ıllıılıı
CISCO

The bridge to possible
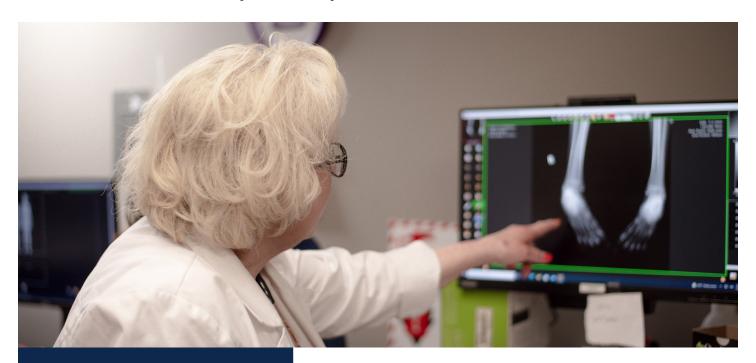
Liberty Technology

Enabling the Delivery of Exceptional Healthcare During the Pandemic

Liberty Technology updates Family Medical Center's (FMC) IT systems with Cisco connectivity, security, and unified communications

The customer summary

Customer name
Family Medical Center

Industry
Healthcare

Location
Griffin, Georgia

Number of employees
50

Business challenge summary

- Help ensure IT systems are free of any threat actors
- Improve network connectivity to reduce the time it takes to see patients

Network and security solution summary

- Installed fiber optic network using Meraki® appliances
- Protected the customer's systems by deploying a full suite of Cisco security products
- Replaced legacy PBX systems with Webex Calling

Business results summary

- Handled 40 percent higher patient volume
- Improved patient experiences by reducing time spent waiting on slow systems
- Helped FMC achieve peace of mind with state-of-the-art threat defenses

Channel/Integrator partner

Liberty Technology

CISCO
The bridge to possible

Liberty Technology

Business challenge

Securing patient data

Healthcare providers have been especially targeted by cybercriminals, who launch ransomware attacks and attempt to steal patient records. Family Medical Center (FMC) is no exception, having been the target of such an attack in 2017. One morning, FMC's practice administrator logged into the practice's system to find it had been encrypted, followed by a ransom demand. She called FMC's IT service provider at the time, who restored the system from the previous night's backup, identifying and closing an open port vulnerability.

In 2020—over two years later—the FBI informed FMC that their practice had been breached during the 2017 attack. While caring for a 49 percent patient increase largely driven by the pandemic, FMC had to send 75,000 letters to patients informing them of the compromised patient records.

Improving network connectivity

In addition, FMC's IT solution provided by the previous IT service provider had become outdated and was contributing to long delays in providing patient care. As FMC practice administrator Tanya Long recalls, "Our systems were down probably as much as they were up while seeing patients. And when our systems were up, they were slow as molasses."

With the network topology in place at that time, it could take a clinician 20-30 minutes to access an X-ray image. It also took 15 seconds for a document to start printing. Fifteen seconds isn't a long time but when multiplied by the 300 patients seen daily, busy caregivers were wasting around 75 minutes a day waiting on the printer.

Network and security solution

Liberty Technology is a 25-person managed service provider located in Griffin, Georgia. For Liberty Technology, solutions include both the technology they can provide to a client and their proven approach to the design, transition, and management of those solutions. They pride themselves on helping their clients evolve into hybrid IT environments. Organizations today are looking for more than a company to sell, install, fix, and refresh technology for them. They need a partner that can also help them transition, manage their environment, drive adoption, and create tangible outcomes.

The engagement with FMC began with Liberty Technology performing a three-month assessment of FMC's existing systems, focused on ensuring that FMC has the best security tools and processes in place. For this, Liberty Technology turned to Cisco's security portfolio, including:

- Umbrella
- Secure Endpoint (formerly AMP for Endpoints)
- Secure Network Analytics (formerly Stealthwatch®)
- Meraki MX security

These tools are standard in the Liberty Technology managed service platform.

With Cisco's security portfolio, Liberty Technology was able to verify that FMC's systems were free of any threat actors and to put in place state-of-the-art defenses against potential future cyber-attacks. As Tanya Long says, "Our systems are now locked down like Fort Knox."

"We knew intuitively we could deliver better patient experiences if we could better leverage technology to improve the efficiencies of our clinicians. But we didn't realize by how much until Liberty Technology came in deploying Cisco technology and essentially overhauled our systems. We're so grateful that we did as we never could have provided the life-saving services to our community that we did, especially during the Covid surges."

Dr. Benjamin Hess
Clinician, and co-owner of Family Medical Center

ıllıılı
CISCO
The bridge to possible

Liberty Technology

Next, Liberty Technology turned to updating FMC's network. FMC's servers are housed in a building located approximately 200 yards away from the building that houses the FMC staff. For communication between buildings, the FMC staff was connected to the Internet over a 20 Mbs WAN and then looped back over another 20 Mbs WAN connection to the server room building next door. In addition, no intelligent traffic routing was deployed. This solution did not provide enough bandwidth to transfer large files like X-ray images.

Given that FMC owned the land where both buildings were located, Liberty Technology suggested and implemented a fiber optic network between the two buildings that utilized Meraki MX appliances. Now this small campus foundation delivers a throughput of 10 Gbs, improving the previous 20 Mbs solution by 50 times.

Not only did the existing WAN solution provide inadequate bandwidth to meet FMC's needs, but it was also quite expensive because the connectivity was over WAN connections. The financial result of the new system was that money saved through the more cost-effective communication system built on Cisco products paid for an entire new phone system. At no increased cost, FMC now has a modernized phone system.

Business results

Improving patient and caregiver experiences
In addition to caring about their patients' health, the entire staff at FMC cares about their patients' time. They know their patients want to be in and out of the doctor's office as quickly as possible. With the systems in place then, patients were often stuck waiting in the examination room or waiting at home for a clinician to call when lab results were finally accessible. Likewise, the caregivers at FMC want to administer care efficiently, which has become even more important given the higher patient volume arising from the pandemic.

With updated Cisco-based systems, FMC staff are now able to see patients in a very efficient manner, allowing them to get on with their day. Clinicians can access patient information in real-time and make informed decisions on care delivery. Clinicians receive real-time lab results, and prescriptions are sent electronically so that medicines are waiting at the pharmacy. The patient experience is now more efficient, making it a more positive experience for everyone involved.

Similarly, the ability to see patients more efficiently improves safety for both patients and care providers. Now, sick patients no longer have to wait for extended periods of time potentially spreading illness to others while caregivers wait for the results they need to identify the required steps in care.

Staying open, delivering quality care as patient volumes surge
Ultimately, Liberty Technology provided the IT infrastructure that enabled FMC to stay open and deliver healthcare services throughout the pandemic, meeting the expanded needs of its local community. This foundation provides FMC leadership and staff with peace of mind, knowing that their systems are both secure and able to meet FMC's future IT needs. FMC staff can now focus on providing exceptional care without having to deal with technology issues.

Handling a higher volume of patients
The improved efficiencies provided by the new technology installed by Liberty Technology also enabled FMC to see 25-30 percent more patients. The improved throughput was extremely important in helping the FMC staff meet the exploding demand caused by the pandemic.

Going forward

As much as FMC leadership would like to have established longer-term objectives, they must take things one day at a time due to the continuous demand of meeting patient needs during the pandemic. As Dr. Benjamin Hess put it at the time of this writing, "We're in week seven of the fifth wave of Covid. So honestly, we're all still in survival mode on a pandemic-driven roller coaster."

FMC's IT department and CIO function are outsourced to Liberty Technology, which oversees and manages both the three-year strategic technology plan and quarterly tactical deployments. In doing so, Liberty Technology relies on its partnership with Cisco.

Unlike many other technology vendors, Cisco continues to embrace open APIs, providing partners like Liberty Technology with:

- Market-leading technology components
- The ability to combine those components at scale to build solutions that meet and exceed customer outcome needs

Liberty Technology wrapped their services and financing packages around the resulting technology solution, enabling FMC to focus on their core competency delivering exceptional care.

Case study
Cisco public

‎ululu
CISCO

The bridge to possible

Liberty Technology

Technical implementation

In reviewing FMC's entire technology roadmap, Liberty Technology discovered and resolved several bottlenecks causing performance issues and restricting the ability of FMC caregivers to provide patient care efficiently.

Replaced a variety of vendor products that didn't work well together

One issue that quickly became apparent was that FMC's technology stack employed products from several vendors. Those products- such as their switches, wireless access points, firewalls, and PBXs -didn't work well together. By replacing these products with Cisco routers, wireless access points, firewalls, and Calling, Liberty Technology deployed a technology stack of products designed to work efficiently together.

Deployed wireless only for mobile use cases

Another apparent issue was that nurses were having network performance issues that slowed down their workflows, frustrating the entire staff. A quick audit revealed that FMC relied heavily on wireless connectivity for many of their network connections, even for fixed-location use cases. Compounding the issue, FMC's USB wireless adapters and access points were old and slow. In response, Liberty Technology added hardwired drops for non-mobility use cases and Cisco Meraki wireless access points.

Resolved cabling issues

In addition, several cabling issues had gone undiagnosed so that rooms housing many of the cables were described as looking like "bowls of spaghetti." However, these cabling issues were easy for Liberty Technology to identify and resolve, using Meraki's ability to identify bad cables automatically.

Modernized the phone system

FMC had four different PBXs with four different carrier contracts in place. They were not connected, and they were managed separately to support each of the four different businesses within the Family Medical Center. At least once a week, each PBX would go down and require rebooting to get phones back online and working. As a provider of acute care, FMC needs their phones to work continuously, so this was an especially critical issue. To meet this challenge, Liberty Technology installed Calling across the board and eliminated all the carrier contracts. FMC received a single, unified calling solution, with each business maintaining its own personality. By removing carrier charges, FMC essentially received a modern phone system at no additional cost.

Deployed SD-WAN

As FMC uses more cloud-native applications to support their business, they become increasingly reliant on the performance delivered by WAN connection to the Internet. In support of FMC's migration to the cloud, Liberty Technology added SD-WAN to their Meraki licenses to route Internet traffic intelligently. Liberty Technology handles all the configuration and management of the SD-WAN connection.

To learn more, contact your Cisco account manager.

Product list

Routing and switching

- Meraki

Security and VPN

- Umbrella
- Secure Endpoint
- Secure Network Analytics (formerly Stealthwatch)
- Meraki MX security

Voice and IP communications

- Webex Calling

Wireless

- Meraki Access Points