

COMMUNITY HOSPITAL OF LONG BEACH



IP NETWORK

Southern California Hospital Delivers High-Touch, High-Tech Patient Care

EXECUTIVE SUMMARY

Challenge

Deliver exceptional patient care by upgrading the existing networking infrastructure to support server virtualization, mobile carts, digital imaging, and picture archiving

Solution

- Brocade FastIron Edge X Series at the network core
- Brocade FastIron GS Series and FastIron WS Series at the network edge
- Brocade Mobility controller for the WLAN
- Brocade Mobility Access Points (APs) for wireless access
- Brocade Direct Support Essential

Results

- Saved \$1 million on film costs annually by digitizing diagnostic images
- Reduced operational and capital expenses by \$100,000 through server consolidation
- Provided support for server and desktop virtualization through a high-performance IP network
- Enabled flexible, mobile patient care using wireless workstation carts

The Community Hospital of Long Beach has a long and rich history in Southern California of providing healthcare for all who need it. First opened in 1924 with 100 beds and a staff of 75, this non-profit institution gradually expanded its facilities and medical technology over the next several decades.

As with any organization that's been around more than 85 years—especially a medical facility facing an upheaval in healthcare technology—the Community Hospital of Long Beach needed to upgrade its networking infrastructure to continue delivering superior medical care to the community.

BUILDING A NEW NETWORKING INFRASTRUCTURE

The Community Hospital of Long Beach endorses the philosophy of bringing “high tech to high touch,” meaning bringing technology into healthcare providers’ hands, according to Robert J. Klingseis, Director of Information Services and Technology at Community Hospital of Long Beach.

“We have a number of initiatives, such as server consolidation, digital imaging, picture archiving [PAX], and electronic medical records [EMR], that move a high volume of

digital data onto the network,” says Klingseis. To support these improvements, the hospital was interested in building a new data center and upgrading its wired and wireless networking infrastructure.

The hospital's existing infrastructure did not have the capacity, high-availability, and security features that are must-haves for a medical environment requiring 24×7 access to patient data and medical information. The Wireless LAN (WLAN) performance was particularly troublesome. The hospital wanted the WLAN to support applications that would allow the emergency department to view diagnostic images and patient records as well as handle bedside registration and dispense medications.

INCREASED MOBILITY AND ACCESS TO INFORMATION

The hospital deployed Brocade® FastIron® Edge Series X switches with Power over Ethernet (PoE) capabilities at the network core and FastIron GS and FastIron WS switches at the network edge. A Brocade Mobility controller and Access Points (APs) were distributed throughout the hospital.

BROCADE

"In our emergency department, medical professionals use mobile carts, or 'Workstation on Wheels' [WOWs], that allow staff to admit patients at the bedside," explains Klingseis. "Brocade mobility solutions allow untethered wireless access in our emergency department so medical staff can take a WOW from room to room as needed." The high-speed wireless infrastructure delivers valuable patient information directly to the medical staff, which they can access and update via the WOWs.

COST SAVINGS AND HIGHER PRODUCTIVITY

The Community Hospital of Long Beach is also using virtualization technology from VMware at the server level, with plans to extend it to the desktop. The hospital relies on Brocade networking infrastructure solutions to provide the performance and scalability necessary to support these virtualized environments. Through virtualization, the hospital has consolidated 20 physical servers down to three, resulting in a cost savings of up to \$100,000.

By digitizing the diagnostic images, the hospital is saving about \$1 million annually because it no longer has to purchase film. The new infrastructure is also helping to improve staff productivity. "Radiologists are saving a tremendous amount of time, and they are able to accomplish more during their workday," Klingseis says. The hospital saves about an hour a day per physician because they do not have to physically be in the radiology department to view X-rays and other diagnostic images. This capability has also led to an overall better experience for patients, since they can get results faster from their doctors.

According to Klingseis, the next step is to allow clinicians to log in to the system, make changes to a patient's record, log off, pull up the same record from a different workstation, and continue where they left off. "That's the way healthcare works," he says. "You don't have nurses and physicians sitting at a desk; they are moving from floor to floor and room to room, so we need to have this kind of mobility and 'follow me' technology."

FUTURE PLANS

In the next few years, the hospital's network capacity and other requirements will skyrocket as government mandates for EMRs increase. "We'll be moving to a completely paperless environment in the next 12 to 18 months. So, without a doubt, that's going to put a bigger focus on our network in terms of reliability and security," notes Klingseis.

The hospital's push for high-touch, high-tech patient care is well underway and already a success among the hospital's staff. "We are seeing better productivity and better access to information," says Klingseis. "The nurses and physicians love their newfound mobility and wouldn't want to work any other way."

For more information, visit www.brocade.com.

WHY BROCADE

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— Robert J. Klingseis,
Director of Information Services
and Technology at Community
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