

CASE STUDY

# KELSEY-SEYBOLD MODERNIZES HEALTHCARE WITH ARUBA .11AC

Kelsey-Seybold Clinic leverages Aruba's Gigabit Wi-Fi technologies, with strong security, streamlined onboarding and minimal IT administration, to provide a modern healthcare environment.

## Kelsey-Seybold Clinic Your Doctors for Life

Ensuring thousands of patients can receive quality and affordable healthcare from our more than 385 providers at any of 20 clinics in a secure environment with modern infrastructure is Martin Littmann's mission every day.

"As a leading U.S. physician-owned practice, and the nation's first NCQA-accredited Accountable Care Organization, we depend on our infrastructure to be responsive and stable," says Littmann, Chief Technology Officer and CISO for the 2,800-employee Kelsey-Seybold Clinic based in Houston, Texas. "That holds true for our wired and wireless networks."

To help ensure Kelsey-Seybold can continue the tradition of excellence it's maintained since 1949, Littmann recently launched a WLAN expansion and upgrade initiative to adopt the latest 802.11ac Wi-Fi standard.

"Seconds and security count in healthcare," Littmann explains. "And, at our organization, exceptional patient experiences are also vital. To meet the clinical needs of our providers and the connectivity needs of patients, we required the performance benefits of Gigabit Wi-Fi as we continue to build out our wireless infrastructure."

### BENEFITS

- Aruba Wi-Fi, with 802.11ac APs, provides connectivity to more than 50 medical specialties located in 20 facilities spread across 10,000 square miles.
- Scalable Aruba WLAN, with ClientMatch™ enables seamless Wi-Fi experience throughout all locations.
- Aruba ClearPass Access Management System™, with Guest and Onboard, provides secure wireless mobility.
- AirWave™ Network Management delivers reliable, high performance wireless to staff, patients, administrators and guests.



**"Our 802.11ac WLAN, with ClearPass and AirWave, ensures we can take our tradition of healthcare excellence into the future."**

**Martin Littmann**

Chief Technology Officer & CISO, Kelsey-Seybold Clinic

## FOR 802.11AC SECURITY, PERFORMANCE AND SCALABILITY, ARUBA IS THE ANSWER

Due to its positive experience with Aruba Networks®, Kelsey-Seybold turned to its Aruba team to assist with its WLAN update. “The security capabilities that are inherently part of Aruba’s technology gives us a high level of confidence in our WLAN,” says Littmann. “And, with the security features baked in, we also gain simplicity from a management perspective.”

Kelsey-Seybold is investing in Aruba’s 802.11ac-enabled AP-215 access points (APs) and additional mobility controllers for the update. These solutions represent fundamental elements of Aruba’s secure, reliable and scalable architecture.

“To ensure proper coverage and reliability, we’re expanding the number of APs on our network by about a third,” notes Littmann.

## PROVIDING SUPERIOR EXPERIENCES WITH ARUBA’S BUILT-IN CLIENTMATCH™ AND APPRF INTELLIGENCE

By using Aruba’s 802.11ac APs, Kelsey-Seybold not only gains Gigabit wire-speed bandwidth, but also benefits from unique, built-in Aruba intelligence features. This includes patented ClientMatch technology and a next generation mobility firewall with AppRF that classifies and prioritizes network traffic using self-optimizing technology.

### Wi-Fi Optimization and Performance Automatically Improved

Aruba’s ClientMatch prevents “sticky clients” by intelligently pairing wireless devices with the best available AP based on signal strength, traffic load and connection type. This ensures individuals can move seamlessly between locations served by the Wi-Fi network.

Aruba’s AppRF technology continuously evaluates mobile app usage and performance, automatically making real-time network configuration adjustments to provide optimal bandwidth, priority and paths based on user-centric policies. This ensures critical apps have priority and maximizes available Wi-Fi resources.



## ARUBA WI-FI ENABLES MOBILITY-DRIVEN EMPLOYEES

In addition to providing high-performance connectivity, Aruba’s 802.11ac technology helps address the expectations of a new breed of technology users defined by their strong preference for mobility, called #GenMobile. By adopting Gigabit Wi-Fi Kelsey-Seybold is meeting the needs of its increasingly mobile patient and workforce populations.

For example, Kelsey-Seybold is undertaking a mobile asset tagging initiative for improved supply chain management. “Although our medical devices are currently tracked separately by a third party, non-clinical equipment will be tracked with hand-held mobile barcode scanners,” says Littmann. “In the future, we foresee tagging and tracking some types of medical equipment as well.”

## SECURELY SEGMENTING AND MANAGING A DISTRIBUTED NETWORK WITH CLEARPASS & AIRWAVE

To securely and efficiently manage a WLAN deployed in a metropolitan area spanning over 10,000 square miles, Kelsey-Seybold relies on Aruba’s vendor-agnostic enterprise management tools. This includes the ClearPass Access Management System — with Guest and Onboard modules — as well as AirWave Network Management.

### ClearPass Supplies the Robustness of Wired in a Wireless Environment

With ClearPass, Kelsey-Seybold gains the robust security features of a wired network in a wireless environment. In a nutshell, ClearPass combines context-based policy management with next-generation AAA (Authentication, Authorization, and Accounting) services for secure #GenMobile connectivity.

Such capabilities assist organizations with comprehensively managing network access policies, onboarding and managing devices securely and admitting guest users — all from a single platform.

### Separate, Secure Networks Enhance Efficiency and Patient Information Privacy

At Kelsey-Seybold, ClearPass enables segregating network traffic for enhanced patient information security. “We’ve divided our WLAN into three separate networks: one for corporate-issued machines, one for employee-owned BYOD equipment and another for guests,” says Littmann.

“On the guest network, we limit the bandwidth,” he adds. “For employee-owned devices we permit unlimited access. This ensures staff with employee-owned devices can seek whatever external materials they need, such as research papers or educational videos. They can also, access their corporate email via a secure connection.”

Enforcement within ClearPass and the Aruba wireless infrastructure make it easy to separate traffic and control bandwidth limits on the guest network.

### ARUBA AIRWAVE A ‘TREMENDOUS ASSET’ FOR GRANULAR INSIGHTS

For ensuring the overall health of its WLAN, Kelsey-Seybold leverages AirWave for critical and granular visibility into their entire Wi-Fi network. This includes real-time and historical information on types of devices logging on, the specific access points devices are connected to and the total number of devices on the network.

“AirWave has been a tremendous asset for keeping an eye on our Wi-Fi environment.” Littmann says. “We rely very heavily on the data from AirWave to tell us about the performance of our WLAN.”

“Aruba’s enterprise tools are a tremendous asset”

### Total Visibility and Control Improves Operations

With AirWave, Kelsey-Seybold enjoys a map-like interface, which provides a visual representation of each AP, and its location, at every facility. This visualization includes the number of users connected to a specific AP and whether they’re using a corporate-owned or BYOD device. Such capabilities assist with diagnosing issues as well as planning for where APs are needed – or whether other steps should be taken – to maximize performance.

In addition, AirWave’s VisualRF™ feature not only provides current and historical device information, but also reports on applications and their performance. With such visibility, problems that previously took hours to resolve can be done in minutes. This provides substantial savings through operational efficiency, reduced downtime and consolidated management toolsets.

### Speeding Resolutions by Pinpointing Interference Sources

AirWave also provides an unprecedented view into sources of signal interference. Like any large, distributed organization, Kelsey-Seybold has a range of devices on its campuses that can cause interference, such as Bluetooth gear or microwave ovens. With AirWave, IT staff can visually see the sources of interference, enabling mobile devices to be moved automatically to a cleaner channel.

### SEAMLESS INTERACTION WITH WIRED NETWORK

According to Littmann, another essential feature of Aruba’s architecture is its ability to integrate effectively and seamlessly with Kelsey-Seybold’s wired network.

“Our data center is located 100 miles away, outside the hurricane zone,” he explains. “We use one vendor’s switches in our data center core and another solution throughout the network fabric. The interaction between Aruba wireless and these networking vendors has been really transparent, which contributes to our operational success.”

## ARUBA WLAN ENABLES NEXT-GEN PATIENT CARE

Beyond operational efficiencies, the patient care benefits of Kelsey-Seybold's WLAN are also palpable. This includes supporting Wi-Fi-enabled features available in the organization's Epic electronic medical records (EMR) system.

"Our Dermatology and Cardiology staffs are using Epic's mobile applications, Haiku and Canto, for secure photo documentation of patient encounters," Littmann says. "Over time, I expect every physician in our practice to use some sort of device to access our EMR," he adds.

## Wi-Fi Infrastructure Helps Take Healthcare Into the Future

Moving forward, Littmann also anticipates a variety of medical devices to connect wirelessly. "As wireless medical device technology matures, I definitely envision such devices becoming standard at our organization."

Other Aruba tools could improve patient and family experiences. "Aruba's Meridian technology provides interesting opportunities for serving up personalized patient experiences," says Littmann.

"For example," he continues, "when a patient with a known device walks into our facility, they could receive a message that says 'Welcome, Mr. Smith, your appointment with Dr. Miller is at 2:30 p.m. in Area A on our third floor. Also, if you need a prescription, our first floor pharmacy is offering a discount, today.'"

"As an organization, we're proud of our nearly seven decades of healthcare service and innovation, but we also look forward to exploring how patient engagement and other wireless technology can help take us into the future," he adds. "Aruba's technologies offer very exciting options for improving patient engagement."



Martin Littmann, Chief Technology Officer and CISO

## ABOUT ARUBA NETWORKS, INC.

Aruba Networks (NASDAQ:ARUN) is a leading provider of next-generation network access solutions for the mobile enterprise. The company designs and delivers Mobility-Defined Networks that empower IT departments and #GenMobile, a new generation of tech-savvy users who rely on their mobile devices for every aspect of work and personal communication.

To create a mobility experience that #GenMobile and IT can rely upon, Aruba Mobility-Defined Networks™ automate infrastructure-wide performance optimization and trigger security actions that used to require manual IT intervention. The results are dramatically improved productivity and lower operational costs.

Based in Sunnyvale, California, Aruba has operations throughout the Americas, Europe, Middle East, Africa and Asia Pacific regions.

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