NOVATO UNIFIED SCHOOL DISTRICT

Reopening Novato Schools with RUCKUS® Wi-Fi and cloud management opens more possibilities

Novato Unified School District serves close to 8,000 students in the city of Novato, just north of the San Francisco Bay Area. The district has seven elementary schools, a K-8 charter school, two middle schools and two high schools. The district has about 800 employees—making it the largest employer in the city.

Customer
Novato Unified School District

Location
Novato, California

Challenges

The existing Cisco Wi-Fi network had the irritating habit of "hiccupping" every 15 minutes. The inexplicable glitch was merely annoying when teachers and students were working with Google Docs, but it was intolerably disruptive for Zoom conferencing during the COVID-19 pandemic. In addition, the Wi-Fi management was so non-intuitive that the IT team had to keep the network relatively static—creating frustration for both IT staff and users.
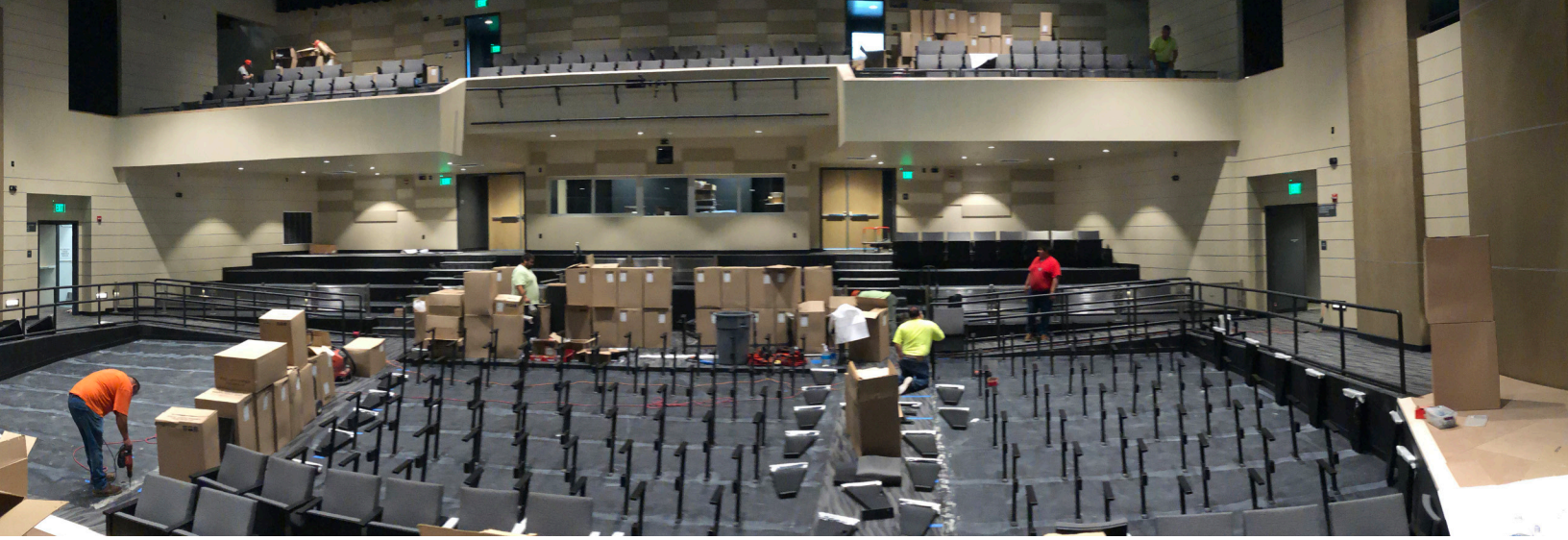
Solution

In phase one, the IT team replaced the existing access points (APs) in the high schools and middle schools with CommScope RUCKUS® APs certified Wi-Fi 6. In phase two, the rest of the district was updated with the new Wi-Fi. RUCKUS was chosen for its performance, coverage, and, especially, its ability to handle high-density environments with ease. The IT team chose cloud-based management over on-premises controllers. Of all the vendors evaluated, RUCKUS Cloud had the most intuitive software for simplifying multi-site management. It also had all of the capabilities IT wanted to support user needs, including fast turn-up of guest networks.

Beyond streaming video and virtual reality: hybrid learning hammers Wi-Fi

"A decade ago, no one would even consider using Wi-Fi for a high-performance infrastructure," says Ryan Green, network supervisor for the Novato Unified School District. "Our new RUCKUS Wi-Fi network from CommScope has made us believers: RUCKUS wireless technology can handle anything."

What a difference a decade makes. Actually, what a difference a year can make—if that year is 2020. California schools were shut down because of the pandemic.

For more information, visit ruckusnetworks.com

A year later, the Novato School District began reopening. It was a return to normal, except so much was different.

The pandemic was like a time machine—propelling education models years ahead. Classes were operating in hybrid mode, mixing remote and classroom-based attendance. The concept of "classrooms without walls" was now an everyday reality. Students and teachers came back to the classroom with their tablets and smartphones. They weren't just entertainment devices anymore. They'd become educational tools.

"All of the devices, the online curriculum and audio and video conferencing—the demand absolutely hammered our RUCKUS Wi-Fi network," says Green. "Remarkably, the performance was flawless. There were no glitches or hiccups. We were elated that the RUCKUS Wi-Fi didn't let anyone down."

The RUCKUS network has created new conversations with Education Services and the assistant superintendent for Educational Services. "It's hard to describe how the RUCKUS performance has affected just about everything. There's more interest in trying to push the technology," says Green.

The management system for the old network would have made it difficult to support those conversations. "We never had the data, analysis and reports that you need for strategy and planning," says Green. "We weren't just modernizing APs—we wanted a modern management system, too."

RUCKUS Cloud gets more out of the network and takes less out of IT

IT had made the strategic decision to start moving away from on-premises equipment. "We want to move away from managing data center equipment and focus on what's happening in the classroom," says Green. "We didn't want on-premises controllers all around the district. That model doesn't make sense if you have a lot of sites on the same Wi-Fi network, like most school districts have. We wanted a subscription-based, software-as-a-service model."

All of the cloud management solutions they looked at eliminated on-premises controllers. But none matched the simplified management of RUCKUS Cloud. "The great thing about RUCKUS Cloud management is that it requires very little effort to manage the entire district's Wi-Fi, but yet the software also gives us so much power," says Green.

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Ryan Green
Network Supervisor
Novato Unified School District

Network technicians can see the health of the network at a glance. "More often than not, our technicians can resolve problems before users know about them," says Green.

At the moment, IT has a separate network for students to use their own devices. "For seven years we maintained a fairly static environment because it was difficult to make changes. Going forward, we'll have the freedom to create networks and assign them to different venues. We'll be able to optimize the network based on sites, usage, applications and more. To think about optimization so soon after going live is

another unexpected leap forward," says Green. "RUCKUS is a great combination of simple, reliable and adaptable."

Some of the system administrators like the RUCKUS Cloud management so much that they've asked Green to make them network administrators. "How often do you see a system administrator wanting to work with a networking tool? They appreciate how well architected it is. RUCKUS Cloud has become a group interest."

Another unanticipated management benefit is that RUCKUS Cloud has enabled the team to discover problems in other parts of the infrastructure. "We get so much great information from RUCKUS Cloud about each AP that we were able to isolate defective cabling because of bottlenecks in Wi-Fi throughput. We also identified a firewall problem in a similar way," says Green.

Literally sprinkling in IoT

Green recognizes the enormous potential of IoT solutions in education. IT has already received a request from the facilities staff to put sprinkler controllers on the Wi-Fi network. Putting in a single outdoor AP will save the cost of trenching and pulling cables. The same outdoor AP can be used to extend Wi-Fi to the sports fields and cover outdoor events.

Green plans to integrate more IoT solutions over time. For example, they have an IoT-based vaping detection solution from Soter Technologies, a CommScope RUCKUS partner. Soter's FlySense detectors incorporate sensors that pick up vaping and noise disturbance. Currently, the FlySense detectors are hardwired over Ethernet in the high schools, but Green believes it makes sense to put the detectors on the RUCKUS Wi-Fi network in the future.

Coming back to a much bigger world

Before the pandemic, if a student needed to work from home, the teacher would send them instructional materials to make up the class. Now they can participate remotely. "This morning I walked into a high school classroom. There were 12 students in class, 30 students on Zoom on a big-screen TV, the teacher was using her iPad and laptop. All the traffic was going over the RUCKUS Wi-Fi and it was working beautifully," says Green. "We're seeing that teachers are willing to take more risks and try things because they know the network will support them."

Novato School District is constructing a new building that will house an 18,000-square-foot performing arts center and 15,000-square-foot center for the sciences. "In the past, we would have worried about how the indoor Wi-Fi would support these high-density environments," says Green. "We're already thinking past that question, because we know RUCKUS will handle those spaces beautifully. Instead, we're thinking about the people waiting in line and giving them Wi-Fi, too. We know coverage won't be an issue with RUCKUS APs. And, with RUCKUS Cloud, we can set up portals for the centers and guest networks for different events. This checks all our boxes for high-density coverage, cloud-based management simplicity, security and future proofing. RUCKUS has helped us open our schools to more possibilities."

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.

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