

**SAN ANTONIO COMMUNITY HOSPITAL**

Trapeze Wireless LAN is the Cure for California Hospital

OBJECTIVE

When San Antonio Community Hospital started looking at deploying a wireless LAN for its 2,000 staff members, the IT staff's main goal was to select a solution that would be as reliable as the hospital's fully redundant wired infrastructure that supported the radiology department's digital Picture Archive Communications System (PACS) and other applications. The hospital processes about 30,000 radiological images a month, with an average file size of 30-90 MB.

According to Irv Hoff, manager of converged networks at San Antonio Community Hospital, achieving comparable resiliency to his existing wired environment would be a challenge, especially for a network that needed to support so many users.

An initial deployment that covered the emergency room, hospital lobby and other areas provided benefits for administrative tasks as well as medical applications. It allowed radiologists to display images from portable x-ray machines from any location. However, this first-generation wireless LAN was prone to failure, had weak security and wasn't easily scalable.

Recognizing the tremendous benefits wireless could offer in improving the quality of patient care and streamlining hospital operations, Hoff started searching for a new system that could provide more reliability, security, mobility and scalability at a price point that would fit within the hospital's budget. They also required a solution that would smoothly integrate with the hospital's PACS wired radiology network.

Related to the desire for a more secure system is the all-important compliance with the Health Insurance Portability and Accountability Act (HIPAA) regulations regarding patient data privacy that all healthcare organizations must respect.

SOLUTION

Hoff narrowed the search to five vendors, including the providers of the hospital's current wired and wireless infrastructure. After conducting a thorough comparison on product features and costs, they selected the Trapeze Mobility System as the hospital's new wireless infrastructure.

To achieve the same level of reliability as the hospital's wired network, each Trapeze Mobility Point (MP) has two 10/100BASE-TX Ethernet ports that can be dual-homed to two Mobility Exchange (MX) switches. This provides redundancy for both data traffic and power over Ethernet (PoE).

On the security front, Trapeze offers 802.1X authentication with WPA2/AES to encrypt all Layer 2 and Layer 3 data between a PC and an MP. Unlike VPN-based security, Trapeze encrypts the IP address itself, which is critical in a sensitive environment like a hospital.

In terms of mobility, doctors, nurses and caseworkers at San Antonio Community Hospital are equipped with 802.11b-enabled voice-over-wireless handsets and PDAs to stay in touch wherever they go within the hospital.

And to address previous scalability issues, the hospital's use of Trapeze's RingMaster planning, configuration and management tool has greatly helped in terms of determining where to deploy MPs and automatically setting them up. The Trapeze Mobility System also scales in

COMPANY DESCRIPTION

San Antonio Community Hospital is a 350-bed facility located in Upland, Calif., southeast of Los Angeles, with 2,000 employees—including 400 physicians.

OBJECTIVE

- Deploy a second-generation wireless LAN with better reliability, security and scalability than the previous solution while complying with HIPAA regulations regarding patient data privacy and staying within the hospital's budget
- Integrate the new network with an existing wired infrastructure and a digital radiology imaging system that processes 30,000 images per month
- Expand the system to give healthcare providers access to patient information and the ability to communicate with each other from any location within the hospital campus

SOLUTION

- The Trapeze Mobility System, including Mobility Points access points and Mobility Exchange switches, provides the basis for a wireless LAN that delivers reliability, security, mobility and scalability
- 802.11b-enabled voice-over-wireless handsets and PDAs give doctors, nurses and caseworkers real-time communications within the hospital
- Trapeze RingMaster planning, configuration and management tool simplifies access point deployment and set-up

RESULTS

- Return on investment achieved in less than one year due to productivity gains, including streamlining patient care and increasing patient-nurse ratios
- Trapeze Mobility System was two-thirds the cost of other vendors' wireless LAN systems. Over five years, the Trapeze system is half the cost of other systems
- Seamless integration with the hospital's existing wired network meant that no time-consuming changes were needed to routing switches, backbone configuration or client configuration

terms of data speed by supporting both 802.11b and 802.11a in the same radio, meaning the hospital can implement the faster 802.11a as needed for particular applications.

RESULTS

From the get-go, the Trapeze Mobility System delivered convincing results to San Antonio Community Hospital. According to Hoff, the cost of the system was a fraction of what other wireless LAN companies were offering. While hardware costs were similar, a major area of savings showed up in installation, operation and support.

The Trapeze RingMaster planning and management tool negated the need for an expensive site plan, and its configuration tools reduced the amount of time required to configure each AP associated with the network.

Also, Trapeze's seamless integration with the hospital's existing wired network meant that no changes were needed to routing switches, backbone configuration or client configuration—all time consuming and potentially error-prone tasks.

“Looking at the big picture of the combined capital and operating costs for the first year, the Trapeze Mobility System was two-thirds the cost of other vendors’ wireless LAN systems.”

Hoff says that looking at the big picture, when he combined capital and operating costs for the first year, the Trapeze Mobility System was two-thirds the cost of other vendors’ wireless LAN systems. Over five years, the Trapeze system is half the cost of other systems.

San Antonio Community Hospital achieved a return on investment for its Trapeze wireless LAN in less than one year due to productivity gains,

including streamlining patient care and increasing patient-nurse ratios. Hoff also expects to realize IT operational savings.

The team is also evaluating wireless tablet PCs, which would function like clipboards and allow doctors to review and update patient files, fill out prescriptions and handle other care-related applications.

In addition, Hoff is looking into providing guest network access and hot spots in the hospital lobby as well as Internet access for patients.

With benefits on all fronts, the Trapeze Mobility System has proven to be just the shot in the arm that San Antonio Community Hospital needed to improve patient care, stay within budget and provide productivity gains for employees.



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