Executive Summary

Industry

- Education, K-12

Environment

- 50,000 students
- 6,500 staff
- 38 schools, 42 buildings
- 100,000 unique devices
- 4,659 access points

Technology Needs

- Ability to deploy access points in every classroom
- Adequate bandwidth to support BYOD and a multitude of native devices
- Seamless support services
- Robust network infrastructure to accommodate continuous growth

Extreme Solution Components

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

Results

- Dramatic improvement in Wi-Fi reliability
- Centralized management, granular visibility and control
- Elimination of systems operations problems
- Enhanced scalability enables continued district growth

Technology Forward School District Deploys Network Built for Growth and Innovation

Forsyth County Schools, a public school district in Forsyth County, just north of Atlanta, Georgia, is a notably forward-thinking, technology-reliant school system. Serving 50,000 students and employing over 6,500 staff, it is one of the largest school districts in the state, and they're growing rapidly.

Forsyth grows by an additional 1,500-1,800 students every year, and they're known for looking ahead for opportunities to enrich student learning experience through technology. "Forsyth County Schools has long been known as forward thinking when it comes to technology, and we're a rapidly growing school district," said Network Operations Coordinator Curt Godwin.

Given the pressures of district growth and continued technology innovation initiatives, ensuring high-speed wireless connectivity, ease of network management, and improved bandwidth are critical focuses for IT leadership.

A Community Centered on Education

Forsyth County can be described as a community centered on education. If you visit their website, you're met with the tagline Quality Learning and Superior Performance for All. It comes as no surprise that as a result, the school system is doing exceptionally well, outperforming the majority of nearby school districts with exceptionally high standardized test scores and graduation rates.

Not only does Forsyth offer traditional curriculum at their 21 elementary, ten middle, six high, and one virtual 6-12 schools, but their Alliance Academy for Innovation delivers ground-breaking career and college subjects. Here, students learn about aerospace engineering, cyber security, emergency medicine, and more—and even earn college credits or industry certifications. A full virtual academy complements their onsite teaching. Remote students can learn online and after-hours. This has enabled the district to completely do away with inclement weather days.

Further, the community understands the value of technology. "We've been very lucky that voters, parents, the district, and our board members understand the value of technology in education," said Security Operations Engineer Sean Fowler. "This has allowed us to continue the technology implementation program we've instituted over the past few years." The district has also been fortunate to receive strong support from the administration and qualifies for a 40% discount through the FCC E-Rate program.

Unprecedented Rate of Growth Calls for Strong Infrastructure

Given the size of Forsyth County Schools, with 50,000 students and 6,500 staff members, the demands placed on the network are high. The network spans 42 buildings and connects over 100,000 devices. Although they are not a 1-1 district, the district recently rolled out 27,000 Chromebooks to improve the device to student ratio. For surveillance, 1,500 cameras are located throughout the hallways. Cameras provide facial recognition at entry ways. Needless to say, connectivity and bandwidth problems would not be acceptable.

Technology-Based, Visionary Curriculum Continues to Evolve

Forsyth is an impressively technology-reliant school district, committed to enhancing the learning experience for both students and teachers as much as possible. In fact, each classroom is equipped with Clear Touch interactive panels, enabling teachers to focus solely on providing an adaptive, personal learning experience.

Students frequently bring their own devices, so BYOD is part of their network environment, in addition to Chromebooks and devices provided through the school system. Forsyth conducts 100% of all state testing online, initiated by working closely with the Georgia Department of Education on an initial pilot program.
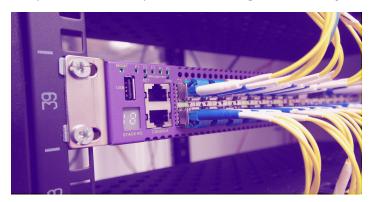
Further, all of the facility operations infrastructure is digital, with LED remote-controlled lighting and network-connected locks in all facilities and an advanced Synergy/Delta Controls HVAC system.

Ease of Network Management and Comprehensive Coverage a Must

Given that technology is such an integral part of the curriculum throughout all grade levels, Forsyth needed network technology that would support a densely-populated, diversified geography.

Not to mention, only two network specialists manage wireless connectivity at Forsyth. A management solution that provides visibility into network issues is critical for smooth operations and fast problem resolution.

When they began their search for a network provider to facilitate a future-focused upgrade, the team at Forsyth compared numerous options, with management as a key

factor for their final decision.

Forsyth worked closely with their service provider and Extreme Networks partner, Lockstep, to evaluate potential providers and solutions. Their account representative emphasized that Extreme understands business models; not just selling networking products.

"We made sure that Forsyth knew Extreme delivers on analytics and automation. Extreme is great at working with partners like us to articulate their vision, which allows us to deliver that appropriately to the customer," said Charlie Van Pelt, Vice President of Sales, Lockstep Technology Group

After an extensive bakeoff involving Xirrus, Aruba/Alcatel, Meraki, and Riverbed, they decided Extreme would be their most effective choice. "I would credit Lockstep with opening the door. They were very helpful in promoting Extreme to us and showing us the benefits," Godwin mentioned.

"We compared every option. We wanted to know: how easy is it to manage? What sort of information is on the dashboard? What integrates well with our existing switching infrastructure? Wireless really ended up being a no-brainer," recalled Fowler.

Ultimately, Forsyth chose Extreme, aiming for a future-proofed infrastructure that would accommodate continued education technology innovations.

"Every week, we're hitting a new high watermark for bandwidth consumption or device count. With the old hardware, we wouldn't have had the infrastructure we needed to support this kind of density."

Curt Godwin
Network Operations Coordinator,
Forsyth County School District

Unbeatable Wireless and Ease of Management

"Post-implementation, there really haven't been any systemic problems. Extreme Control gives us the information that we need," said Godwin. The internal IT staff at Forsyth is small, but they're still able to easily support a robust wireless network and focus on other technology initiatives.

Managing Partner James Harden of Lockstep Technology Group says, "The time required to manage the network has been reduced because with the new solution, once a user plugs in a device, they're provisioned based on a role. This gives the technician their time back to work on more strategic technology initiatives for the school district."

"Our mutual partner, Lockstep, has always been available to us when we've had either an Extreme-specific issue, or just a general issue with implementing a feature," recalls Goodwin.

Because the Extreme wireless solution works so well, the district has been able to transition a great number of devices from a wired connection to wireless, and still provide the same quality of service.

As a cutting-edge district, Forsyth is now growing an eSports program, implementing robotics, and increasing their use of virtual and augmented reality – these are just a few technology initiatives in the pipeline. Fortunately, Forsyth is well equipped to successfully accommodate the resulting network demands.

"Since adding Extreme, our bandwidth has tripled."

Curt Godwin
Network Operations Coordinator,
Forsyth County School District

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