Complete HealthCare Resources®

Flexible, Easy to Deploy and Manage Wireless Networking for Healthcare Facilities with Cooperative Control Wireless LAN from Aerohive

Challenges

- Needed to deploy eMAR application, which uses bar code reading technology to monitor the bedside administration of patient, throughout its client facilities

- eMAR app requires a wireless LAN infrastructure, but the existing Wi-Fi solution lacked the facility-wide coverage and security needed to support the application

- Needed to support Complete Healthcare's thin-client infrastructure model by deploying a WLAN that would be easy to install and use, and provide centralized management

- The new WLAN would also need to overcome the difficult physical environment - most facilities were decades old and had many potential dead zones

Results

- Investigation of various WLAN solutions revealed Aerohive had the right wireless LAN architecture to support Complete HealthCare's eMAR app

- Aerohive's wireless mesh capability allowed Complete HealthCare to overcome difficulties with the physical environment and dead zones

- Aerohive delivered the ease of installation Complete Healthcare wanted, along with ease of use and centralized management

- In the future, the Aerohive solution will support Voice over IP, allowing nurses wearing headsets to remain in contact with associates throughout the day

One of the nation's leading long-term care providers, Complete HealthCare Resources, selected Aerohive's Cooperative Control wireless LAN solution for its facilities due to its ease of installation, manageability, and flexibility.

Founded in 1989, privately owned Complete HealthCare Resources has been providing strategic solutions to long-term care, assisted

"We felt Aerohive's technology had leapfrogged that of Meru and Cisco. Furthermore, because eMAR, as well as other future wireless applications, are mission-critical for us, we needed to find a partner with a solid and reliable technology that would work with us over the long term to integrate new applications. Aerohive not only had the right technology, but they also worked long and hard with us to create a partnership that helped us implement the solution in phases."

—Martin Diller
Chief Information Officer, Complete HealthCare Resources

living and retirement communities through management and consulting services. Complete HealthCare Resources currently provides full management and consulting services in the Mid-Atlantic region through its Eastern subsidiary and consulting services in Texas through an affiliate. The Eastern subsidiary currently provides full management services to 15 facilities with approximately 3,000 beds and through the Texas affiliate, provides consulting services to another 37 nursing facilities with approximately 4,500 beds. The firm employs approximately 4700 staff nationwide.

Technology is a key component of the Complete HealthCare Resources business model. "Technology helps make us better, faster and more efficient and that is crucial in today's environment where we need to do more with less," says Martin Diller, Complete HealthCare Resources Chief Information Officer. One of the business drivers for wireless technology is an application that uses bar code reading technology to monitor the bedside administration of patient medications. If the scanned information doesn't match the doctor's orders or a drug interaction is detected, an alert can be triggered. The application, eMAR (electronic Medication Administration Record) will play an important role in the overall care of residents.

The Challenge

Complete HealthCare Resources was committed to deploying eMAR throughout its client facilities. However, eMAR requires a wireless LAN infrastructure. The healthcare provider had installed a single wireless access point from Cisco at each facility. This allowed visiting staff, who had no place to plug in their laptops, to access email and other corporate applications. But it lacked the facility-wide coverage and security needed to support eMAR.

Diller's IT team set about identifying key requirements for a new WLAN. Complete HealthCare Resources operates on an ASP model, running nearly all its data applications and network from a data center in Dresher, Pennsylvania. "Our infrastructure is built around thin clients that don't require a lot of maintenance," says Diller. "We don't have people at each site managing networks." The new wireless infrastructure would need to be easy to install, easy to use, and provide comprehensive, centralized management.

The new WLAN would also need to overcome the difficult physical environment. Most facilities were decades old with concrete block walls, thick plastered ceilings, and many potential dead zones.

Cooperative Control Architecture from Aerohive

After considering a wide spectrum of solutions, the review team narrowed their search to three wireless suppliers: Meru, Cisco, and Aerohive. "We were impressed with Aerohive," says Diller.

"We felt that their technology had leapfrogged that of Meru and Cisco. Furthermore, because eMAR and other applications are mission critical for us, we needed to find a partner we could trust. Aerohive not only had the right technology, but also worked long and hard with us to create a partnership that worked for both of us."

Aerohive's cooperative control access points (HiveAPs) require no network controllers or overlay networks. Instead, software in the HiveAPs enables them to self organize into groups called Hives. The result is enterprise-class network management and security without the cost, performance, and availability issues associated with controller deployments.

One feature that Diller liked was Aerohive's wireless mesh capability. The feature can establish a wireless mesh connection between neighboring HiveAPs using the second radio in the AP. This feature adds resiliency to the wireless network and extends coverage into areas that APs from other vendors might not reach-a key issue given the difficult environment at many Complete HealthCare Resources facilities.

Sufficiently convinced that Aerohive had the qualities Complete Healthcare Resources was looking for, Diller set up pilots at a facility in Pennsylvania and another in Texas. Diller recalls the team scheduling three days for installation and fine tuning at the site in Texas. "The crew had the ten HiveAPs installed, adjusted for coverage, and tested within about six hours. It was a very good experience. We were thrilled with the results."

Assured that Aerohive delivered the ease of installation it wanted, along with ease of use, centralized management, and flexibility to support future needs, Diller chose Aerohive. With two sites deployed in the pilot, Diller rolled out seven more sites with about 100 HiveAPs in January. The remaining sites will be fully deployed by August. A typical site will consist of about 6-8 HiveAPs running the 802.11n protocol.

Looking Forward

WLAN deployment of the initial sites will enable the healthcare provider to begin piloting the eMAR application in February at one of their Pennsylvania homes as well as pilot an enterprise-wide HR initiative utilizing a stand alone wireless kiosk. The Aerohive solution will also support additional applications in the future, such as Voice over IP, allowing nurses wearing headsets to remain in contact with associates throughout the day. In addition, Point of Care (POC) applications that enable nurses to deliver care right at the bedside are under consideration by the IT team. "There are a number of other "complimentary" capabilities we may look to implement in the future that would utilize the Aerohive network," says Diller.