SUNY CANTON

Executive Summary

Industry

- Higher Education

Environment

- 3,200 full-time students
- 450+ full-time staff
- 500+ acres coverage
- 100 applications running locally
- Indoor coverage area of 692,956 GSF
- 4-5 devices per user

Technology Needs

- A hardware refresh was on the horizon
- 802.11ac Wave 2 access points for greater bandwidth were required
- Reduce operating costs

Extreme Solution Components

- ExtremeSwitching™
- ExtremeWireless™
- Extreme Management Center™
- ExtremeControl™
- ExtremeAnalytics™

Results

- Able to maintain staffing through upgrades
- No unanticipated outages or issues
- Infrastructure improved
- Future-proofing measures were taken

SUNY Canton Gets Ahead of Network Hardware Refresh, Future-Proofs Infrastructure

The State University of New York at Canton (SUNY Canton) is Northern New York's two and four-year college for technology, health, management and public service. SUNY Canton is known for emphasizing hands-on, engaging educational experiences designed to fully prepare students for their future careers.

With a major equipment refresh on the horizon, SUNY Canton had the need to upgrade to the latest networking technology, including Wave 2 APs for greater bandwidth. Operating expenses associated with the network infrastructure were getting very high and the SUNY Canton IT organization wanted to get ahead of their equipment's end-of-life.

Setting Sights on a State-of-the-Art Network with Full Visibility

Given the need to reduce operating expenses, plus a slew of impending advanced technology initiatives, achieving a more robust, state-of-the-art network was critical to successfully supporting Canton's students and staff. Canton's IT team was looking for a total network upgrade solution that includes a comprehensive, single point of view of operations. With only one full-time network administrator on-staff, complete support was critical.

Major BYOD Footprint Called for Robust Network Services

Canton's IT infrastructure was becoming increasingly virtualized, with 70% virtual and a hybrid data center model on the rise. The overall BYOD footprint was considerable, creating the need for a robust network with reliable connectivity. "We have a substantial BYOD footprint on campus. We're finding that our students and staff typically have 4-5 devices registered per user," said Kyle Brown, Assistant VP for IT and the CIO.

eSports Competitions, Students at a Distance, and IoT Bring Network Complexity

Canton's main campus, bustling with 3,200 students and over 450 staff members, was in the midst of launching numerous advanced technology initiatives that would require around-the-clock support of their network.

In December 2017, Canton launched their eSports program as the first varsity squad in New York State, making them the first New York State eSports team to join the National Association of Collegiate Esports (NACE), the most renowned, nationally-recognized organization committed to competitive collegiate video gaming. Plans for the eSports team include specialized computer stations for practice and competition in a newly designed gaming area in Nevaldine Hall. Canton also plans to develop an eSports wing in a residence hall with a gaming computer area adjacent to student's rooms. The eSports wing would be similar to the college's current Pet Friendly wing where academic interests and lifestyles intersect with themed residential living. With their new gaming labs in the works, support from Extreme Networks will be key to its success. In eSports, seconds, and even milliseconds, are paramount, as well as the added features of network optimization and analytics.

Additionally, 24% of Canton's student population is fully online, with a large virtual offering of distance learning courses, including 13 online degrees. "One of our major initiatives right now is around students at a distance," Brown said. "The goal is to extend services, culture and campus involvement to students at a distance in the same way that our on-campus students would experience those services and that culture. One of the most interesting initiatives is a converged modality learning, which allows a mix and match approach for the student. The course is held in a traditional classroom setting, streamed for synchronous participation, and recorded for asynchronous participation. The student can attend in person on Tuesday and participate virtually on Thursday. If they have a family commitment and cannot participate virtually in the live session, they can complete the work on their own time. It gives a lot of flexibility to our non-traditional and commuter populations. The students and faculty rely on the wireless and networking performance to be able to deliver their content," he explained.

> *"Thanks to Extreme Networks, we've been able to maintain our staffing levels even through the upgrading process."*
>
> **Kyle Brown**
> **Assistant VP for IT and CIO, SUNY Canton**

Given the prominence of online learning, virtual and augmented reality are also key investments for Canton. "We have a newly approved video game design curriculum, and last fall we built a new high-end facility to accommodate. We're expecting increasing use within the VR and AR field."

Where the Internet of Things is concerned, Canton was also in the process of integrating their HVAC system with room scheduling software in order to control temperature based on occupancy and scheduling. Converting swipe card locks to a wireless IP lock for security and surveillance was in the works, as well. The ability to maintain connectivity and security for IoT devices needed to be a built-in feature of the network.

Complexity Conquered. Full Visibility Achieved. Students and Staff Supported.

When it became time to evaluate network vendors who could put them in a better position to accommodate students and future initiatives, ease of use would be key, especially given their limited network staff. “Ease of use was certainly important, especially having a single point of view and being able to take care of the network since we only have one network admin. Support was a huge item for us, and it was certainly one of the primary reasons we chose Extreme Networks,” Brown recalled.

Canton is also leaning heavily on ExtremeAnalytics both for troubleshooting and tracking application usage. “We’re definitely interested in leveraging learning analytics so we can gain a better view into application usage and bandwidth monitoring. We are interested in knowing more about how students interact on campus, and there’s a lot of untapped opportunity when it comes to learning analytics,” Brown explained.

“Thanks to Extreme Networks, we've been able to maintain our staffing levels even through the upgrading process. We haven't had to deal with any unanticipated outages or issues of any sort. We also haven't had to add any additional staff, all while improving our infrastructure and future-proofing for upcoming initiatives,” Brown said.

Ultimately, Canton was very pleased with the outcome of their implementation, from specking out the equipment in the design to procurement and rollout.

“We've had Cal Turner from professional services at Extreme on site multiple times to assist with the rollout, and he has been excellent. We're excited about having an Extreme solution in place for future proofing the initiatives that we have coming.” Brown concluded.