system. The rest of the system supported the range of functions needed to run a far-flung network of healthcare services, from DNS to email. A single Meditech SAN provided storage.

Berkshire envisioned rebuilding the aging infrastructure, installing a second data center for disaster recovery and achieving more efficient system management. And most critically, Berkshire wanted a single, reliable systems integrator on whom it could rely to realize its vision efficiently and within budget.

The bidding came down to two systems integrators. In the end, Berkshire went with Park Place International. Berkshire chose Park Place based on its strength as a Meditech integrator and its over 150 supported Meditech-specific hospitals, the processing power of IBM BladeCenter server technology and the scalability and performance of the IBM System Storage DS4000 Series. Being a not-for-profit, Berkshire also found Park Place's warranty, service offerings and maintenance contract to be attractive.

Three-phase approach keeps things online

After seven months of due diligence that included the bidding process, Park Place brought the project to life in three phases while keeping the system up and running.

In Phase I, Berkshire's Compaq-based Meditech installation was replaced with an IBM System Storage DS4800, IBM's latest and most powerful DS4000 disk storage system, making it perfect for an environment like Berkshire's that has a high demand for storage and performance.

Phase II saw the construction of a new data center that ultimately would be used as Berkshire's production center. This data center consists of approximately 30 IBM BladeCenter blade servers connected via fiber optic cable to a DS4800 SAN that mirrors the first SAN. This IBM-based data center allows Berkshire to run its highly diverse number of applications on a single architecture, reducing complexity, increasing performance, improving system management and delivering flexibility while driving down the total cost of ownership. The SAN finally gave Berkshire the disaster recovery capability that it was sorely lacking, increasing reliability and uptime significantly.

In Phase III, Park Place replaced all of the non-Meditech infrastructure—consisting of approximately 65 servers, with IBM BladeCenter servers and a DS4500 SAN.

Positioned today for the future

With the new data center, a refurbished center and three SANs, Berkshire Health Systems finally has an infrastructure that dramatically reduces its risk. Berkshire now has the ability to keep users up and productive because, if a server needs to be taken offline, the IS staff can switch over to the mirrored system in minutes. Before, users could be offline for hours or even a day as the IS staff worked on the system. Berkshire now can actually switch over between its entire two data centers. Productivity throughout the healthcare system is improved because the IBM BladeCenter servers actually run the Meditech hospital information system five times faster than even Meditech forecasts that it will run.

Today, Berkshire's Meditech hospital information system handles its 35,000 daily transactions easily. But, if that should change, future growth is ensured because IBM BladeCenter scales easily, and the mirrored data centers allow the IS staff to take one center down to add servers while the other continues to support healthcare operations. With IBM Business Partner, Park Place International, Berkshire has found a long-term partner that it can trust and depend on to help Berkshire meet the continued demands of its healthcare users.

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