CASE STUDY

DECATUR CITY SCHOOL DISTRICT

Decatur City Schools improves student engagement with new Aruba Wi-Fi and wired solutions to achieve excellence goals

Establishing a 100-percent college and career initiative launched a multifaceted teaching and learning transformation at Decatur City Schools in Alabama. The effort quickly led officials to determine the district's existing wired and wireless environment couldn't cope with the new demands.

"Our decade-old legacy infrastructure was increasingly lacking in performance," explains Emily Elam, Supervisor of Technology for the 8700-student district. "In addition to our existing 1:1 initiative in 4th-8th grade, we also planned to supply every 9th-12th grader with a Chromebook at our two new high schools. With the growing demands and device densities, we clearly needed an infrastructure refresh."

Positive Experiences Lead to Aruba Embrace

To begin, Decatur evaluated whether to update its existing solution or seek another option. Elam's familiarity with Aruba, a Hewlett Packard Enterprise company, from her previous district tipped the scales.

"I had a great experience with HP at my prior district, where there were very few issues with the networking equipment and the warranty meant no costly repairs," Elam says. "This made Aruba ownership a very cost-effective way to be good stewards of taxpayer funds. We also used Aruba ClearPass for policy-based access control and our experience with it was equally positive."

REQUIREMENTS

- Support excellence initiative to transform teaching and learning
- Streamline, unify and deploy simple Wi-Fi and wired infrastructure
- Tackle educational disadvantage with cost-effective, digital networking solutions

SOLUTION

- Aruba Indoor & Outdoor APs
- Aruba 7210 Series Controllers
- Aruba 2930M Switch Series
- Aruba 3810 Switch Series
- Aruba Central
- Aruba ClearPass

BENEFITS

- Slashed school absenteeism by 14 percent while boosting graduation rates with greater student engagement
- Introduced new engagement and scholarship opportunities, such as Esports, made possible by high speed Wi-Fi
- Cut network downtime from hours to seconds with automated Wi-Fi infrastructure updates
- Improved employee productivity in IT from network simplicity
- Gained future-proof infrastructure for delivering on the goal to expand curriculum and IoT adoption

"We're definitely realizing value from modernizing our wired and Wi-Fi infrastructure. We credit Aruba with being an exceptional partner in making it happen.

EMILY ELAM
SUPERVISOR OF TECHNOLOGY, DECATUR CITY SCHOOLS

Although Elam was confident about Aruba, Decatur's network administrator was initially concerned, being heavily invested in the incumbent. "Fortunately, the more he learned about Aruba's product quality, intuitive interface, ease of configuration and extensive support resources, he became excited about making the leap," says Elam. "We've never looked back."

Aruba Infrastructure + Central = Long-Term Connectivity Gains

In collaboration with Aruba representatives, Decatur began a multi-year update to coincide with the availability of E-rate grants. This included high-performance Aruba Access Points, in Instant mode (IAPs), and access switches along with cloud-based Aruba Central, for network management and operations.

"In addition to addressing our short-term needs, the set-up provides the flexibility to evolve our network over time," says Elam. "Aruba's demonstrated track record for supplying efficient and effective pathways for smoothly transitioning to the latest technologies, as they're required, is a big plus."

The district also deployed smaller Aruba mobility controllers for the sole purpose of creating VPN tunneling back to the data center. "Our teachers and staff need access to their mobile phones for various reasons, particularly in case of an emergency," Elam says. "Combining our IAPs with a VPN enables us to offer connectivity for those BYOD devices, as well as transporting guest traffic securely."

Aruba Central reduces networking complexity and costs

Given Decatur's ultra-lean IT staff, officials were especially attracted to Aruba Central's breadth of features and cost efficiencies.

"Among its advantages, Aruba Central eliminated the need for an on-site server and associated costs," says Elam. "This also avoided inherent server administration and update tasks, which helps relieve an already challenging goal to keep up with all of our technology needs and requests."

From cost savings to IT productivity

What's more, Central supplies a wealth of other attributes. "For instance, with our old system, configuring and updating network settings was cumbersome," says Gary Cloer, Network Administrator at Decatur. "Central not only simplifies those processes, it's also easy and intuitive to use."

Non-disruptive fine-tuning is another capability Cloer values. "Previously, updating network configurations required taking Wi-Fi offline for several hours as our old system was overly complicated to administer," Cloer says. "Using Central, making needed changes takes seconds."

Overall, Cloer appreciates the concise view of each IAP, how they are performing and the clients connected to them. "This gives us visibility into whether any adjustments are needed as utilization patterns change," he says. "Having such a powerful and intuitive tool frees my time to focus on other critical projects."

SWITCHING INNOVATIONS FUTURE-PROOF WIRED INVESTMENTS

On the wired side, Aruba's switches are answering multiple near and long-term needs. "For example, we purchased some of our switches with general fund resources to enable deploying a variety of IoT systems," says Elam.

This enables Decatur to run current IoT solutions, such as security cameras, door locks, intercoms and telephony, over the wired network without any congestion, she says. Further, Decatur's wired network is now future-proofed to support new requirements as they emerge.

"Aruba's high-powered PoE switch ports and multi-gigabit Ethernet capabilities provide us with the features we need today," she explains. "In the future, we can easily take advantage of the many capabilities Aruba is building into its access switches."

ARUBA CLEARPASS – UNIFIED WIRED AND WI-FI POLICIES

Decatur is also anticipating rewards from unifying Wi-Fi and wired access by deploying ClearPass. This will supply the district with one system that works to authenticate students, teachers, staff and guests, saving time and addressing security needs.

"We appreciate the granular visibility and enhanced security ClearPass will give us with respect to who and what is connecting to our network," says Elam. "We'll also have improved control over bandwidth utilization, which is particularly critical to managing guest and Internet traffic effectively."

Putting colorless ports and dynamic segmentation to work

Other projects on the horizon include leveraging the colorless port and Dynamic Segmentation capabilities within Aruba's switches.

The former enables a switch port to automatically use information, supplied from ClearPass, about a connected device to determine whether it's a camera or an HVAC sensor for automatically assigning appropriate access rights. This eliminates manual port configuration tasks.

Similarly, Dynamic Segmentation leverages ClearPass to micro-segment traffic using district-defined rules to increase data security as information travels across a network.

ENABLING NEW OFFERINGS WHILE EXCEEDING EXCEPTIONS AND GOALS

With its new network providing a modern infrastructure foundation, the benefits at Decatur rapidly added up. "When you open two new schools, with new equipment and new Chromebooks for each of about 2500 student, expectations run high," says Elam.

"All of the cloud applications at our high schools – Google Classroom, Canvas learning management and online textbooks – depend on a reliable experience," she continues. "Our new wired and wireless infrastructure is enabling us to exceed our students, teachers and staff expectations."

Esports team takes the lead

In addition to powering classroom systems, high-performance Wi-Fi is opening doors to new options for engaging students. One of them is supporting an Esports team, complete with college scholarship opportunities.

"The State of Alabama sanctions three Esports games, of which we participate in League of Legends," Elam says. "The bandwidth and performance requirements are very high, and it must be stable, as higher education scholarships are on the line. Our Aruba Wi-Fi gives us the confidence to encourage our students to participate and win."

Academic outcomes abound

Most importantly, Elam reports that Decatur is surpassing its excellence goals. Two significant measures are reduced absenteeism and higher graduation rates.

"By enhancing student engagement we hoped to see a three percent decline in absenteeism," she says. "Instead, absenteeism dropped by 14 percent, which is tremendous."

For graduation rates, the target was a two percent increase. "We're on track to exceed that goal as well," Elam says. "We're very pleased with how far we've moved the needle, especially considering the challenged demographics of our district."

"We're definitely realizing the value from modernizing our infrastructure," she adds. "We credit Aruba with being an exceptional partner in making it happen."

Contact Us