

Herricks School District gets network capabilities beyond expectations with CommScope RUCKUS® Wi-Fi and switching

The Herricks School District (also known as Union Free School District #9) has three elementary, one middle and one high school. The district serves about 4,000 students in eight communities. Despite strained budgets, Herricks is committed to providing a well-rounded curriculum. It is in the top 10 percent of New York public schools (based on math and reading proficiency). And students enthusiastically participate in arts, languages and sports programs.



Client
Herricks School District

Country
Long Island, New York

Challenges

Over the past eight years, the district's IT group had worked with two wireless vendors, the first of which went out of business. The existing wireless network began failing as more courses and users moved online. IT wanted technology that could support an expanding digital learning program. They wanted capacity and scalability to future proof the network for years to come. When the pandemic hit, disrupting distance learning was not an option—adding yet another challenge to deploying a new network.

Solution

The CommScope RUCKUS wireless and switching network provides edge-to-edge high-capacity coverage. Student and device onboarding is automated with user and device authentication. Secure guest networks can be set up on the fly. The district is confidently moving ahead with its 1:1 initiative, expanding online curriculum, and BYOD policies. They have capacity and scalability to ensure future proofing beyond their expectations...and achieved well within their budget.

A stalled network overhaul frustrates a determined IT group

The small IT team at the Herricks School District (also known as Union Free School District #9) isn't afraid to be at the vanguard of technology. "If technology advances support the goals of our educators and curriculum, we'll be early

Products

Indoor and outdoor APs

ICX® switches

Cloudpath® Enrollment System

RUCKUS® CLOUD network management



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David Pickman
District Technology Integration Specialist

adopters,” says Chris Connors, director of instructional technology.

But being an early adopter has risks. For over eight years, the IT team was frustrated by its relationship with two different wireless vendors. One went out of business and the second began having performance problems as more online courses and users came online. “Before we knew it, our ‘safe’ Wi-Fi choice was maxed out, dropping connections and slowing downloads,” says Connors.

Students were vocal about their dissatisfaction with the poor performance of the wireless network. It was even more difficult for faculty. The network would crash as traffic increased, which meant teachers lost valuable time in the classroom. As a result, they were losing confidence in the online curriculum.

But times have changed. Today, Herricks has a RUCKUS wireless and switching network from CommScope. “We finally have the network foundation we need,” says Connors. “It’s changed everything—from the performance we have today to the capabilities we need for the future.”

Compared to many other districts on Long Island, New York, Herricks has a small base of commercial businesses. Which means less tax revenue to fund education. “For the past three years, we tried unsuccessfully to get funding for a new network through a state-sponsored program,” says David Pickman, district technology integration specialist. “We’re very fortunate that our board of education stepped in and found the money.”

Network Outsource, an IT services company based in New York, was invited to submit a proposal. “We had half-decided to go with Cisco again, but the proposal from Network Outsource, which was based on RUCKUS Wi-Fi 6 indoor and outdoor wireless and multigigabit wired network, absolutely blew us away,” says Pickman. “It met all the requirements we specified and went far beyond what we thought we could afford. It gave us capacity, speed, scalability, redundancy, high-density coverage, and automated onboarding. And the whole proposal came in under our budget.”

There was another unexpected savings source during the design phase. “Network Outsource did a heat map of each building,” says Pickman. “They were able to reduce the number of APs in the original specification by 30 percent. Together with the reduced cabling costs, it was a hefty savings.”

Unfortunately, the next surprise wasn’t a pleasant one: the COVID-19 pandemic.

Persevering through the pandemic

The first phase of the upgrade was installing a new fiber-optic backbone. Soon after installation began, all New York schools were shut down because of the pandemic. It was four months before the fiber-optic installers were allowed back on site, putting the AP and switch installation way behind schedule.

“When school started in September, we were operating in hybrid mode—part on-site and part distance learning. The demands for online resources were so intense, we couldn’t tolerate any disruption,” says Pickman.

Which meant the Network Outsource team could only deploy the new infrastructure on weekends. To reduce risk even further, the IT team told Network Outsource that each building had to be brought online one at a time. “Network Outsource didn’t leave us in the lurch even once, despite the setbacks caused by the pandemic—not to mention the extra pressure on the network to perform beyond what was expected because of the hybrid teaching model,” says Connors. “The board was aware of the success of the upgrade, especially given the challenges, and told us how much they appreciated what we had achieved.”

Management in the cloud brings efficiency on the ground

The network is managed by Network Outsource using their Network Operations Center and RUCKUS Cloud, a network management-as-a-service platform enabled by artificial intelligence (AI).

“The RUCKUS cloud has monitoring and management capabilities that far surpass any other cloud platforms that we’ve used,” says Howard Weinstein, director of professional services at Network Outsource.

Michael Brewer, network engineer, is responsible for day-to-day management of the Wi-Fi network. Brewer calls the RUCKUS Cloud the “best in class” all-in-one management platform. “The RUCKUS Cloud management dashboard is leaps and bounds better than the management for the previous Wi-Fi. On one screen, I can see every site and the APs and their status. I can drill down to every user and device connected to that AP. RUCKUS has integrated analytics that provides things like a hierarchy of color-coded critical incidents and identifying applications that are bandwidth hogs. RUCKUS Cloud is a perfect balance of powerful tools and simplified interface. It saves time on everything from provisioning to managing to optimizing the network.”

“Because Network Outsource has such a good handle on the day-to-day management of the network, we can focus our energies on instructional technology,” says Pickman.

The network easily shoulders digital learning, school safety and operational efficiency

“In September, we were on the old network and we were getting daily complaints about buffering problems

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Howard Weinstein
Director of Professional Services
at Network Outsource

and students getting kicked off Google Meet,” says Pickman. “In October, as we flipped the switch on the new network in each building, the complaints disappeared. With the legacy network, we had no outdoor coverage, no coverage in the high school gym, and minimal coverage in the administration building. Now we have an edge-to-edge network, including APs in the football field.”

The RUCKUS ICX switches provide 20 GB between wiring closets and 40 GB between buildings. The legacy network had no redundancy; the new network has redundancy in each wiring closet and across the network.

In early 2021, the 1:1 initiative will move into high gear with the distribution of more than 1,000 Chromebooks. “This rollout will really showcase the strength of our infrastructure,” says Connors. “With the old network and before the pandemic, only a handful of teachers used Google Classroom. Now 100 percent use it. We know the end-user experience is going to be an absolute delight compared to the past. We’re also ready for online grading and testing,



including the online New York State Regents Examinations. We can easily support concurrent testing across both the middle school and high school and the network won't falter."

For years, the district has provided a portal-based network for students. It was separated from the district network, but security was minimal. "Anyone could get on the network by registering a user name and password," says Pickman. "With the RUCKUS Cloudpath Enrollment System we can authenticate each user and BYOD device accessing the student network." The network also supports Infinite Campus, a popular student information system (SIS) that encompasses a wide range of tools for parents and faculty.

Cloudpath will also onboard student and faculty for the district network, authenticating users, BYOD and IT-provided devices. Cloudpath automatically blocks any unauthorized device from accessing the network.

"Cloudpath is a massive jump forward in security, visibility and control. At the same time, it's going to be easy for students, faculty and administrators to use," says Pickman. "As we implement our 1:1 initiative, Cloudpath is going to save us a lot of time, including the number of help desk calls we anticipated with the old network."

Another new capability is setting up guest networks on the fly for special events. "RUCKUS lets us set up and take down SSIDs in a matter of minutes," says Pickman. "Our legacy network had very complicated security mechanisms. It wasn't conducive to making changes, so we couldn't support and secure events the way we wanted to."

With its high-capacity, redundant network foundation, IT has also strengthened physical security by putting connected door locks and security cameras on the RUCKUS network. As a school's HVAC system reaches end of life,

the IT group says the network can also support smart building systems that will reduce operational and energy costs.

"It's difficult to convey the peace of mind we have now," says Connors. "We can expand our online curriculum effortlessly. We can use our foundation for a safer and more efficient physical infrastructure. We have the best support from Network Outsource and CommScope RUCKUS. We're supporting more progress and projects and lowering the cost of operations. If there's a smarter investment than that, I can't imagine it."

About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

www.ruckusnetworks.com

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