



Executive Summary

Industry

- Higher Education

Environment

- 2,500 staff
- 11,300+ students
- 95+ buildings

Technology Needs

- Robust, reliable network infrastructure for wireless connectivity across campus facilities
- Continuous uptime to enable productivity among students and faculty
- Cost effective implementation options
- Simplified routing and switching

Extreme Solution Components

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

Results

- Significant decrease in wireless incidents
- Improved uptime
- Better coverage per access point
- Support calls went from hours over days to first time resolution
- Successfully positioned network for continual improvement



Southern Illinois University Undergoes Network Refresh to Improve Performance and Power

Southern Illinois University Carbondale is a public research university founded in 1869. It is the most longstanding campus within the Southern Illinois University. Over 13,000 students are enrolled from over 100 countries and all 50 states.

The SIU mission statement is a clear reflection of the commitment to guiding students through their education to gain knowledge and experience that makes a difference in the world. With a focus on innovation, research, and creativity, using technology to enable students and faculty separates SIU Carbondale from the typical university.

The network engineering team at SIU was facing numerous technology challenges as they neared a hardware refresh. There were complaints of Wi-Fi problems across the campus while aging equipment was causing performance problems. Plus, the complete core infrastructure needed to be replaced. With the need to power students and faculty throughout buildings and facilities, the university chose Extreme Networks to update the network, deliver better connectivity, and enhance the learning experience.

“We’ve got a great relationship with our account manager. We can communicate easily, and we trust that he’s working for our best interest. With Extreme, we have a partner.”

Greg Pangrazio, Manager, Network Engineering, SIU

Bustling Research Campus Deals with Wi-Fi Complaints, Aging Hardware, and Network Complexity

SIU is a bustling, research-focused university campus with the need to connect thousands of students and faculty members. With a major network upgrade on the horizon, the IT team was dealing with a handful of frustrations. “The core infrastructure was old, and it needed to be completely replaced. Unfortunately, our previous vendor was proposing an entire network forklift replacement. They wanted us to replace every switch, and it simply wasn’t possible from a funding perspective,” explained Greg Pangrazio, Manager of Network Engineering, SIU.

As the team evaluated potential solutions, Wi-Fi problems loomed. Further, routing and switching was a headache. The existing traditional routed and switched environment was inflexible. To select a new network solution and partner, the SIU team conducted a proof of concept across identical buildings with one for each vendor. “The Extreme solution came out ahead from a performance and price perspective,” recalled Michael Shelton, Deputy Director of Network Engineering and Telecommunication Services, SIU.

SIU Chooses a Cost-Effective, Incremental Upgrade Approach with Quality Solutions

SIU network engineering worked closely with Extreme to design a solution they could build into incrementally. First, they chose Extreme Fabric Connect to simplify their network transition as an alternative to doing a complete overhaul of 900 switches.

From there, the implementation began. “The technology is straightforward, and GTAC is much better than our previous vendor, so I was able to do the VSP implementation myself,” Pangrazio said. For the wireless install, the SIU team deployed a mix of 1,400 access points across 11 buildings. “We did all of this in a period of days, which would’ve been unheard for us in the past. Now, the wireless coverage is excellent, and we’re working through other deployments using a phased approach.”

Since the wireless install, SIU has experienced a significant decrease in the number of wireless issues. As a department, going from one building to another took on average 40-50 hours of engineering time. Today, it can be done easily in 2-3 hours. In addition, uptime has improved significantly with fewer associated outages. The team has also noticed that they have better coverage per access point than the legacy network solution Extreme replaced. “Since we removed the old access points and switches in Woody Hall and replaced them with Extreme products, we have had very few complaints.” Shelton continued.

Being an innovation and research centered university, it’s important that SIU has adequate support when questions or issues arise so that campus and learning activities can continue unfettered. With Extreme tech support, the networking team can trust that they’ll receive fast, quality feedback and solutions to problems. “Extreme GTAC doesn’t ever start off a call with asking a question like ‘Is the switch plugged in?,” said Pangrazio.

The university looks forward to continuing to replace their old hardware, and notes that Extreme makes a continual effort to help solve problems across the network without pushing unnecessary products. “Other vendors would give us a solution with a price tag and tell us we’re stuck with it. With Extreme and our dedicated account manager, it’s not about selling stuff. It’s about finding a different way of accomplishing the university’s goals,” Shelton concluded.



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