

CASE STUDY

HEALTH SYSTEM MODERNIZES PATIENT CARE INFRASTRUCTURE AND IMPROVES BOTTOM LINE WITH ARUBA MOBILE-FIRST NETWORK



Excellence and compassion in all we do.

For Tahoe Forest Health System, the chance to improve its IT network infrastructure and save money while improving patient care was too good to pass up.

“We want to put any money we can toward our patients,” says Jake Dorst, chief information and innovation officer at Tahoe Forest Health System. “The dollars that we save on reducing our network infrastructure costs not only go a long way with our patients, but help our community.”

HEALTHCARE PROVIDER SIGNIFICANTLY REDUCES NETWORK COSTS

Tahoe Forest Health System is replacing its expensive and complex Cisco environment with an Aruba edge network, a move that will save the healthcare organization \$750,000 to \$1 million in operational costs over the next five years, while also improving network performance and simplifying IT management.

In partnership with [WrightCore](#) of Nashville, Tennessee, Tahoe Forest is standardizing on Aruba’s mobile-first network, which includes access points, access switches and mobility controllers. The hospital is using AirWave for network management, ClearPass for wired and wireless network access control (NAC) and AOS 8, which includes a Live Upgrade feature that enables Dorst to upgrade the

REQUIREMENTS

- Transition to Aruba network with minimal interruption of operations
- Simplify network management while reducing costs
- Improve network security through better visibility
- Offer seamless user experience across all locations

SOLUTIONS

- [Aruba 300 Series indoor APs](#)
- [Aruba 7000 Series Mobility Controllers](#)
- [AOS 8 with Mobility Manager](#)
- [ClearPass for policy-based access control](#)
- [AirWave for network management](#)
- [Aruba 2930 Switch Series](#)
- [Aruba 3810 Switch Series](#)
- [5400R Switch Series](#)

OUTCOMES

- Estimated cost savings of \$750,000-\$1 million over five years
- Seamless transition of network with minimal downtime from Cisco to Aruba
- BYOD program that allows doctors, nurses and staff to self onboard devices
- IT can now easily see and secure IoT devices as they connect throughout the hospitals

“We needed a network that was cost effective, easier to administer and that we could build on. The ability of Aruba’s portfolio to work right out of the box and integrate with our existing solutions was crucial to the operations of our healthcare facilities, and the money we save can be redirected back into patient care.”

Jake Dorst, Chief Information and Innovation Officer, Tahoe Forest Health System

CASE STUDY

entire network in real time without interfering with users or medical devices.

“The Aruba products deliver a lot of functionality right out of the box, without having to spend a lot of time configuring them,” Dorst says. “This more IT-friendly approach allows us to save time and money and lets us set up new services that everyone can take advantage of right away.”

CONNECTIVITY THAT STRETCHES THE EDGE

Tahoe Forest Health System serves almost 150,000 patients each year, which include the Incline Village Community Hospital in Incline Village, Nevada, and Tahoe Forest Hospital in Truckee, California. The organization also operates six specialty clinics that includes everything from a 24-hour emergency center and home health and hospice programs to a cancer center, a women and family facility and a medical and surgical unit.

In all, Tahoe Forest covers about 3,500 square miles spanning six rural counties in two states. Simpler access control management for such a broad and far-flung area was important for an organization that relies on a small IT staff.

“I really wanted something that was easy to administer and Cisco’s ISE was clearly not it,” Dorst says. “ClearPass was the obvious winner, with its ability to work quickly out of the box and simplicity that cuts down on training costs.”

Securing the network with ease

In addition to right-sizing the network for mobility and simple-to-operate solutions, it was critical to bring in a vendor that made things easy for an already overworked networking staff. Dorst wanted to ensure that if responsibilities shifted the network basically ran itself.

“I don’t have a large networking staff that can sit and spend hours and hours trying to set up a product that costs as much as Cisco ISE does just to have it not work,” Dorst says.

Not skipping a beat

For an organization whose top priority is taking care of its patients, Tahoe Forest wanted to make sure that transitioning to the new network and security solutions would only minimally disrupt operations. If the doctors and nurses are happy, it would be a testament to how simple Aruba has made their products.

The network is the backbone for the hospitals’ Epic Electronics Health Record (EHR) system. The IT team had to ensure that doctors and nurses could view patient records and images from X-rays, CTs and MRIs and share them with other facilities in the system, with minimal downtime.

“The transition was pretty much transparent to most users,” Dorst says. “Which was definitely our goal.”

Because of the great experience, Tahoe Forest plans to expand what it does with the Aruba Wi-Fi infrastructure, such as leveraging location services like wayfinding and using ClearPass to implement advanced features like 802.1x policy enforcement.

“For us, the success criteria for moving from one vendor to another was to make sure we could get the full rip-and-replace completed without any major interruptions,” he says. “It went pretty well and it’s something that the team is proud of.”

PREPARING FOR APPS AND THE IOT ONSLAUGHT

CASE STUDY

Like other healthcare organizations, there's a growing number of IoT devices connecting to the network, such as sensors to make sure that medicine does not exceed specific temperatures. Also, many of the systems in the buildings, from door locks and badging mechanisms to HVAC operations, are tied into the network.

"Remote health and patient monitoring have been going on in hospitals for a long time," he says. "In the future, I think IoT is going to make things a lot simpler and cheaper. Once a patient goes home, there will even be more capabilities centered around the ability to track the patient and stay in touch."

ClearPass' central role in IoT

As the deployment of IoT devices inevitably expands, having the Aruba technology in place will prepare Tahoe Forest for what's coming. Already they've seen as many as 3,000 devices a day accessing the network, but that is expected to increase significantly.

"IoT is going to make things a lot cheaper and simpler, so I think the adoption of new devices is really going to skyrocket," Dorst says. "We're a little bit ahead of the curve with the tools we've put in place, so rather than waiting until the market demands shifts, we're ready to be that IoT shop of the future."

READY FOR ANY MOBILE DEVICE

Tahoe Forest supplies doctors and staff with mobile devices to access medical records and to communicate with each other. Apps such as Imprivata for secure texting and the MyChart app from Epic need to work from anywhere. The trick is to also make sure that the apps can also be used on personal devices that employees may bring in.

The guest network used by patients, family members and visitors has also seen a growing number of devices. Because of this the IT team is challenged with enabling users and ensuring a great experience regardless of device type or ownership.

ClearPass gives Tahoe Forest the foundation it needs to build a BYOD program that will address the myriad challenges presented by the personal devices that are being brought into the healthcare facilities.

"It's a big deal," he says. "We want to encourage people to use apps that are important to their jobs and this is a safe and secure way to do it. Hospitals haven't always wanted caregivers to be on their phones while they're taking care of patients, but that's changing now that there are so many useful apps. We want them to be able to use their phones in a way that helps productivity."

JUST SCRATCHING THE SURFACE

With the Aruba network in place, Dorst is beginning to plan how else to use the tools at his disposal. One area is combining ClearPass with Aruba IntroSpect and its artificial intelligence (AI) capabilities to get better visibility into what's going on in the network with the aim of quickly detecting and remediating security problems.

Aruba Dynamic Segmentation technology is another tool Tahoe Forest wants to utilize.

"Automated tunneling would help us get rid of the crazy manual access controls we're currently managing," Dorst says. "That's something that's on the roadmap. The first part of feeling good about our decision to go with Aruba was just to get everything installed, in place and up and running was our first goal. Now that we've completed a full replacement we can start looking at all of the cool stuff that comes with it."