

Executive Summary

Industry

- Healthcare

Environment

- 20,912 total employees
- 13 acute care facilities, 18 urgent care locations
- 1,874 licensed acute care beds
- 1,300 primary care, specialist, and advanced practice providers
- 1,321 ethernet switches
- 42 core switches
- 575 data closets across 67 cities and towns

Technology Needs

- Robust, reliable network infrastructure for continuous connectivity across locations
- Secure network to protect customer data
- Network agility for supporting business needs and advanced research capabilities
- Ease of management via automation capabilities

Extreme Solution Components

- Extreme Fabric Connect
- Extreme Fabric Attach
- ExtremeSwitching™
- Extreme Management Center™

Results

- 30% capital replacement savings
- 60% maintenance reduction
- Enhanced security
- Simplified network
- Reduced cost
- Guaranteed connectivity



OSF HealthCare Drives Smart Hospital Innovation with a Modern Network

OSF HealthCare is an integrated health system located in Illinois and Michigan. Dedicated to innovation and digital transformation to improve the lives of their patients, the organization consists of 13 acute care facilities and two colleges of nursing, as well as a robust physician organization.

Ranked as a top 10 innovation center in the US, the OSF mission is to reinvent the healthcare delivery system of the future. They launched OSF Innovation to embrace change and solve the biggest healthcare challenges of today head on. "We need innovations both large and small to reinvent healthcare to meet the needs of our communities," OSF explains on their website dedicated to advancements in healthcare. In fact, OSF operates a center in downtown Peoria, Illinois called Jump Trading Simulation and Education Center, full of medical and technology professionals who are innovating in the healthcare space.

"We have mock surgery centers with researchers who are working on the latest technology, VR headsets that allow surgeons to simulate brain surgery. We want to be as cutting edge as possible."

Collin Summers,
Director of Network Services for OSF HealthCare

In addition to supporting their research facility, OSF faced the difficult task of evaluating their network infrastructure design and orchestrating a move-forward-plan that would align with the ministry's top business drivers: improving patient outcomes and care, increasing security and compliance, and reducing costs.

Fortunately, OSF works with POINTCore Network Services, their primary network services provider and an extension of their team. POINTCore offers healthcare technology consulting for network implementations in healthcare environments.

It was clear that OSF needed a clinical grade network infrastructure to drive down costs, enhance security, and enable digital transformation technology initiatives. Alongside Extreme Networks, OSF set their sights on implementing a simple, efficient, automated network to maintain their growing ecosystem.

An Aging Network Infrastructure Limits Transformation Goals

OSF HealthCare was operating a network infrastructure that was nearing end of life, and spanning a significant geography. "Our network infrastructure was working, but in order to remain secure, efficient, and prepared for the future, we needed to reevaluate our infrastructure," explained Karl Belter, Network Architect at POINTCore.

Given the array of health services provided by OSF and their devotion to technological ingenuity in healthcare, it was time to evaluate what their network should really look like within the ministry. The network design wasn't just about enabling IT anymore; it needed to evolve into an enabler of business results—especially improving the patient experience and health outcomes. OSF grappled with deciding whether it made sense to swap out gear as needed without a change to the architecture, or do a deep-dive analysis into new infrastructure technologies. "It can be difficult when leadership wants reduced costs, but resiliency, reliability, and cutting-edge features at the same time," Summers commented.

After conducting an evaluation, OSF HealthCare decided against swapping out individual sets of gear in favor of a better total cost of ownership overall. The question was, how would they refresh their network gear, achieve a better total cost of ownership (TCO), and enhance network operations and security all at the same time? "That's how we ended up with Extreme as the solution provider. Their offerings could deliver on all of our goals," Summers recalled.

Teaming up with POINTcore to Design Cutting-Edge and Automated Network

A significant turning point came when the OSF team explored Extreme Fabric Connect and Extreme Management Center (XMC). The network fabric seemed far simpler than the other contenders they were evaluating. Without the need to configure ports constantly, OSF's technical resources could automate a service to run across their network automatically. "We very quickly decided that XMC was almost as important, if not more important, than the network fabric itself. The ability to execute on automation using XMC was going to reduce day-to-day operational expenses. We'd be able to respond quicker," Summers explained.

With POINTcore on board to manage the selection, implementation, and optimization of the OSF network, the team was ready to move forward with their plan. OSF HealthCare enlisted the help of Extreme Networks to modernize and simplify their equipment and infrastructure at a manageable cost. The group worked together to create a standardized infrastructure model that would stretch across locations. Extreme engineers focused on building a flexible network with minimal interdependencies that wouldn't disrupt hospitals during updates and patching, replacements, or failures.

"Our experience with Extreme during the implementation was responsive and refreshing. We felt like they really listened to everything we had to say. I was able to work with the product developers directly to make a few tweaks here and there," Belter remembered.

Complete Network Upgrade Improves Patient Experience and Drives Innovation Initiatives

Post-implementation, the results of the engagement were nearly instantaneous. A complete network upgrade immediately led to enhanced efficiency. The OSF team noted that previously, they needed an experienced engineer to configure backend connectivity, as well as edge connectivity up to the cores. With their new network infrastructure and the automation power of XMC, the deployment team can focus exclusively on go-live support and layer three cutover. Belter said, "The biomed team just plugs devices in, and they work. We don't have to worry about what port they're plugged into or making sure it has the right security. The automation that's possible with Extreme Fabric Connect and XMC is huge."

Besides the immediate benefits of a simplified network, stronger security, and reduced cost, OSF set themselves up to progress faster toward their innovation ambitions. “If you’re going to be doing electronic medical records and you don’t have a quality network...you might as well go back to paper,” Belter stated. The healthcare organization is digitally transforming in real time, engaging patients through their network while delivering on physician expectations at every facility. “When a doctor pulls up an X-Ray on a connected device, it’s going to come up in seconds.”

Looking to the future, OSF HealthCare believes that “everything must work all the time.” Future-forward healthcare means being able to connect doctors in different locations, allowing patients to receive service efficiently, and being able to rely on the network always. Partnered with Extreme, OSF is well-positioned to focus on business value with their new, simplified network infrastructure.

“We owe OSF HealthCare the right features at the best cost. Extreme allows us to deliver that.”

Collin Summers,
Director of Network Services for OSF HealthCare



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