

Singing River Health System

EXECUTIVE SUMMARY

Challenge

Deliver superior patient care by sharing clinical information among hospitals and community medical clinics over a high-performance, reliable network

Solution

- Brocade VDX® switches
- Brocade VCS® Fabric technology

Results

- Reduced Epic electronic health record (EHR) login time by nearly half the industry standard
- Enabled seamless business continuity in the event of a disaster
- Delivered improved network performance to meet data requirements of EHR, medical imaging, and mobile devices
- Simplified management

Brocade Helps Singing River Health System Transform Care Delivery

In 2005 when Hurricane Katrina blasted the Mississippi Gulf Coast, it devastated Pascagoula, Mississippi, flooding 92 percent of the coastal town and destroying or damaging 95 percent of its homes and businesses. Fortunately the town's Singing River Hospital suffered only a four-hour power outage and was able to stay online and receive patients during and after the hurricane. However, the experience left hospital leadership with an indelible lesson: Disaster recovery solutions are critical to maintain the IT systems that support uninterrupted patient care and those solutions begin with the IT network.

The organization began to redesign its IT network, data storage, and backup capabilities to ensure business continuity in the event of a disaster. In addition, a plan was developed to support the growing bandwidth demands of its Electronic Health Records (EHR), medical images, analytics, and mobility.

Singing River Hospital is the 415-bed flagship of Singing River Health System, which serves patients in southern Mississippi and Alabama. The health system's 2,600 employees and 300 physicians provide centers of excellence in heart, cancer, neuroscience, women's and children's and rehabilitation health. In 2012, Singing River went live with an Epic EHR that included computerized physician order entry (CPOE) and linked it to its existing radiology picture archiving and communication system (PACS),

cardiology PACS, and robotic pharmacy to better support the continuum of care.

Over the years, the network has transformed from having 25 servers and no switches to more than 700 servers and state-of-the-art switching. As clinical data, images, and video continued to increase and strain network bandwidth, response time, and network uptime, Singing River executives realized that their goal of seamless sharing of clinical information among hospitals, clinics, and physician offices required upgrading the health system's IT infrastructure.

Based largely on its success with Brocade® storage area network (SAN) technology, the health system selected Brocade to also provide its Ethernet IP network and data center backup solution. Brocade offered the most advanced and easiest-to-implement technology

at the right cost. "Everything we do now is electronic. All our data passes through the Brocade IP network and storage infrastructure. The data network is very robust," says Aaron Marsden, Network and Database Administrator at Singing River.

Faster Backup and Reliable Business Continuity

Prior to Katrina, the health system had built-in conventional redundancy to address outages. "Hurricane Katrina changed our way of thinking in terms of fast recovery and business continuity. We designed our network infrastructure to accommodate a hurricane environment by utilizing two separate data centers and replicating our data where appropriate," says Marsden. Using networking technology from Brocade, Singing River now takes only seconds to establish business continuity in the event of a disaster.

User response time also improved dramatically with the upgraded network infrastructure. When the hospital system implemented its EHR with Citrix servers, user response time was an industry-standard 15 seconds. After deploying Brocade VCS® Fabric technology, which includes virtual cluster switching, the response time dropped to 7 seconds—including remote sessions under the highest data load possible.

"By using Brocade VDX switches on both sides of our network, we're able to provide our end users with optimal performance and availability. Healthcare is a 24x7 environment and it's critical that we keep our information online and at the fingertips of our physicians and clinicians in order to provide world-class, quality-driven healthcare," says Marsden.

A Future Poised for Growth

Singing River's network infrastructure is dramatically more efficient and will support a changing healthcare landscape. The health system is implementing Virtual Desktop Infrastructure (VDI), which uses a thin-client model to enable each user's computer desktop to run in a network server environment.

"We're very excited about VDI because we can generate significant ROI by cutting costs at the desktop level," says Marsden. "At the same time, because Windows 7 is an environment that can run end-to-end on our network, users can go to any device anywhere on the network and display their desktops. We have the same look and feel to our desktop wherever the user goes, even from home."

As with many healthcare organizations, data, voice, and video traffic over Singing River's network is expected to grow exponentially. Scalability is a must-have to support population health and the

WHY BROCADE

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—Aaron Marsden, Network and Database Administrator, Singing River Health System

increased use of Big Data, analytics, and mobile devices by both staff and patients.

"The patient is at the center of everything we do," says Daphne Gibboney, RN, Epic Project Coordinator. "I think the future is secure now that we have a strong foundation with our network." For more information, visit www.brocade.com.

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