A University Infrastructure That Lays Pathways to the Future at NEIU
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Building a competitive university infrastructure used to mean tricking out the student center. Today it means delivering a foundation of technology on which students, faculty and staff can build amazing things of their own.

Sam Kann, CIO at Northeastern Illinois University (NEIU), had watched this change play out over the course of his career. When he came to NEIU, he knew the opportunities — and the stakes. The university has approximately 8,000 students, with each one bringing an average of 2.5 devices with them to NEIU. The streaming, downloading, uploading and general learning was starting to crush the university IT infrastructure. Sam knew that to keep up he needed to rethink the system from the ground up.

The original briefing between ServerCentral and NEIU was to connect the university and move NEIU’s on-prem servers into colocation. As we began our collaboration on the university infrastructure plan, however, both teams could see the opportunity to give students, faculty and staff much more than just stability.

Together, we designed a hybrid cloud and managed services solution that gives students, faculty and staff hyper-fast connections and 24/7 access to every class, conversation and idea across the institution. Switching to a consumption model, where NEIU pays for what it needs, gave Sam and his team budget flexibility and a move from Capital Expenses (CapEx) to Operating Expenses (OpEx). With the new infrastructure, Sam has given NEIU the tech credibility it needs to go out and attract faculty and students — and all for 48 percent less per month.

Sam and his team reached out to ServerCentral with three main goals:

1. **Move technology from the departments to an integrated, university-wide “enterprise” model**

2. **Attract and retain students, faculty and staff with improved experiences**

3. **Reduce costs**
“ServerCentral listened carefully to our needs. That stood out. They understood the intensity, how fast we had to move. That’s why we have a signed contract and are successful in moving forward.”

Sam Kann
CIO at NEIU
University infrastructure requirements start with one goal: connecting the university

Sam’s first requirement for a modern university infrastructure was also the most difficult — encircling the university in a fiber network ring. After a few meetings where we listened to NEIU’s needs, plus a look at the work we had done connecting DePaul University, Sam knew ServerCentral could be a partner from the network up.

At the time, students and faculty were relying on a 100Mbps connection between the university, and to the internet. “The infrastructure was definitely taking a beating,” Sam says. “Rather than a band-aid, we had to do a reset and think through how to fix all of this in a short amount of time.”

Our first step was to get dark fiber into the ground and work with others to procure it where needed. The fiber ring we created connect the university together with a private 10Gbps network that can be expanded, immediately to 100Gbps when needed. By deploying and managing the dark fiber, we were able to remove layers of traditional network equipment and carrier complexity, increase performance with direct routes between buildings for minimal latency and lower TCOs.

Thanks to Sam’s vision, NEIU now has the kind of network that attracts talent — but that’s not where his vision stops. The new fiber ring is just a foundation for connectivity and applications Sam has planned. The next step was giving students, faculty and staff resources worth using.
Getting great university infrastructure by getting out of the data center business

“We aren’t a data center. We’re a university,” Sam says. “We definitely wanted to get out of the hardware business. The value of the office of the CIO is in innovating and delivering revolutionary services — not solely worrying about the foundation upon which it is built.” With all of the university’s data and applications located on-site, Sam and his team were stuck maintaining servers instead of improving experiences. Shrinking state budgets and budget freezes meant they weren’t going to have flexibility in resource availability, either. To transform the university’s IT, they needed to be smart, fast and focused on freeing up their time to reinvest wisely.

Moving as much infrastructure as possible off-premises would shift the burden of maintaining hardware and networking equipment to ServerCentral, where we have a dedicated team of experts who do nothing but that. Our specialized expertise gives NEIU access to architecture, support, security and features it could not create on its own. It also supports the university’s evolution — as quickly and dynamically as they see fit.

The only snag was the timing — NEIU’s backup solution was set to expire in 30 days, meaning we at ServerCentral needed to move everything over as quickly as possible. To get it all done, we went on-site to do a physical transfer, meeting the deadline with time and budget to spare. The university IT team now has the time to focus on direct services like email, Wi-Fi and platforms that students and faculty engage with every day.

“The flexibility in ServerCentral’s approach to solving problems is a strategic asset. As NEIU evolves, we will see ServerCentral evolve with us. That’s a true partnership.”

Sam Kann
CIO at NEIU
Moving university infrastructure development to the cloud

We didn’t get far into the university’s IT plan before we all saw that cloud presented opportunities colocation and physical infrastructure couldn’t. So much of the IT game in education is working within fixed budgets. Cloud would let NEIU adhere to those budgets while still scaling and shifting resources dynamically. The low cost of entry also made it possible to add managed backup and Disaster Recovery as a Service to the project — two things NEIU desperately needed but didn’t think were possible.

The new NEIU hybrid cloud is fully automated, monitored 24/7 by ServerCentral and seamlessly connected to NEIU’s systems. To prove the new cloud’s capabilities, the first application we migrated was also the most critical: Banner, the university’s ERP system. It essentially runs the university, and it needed to be upgraded by the end of the year, giving us just a few months to settle it into its new environment.

Not every application could make the jump to cloud immediately — legacy systems needed to continue in NEIU’s facilities until they could be rewritten. To keep NEIU from having to devote resources to the upkeep of these systems, ServerCentral is delivering remote managed services to provide a comprehensive hybrid architecture.

“ServerCentral is working with us very closely. Both parties have insight into all aspects of NEIU, which will be invaluable when the cloud transformation is complete,” Sam says. “Our goal is to have all critical NEIU applications on the ServerCentral cloud by 2021.”
Working with — not against — university infrastructure funding and timelines

Working on any university infrastructure project means working within budgets and timelines that are pre-determined and immovable. This is normal. With NEIU, the difference was working extremely fast and throughout a state budget crisis.

The mandate from the beginning was consistent: predictable billing. With state budget issues threatening NEIU’s operating budget, we needed to immediately show the benefits of moving to an OpEx model — and secure a capital request that would cover the transition.

The problem with static billing is that it often means static infrastructure — something that won’t work for a dynamic university adapting to the needs of its students, faculty and staff. That’s why we created Investment Flexibility to keep our customers agile within fixed costs. ServerCentral’s Investment Flexibility allows customers to transition between colocation, cloud and managed services as they need, all within their existing contracts. As their needs change, so can the solutions and services ServerCentral delivers. This freedom means NEIU can respond to changing technologies without having to re-budget (and re-earn approvals).

“By moving to a consumption/OpEx model, we were able to save money and put it to better use in areas including staff training.”

Sam Kann
CIO at NEIU
A university infrastructure plan that secures the present, and the future

When Sam came to NEIU, the university infrastructure was nothing more than a data center with unconnected networks. With ServerCentral’s help, he’s transformed the institution’s technology, creating a diverse and resilient network all students, faculty and staff can use. For the first time, the university has a formal disaster recovery strategy, bringing the recovery window for data loss down from a few days to a few minutes.

With a stable platform established and locked-in for the next five years, the NEIU team can turn its attention to building: building needed applications, better experiences and a new reputation for NEIU as a home for technology.

“ServerCentral’s infrastructure is going to really help our institution recruit effectively,” Sam says. “I can now reallocate resources to focus on our network technology, automation, bringing big data to our students and faculty and other initiatives that can help us grow.”

As the university’s ranking grows, so can its technology. The network ServerCentral built is ready to move well beyond 10Gbps whenever the university needs, and the cloud is waiting to host new applications and new breakthroughs as they’re created.
“Our biggest building block in this whole endeavor is student experience. Building that effectively would help NEIU with its enrollment, retention and graduations rates. The technology we are implementing with ServerCentral will help us get there sooner than later.”

Sam Kann
CIO at NEIU