Building a Modern Network for Modern Healthcare Solutions

Setting Up a New Network and the Applications that Run on It

Industry
Healthcare

Client Profile
Northeastern Tribal Health Systems is a healthcare consortium of eight Native American tribes, overseen by members of the Cherokee, Miami, Modoc, Ottawa, Peoria, Quapaw, Shawnee and Seneca-Cayuga nations.

Business Situation
Positive patient outcomes, without breaking the boundaries of available resources, has always been the primary goal of NTHS. That goal was hindered by outdated network technologies that were both unreliable and persistently expensive to maintain.

Solution
NTHS engaged ITsavvy to build out a new wired and wireless network, and implement the solutions that run on the network. To complete this initiative, we established a two-phase strategy:

1. After careful review, we recommended NTHS implement a new network infrastructure using wired-network switches and wireless access points.

2. Once the network was in place, we helped NTHS layer on the best healthcare apps available, from core electronic health records to advanced pharmacy robotics.

Benefits
- Opened a wide door for NTHS to implement modern, cloud-based and IoT-enabled applications over many years to come.
- Dropped EHR connections essentially disappeared.
- Cut the cost of network troubleshooting and administration by one third.
- Reduced network infrastructure licensing costs by tens of thousands of dollars.

Network Upgrades Open Doors to Modern Healthcare Tools

Building Out a Complete Wired and Wireless Network

About the Client

Northeastern Tribal Health System strives to provide quality health care to the surrounding Native American Community. NTHS empowers and educates its community to achieve and maintain the best possible health. They serve as a prime health resource and advocate, linking the community to the healthcare system, actively identifying existing and evolving health care needs, and striving to meet those needs.

A Modern Healthcare Program Needed a Modern Network

While COVID-19 added a new set of challenges to the NTHS network infrastructure, the need to modernize it was recognized well before the pandemic.

· Network connections with its electronic health record [EHR] system dropped throughout the day, extending appointments and frustrating both patient and physician.

· A third of its already-stretched IT staff was dedicated solely to troubleshooting the legacy network.

· The cost of network infrastructure licensing wasted thousands of dollars each year.

Dropped connections with our latency-sensitive EHR instantly became a thing of the past. Our providers can now focus on providing quality care rather than struggling to reconnect with the EHR.

First Up: Build the Network Infrastructure

ITsavvy designed an entirely new wired and wireless network infrastructure. After a rigorous diligence and vendor research process, ITsavvy determined that Aruba ESP solutions were the perfect fit:

1.   Aruba 3810 Switch Series was installed for edge access for the wired network.

2.   Aruba 5400R Switch Series was installed for aggregation.

3.   Aruba CX 6400 Switch Series was used for the NTHS networking core.

4.   Aruba's 530 Series indoor access points (APs) managed in Aruba Instant Mode are used for the clinics' Wi-Fi 6 wireless network.

And Then: Use It to Run the Best Healthcare Solutions

Once that network infrastructure was solidly in place, the next phase involved using it as the base from which to run advanced healthcare systems and solutions. Here are some examples:

✓ **Parata Pharmacy Robots**
These advanced wireless robots automate the fulfillment and dispensing of prescription medications.

✓ **Refrigeration Monitoring**
IoT networked devices monitor sensitive medications that must be kept cold.

✓ **Advanced Imaging**
Oral healthcare is significantly streamlined and improved with high-resolution imaging.

✓ **Practice Management**
Business practices are streamlined and made more efficient with a Dentrix clinical and business management solution.

✓ **IoT Physical Safety and Comfort Solutions.**
Centrally monitored, wireless security cameras, door controllers, and door readers increase security and maintain a comfortable environment.

Next Up: So Many Great Options

Looking ahead, NTHS sees many ways they can use their network to implement digital, networked technologies. Those technologies include Aruba Central for cloud-based AIOps network management, User Experience Insight and NetEdit to automate management and support of wired networking switches.

The network is rock-solid and requires almost no effort on IT's part. Now that it's in place, we're running very smart and efficient solutions on top of it. For instance, the Parata robots fill thousands of prescriptions every day. They also automate inventory tracking and provide data for compliance reporting.

The ITsavvy Solution

✓ Aruba Wi-Fi CERTIFIED 6 Access Points   ✓ Aruba CX 6400 Switch Series   ✓ Aruba 5400R Switch Series   ✓ Aruba 3810 Switch Series

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