aruba
a Hewlett Packard
Enterprise company

Aruba Wi-Fi 6, Central and AIOps supplies intelligent, self-healing network for learning without limits today and tomorrow

Customer Profile

Vestavia Hills City Schools serves 7,200 PK-12 students who reside within the city of Vestavia Hills in the Birmingham, Alabama metro. A high-achieving district with graduation rates above 95 percent, Vestavia Hills facilities include five elementary schools, two middle schools, a high school, a board of education office and an operations/transportation center. Dedicated to a "learning without limits" model, Vestavia Hills supports a staff of 700 teachers and administrators.

Vertical: Primary Education

Location: Vestavia Hills, Alabama, United States

Customer size: 7,200 students and 700 staff

Use Case

Remove learning barriers by replacing obsolete wired and wireless networking technology with AI-enabled, cloud-based, unified infrastructure to boost access reliability and security while streamlining and automating network management.

REQUIREMENTS

Support strategic institutional goal to enable learning without limits

SOLUTION

Aruba Indoor APs, including Wi-Fi CERTIFIED 6 APs

OUTCOMES

Deliver premier traditional, remote and hybrid learning experiences with reliable, secure, future-ready AI-driven

Adopt a high-performance, high-density wired and wireless networking solution

Automate, centralize and streamline infrastructure with AI-enabled tools

Aruba 2930F Switch Series

Aruba 3810 Switch Series

Aruba Central for cloud-based network management

Aruba ClearPass for network access control

Foundation Care for Aruba

infrastructure

Supports advanced curriculum innovations such as virtual reality (VR) and IoT-enabled learning tools

Slashed teaching and learning downtime from hours to minutes

Cut monthly IT maintenance windows from about two days to less than two hours

Enabled extending controlled, secure and granular Wi-Fi guest access to athletic and community events

With its strategic plan calling for learning without limits, Vestavia Hills City Schools found itself at a technology crossroads.

"Our legacy wired and wireless networking infrastructure was limiting teaching and learning," says Keith Price, Director of Technology for the 7,200-student PK-12 district located in suburban Birmingham, Alabama. "As we were rapidly adopting cloud-based classroom applications and moving toward a 1:1 mobility environment, we needed to improve connectivity reliability, security and performance across the district."

"We definitely appreciated zero-touch and the ability to create a common environment across all of our sites," Price says. "This significantly streamlines management."

Aruba Wi-Fi 6, Powered by Central, the Clear Choice

To satisfy federal E-rate funding requirements and state mandates, Vestavia Hills began its journey with a competitive bid process that included Aruba, a Hewlett Packard Enterprise company.

"Aruba was the clear choice for the quality of its solution combined with the services we needed to help us install, configure and maintain a modern, future-ready wired and wireless networking platform while stewarding taxpayer funds," Price says.

By selecting Aruba's Edge Services Platform (ESP), Vestavia Hills gained centralized, automated, cloud-enabled network management from a single intuitive dashboard using Aruba Central. The solution also includes Wi-Fi CERTIFIED 6 access points (APs), which are based on the latest IEEE 802.11ax standard, along with wired aggregation edge switches, and Aruba ClearPass for secure, granular and centralized access control.

Central + AIOps Advances Deployment, Management & Reliability

During deployment, Vestavia Hills used Central's zero-touch provisioning capabilities to automate AP and switch implementation and configuration. With Central, traditionally time-consuming and error-prone manual deployment and network optimization tasks are reduced to fast, accurate points and clicks.

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Availability users can count on

Vestavia Hills also appreciates the network reliability enhancements provided by the AIOps (artificial intelligence operations) framework underlying the Aruba ESP platform. It preempts network problems by uniquely combining machine learning with anonymous data, gathered from millions of devices throughout Aruba's global customer base.

The AIOps-driven platform combined with Central's granular visibility and management tools are delivering Wi-Fi connectivity the school system's teachers can count on.

"Prior to implementing Aruba, teachers reported sporadic wireless connectivity," says Price. "With Aruba and Central as a one-stop location for troubleshooting and correcting issues, we've reduced our teacher downtime from four or five hours to a few minutes."

Multi-Layered Zero Trust Security and Cyber Catalyst^{SM} Advantages

To support Zero Trust security best practices, while further unifying its network to build consistent wired and wireless experiences, Vestavia Hills is adding ClearPass to Aruba's native security capabilities.

With its customizable and template-based policy enforcement approach, ClearPass automates discovery, profiling and access control for users, devices, and "things." It also enables rapidly drilling down to specific devices, whether it's a printer, security camera or laptop.

"With ClearPass, we can offer more streamlined network access and improve user experiences, while increasing security and network integrity," Price says.

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Insurance benefits stem from Cyber Catalyst^{SM} designation

As a whole, Aruba's security features have achieved Cyber Catalyst^{SM} designation, making organizations like Vestavia Hills eligible for enhanced conditions on cyber insurance policies from participating insurers.

Further, Aruba's tight integration with other industry-leading security platforms enables quickly and easily creating a multi-layered zero-trust approach.

Supporting Modern Experiences in Classrooms, on Athletic Fields, and After School

Although COVID-19 has temporarily altered Vestavia Hills' instruction to include blended, remote and triage models as well as in-person learning, its new network is key to delivering all four options. "During the pandemic, our network is supporting the learning platform required for our hybrid, remote and triage models," Price says.

In traditional classroom settings, curriculum innovations include traffic-intensive Google AR & VR along with other IoT-enabled learning tools. "In addition, our teachers use web conferencing internally for building-to-building and class-to-class projects," says Price. "We also partner with universities and others, which frequently involves video-enabled collaboration."

Vestavia Hills' new network also shines in high density areas, like gymnasiums, cafeterias and large conference rooms. "All of these are multi-use spaces in today's educational environment," Price says. "Whether it's robotics competitions, guest speakers, or online testing, we've gained the capability to stream content to any gathering."

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Network keeps Vestavia Hills in the game

For the athletic department, the network supplies the capability to fulfill contemporary requirements. This includes real-time score streaming as well as providing visiting teams and coaching staff with smooth and secure Wi-Fi guest connectivity for access to Hudl and other athletic platforms.

Additionally, the infrastructure supports the courtside scoreboard and statistical system for basketball, volleyball, and wrestling along with the football team's instant replay and scoring solutions.

"Athletics today are a high tech endeavor," says Price. "Our network ensures we can fully participate."

Extending controlled access to community events

To benefit its students and the community, Vestavia Hills also hosts a variety of extra-curricular events where guest Wi-Fi is key. "For example, we've hosted an annual Thespian festival where we extended access to attendees," Price says.

"With our new infrastructure, we're able to serve the larger needs of our students and community while also having granular control over who, and what, we allow to connect," he says.

Significant Business, IT and Operational Rewards

From a business and operations perspective, the network modernization is also a plus. With Aruba's Wi-Fi 6 supplying military-grade Suite B cryptography, Vestavia Hills ensures optimal, secure experiences in the most congested settings. Sustainability is also improved with capabilities like Green AP mode, which offers energy savings of up to 70%.

"As our 1:1 deployment is expected to bring an average of 8000 devices on the network at any given time, we're now ready for daily and peak data traffic loads," says Price. "This includes supporting our faculty and staff's participation in multiple internal and external learning communities."

On the wired side, Vestavia Hills' VoIP telephony, security cameras, door access, intercom and HVAC utilize the new network. "Supplying power to all of those devices via PoE is a considerable savings over running more cable," Price says.
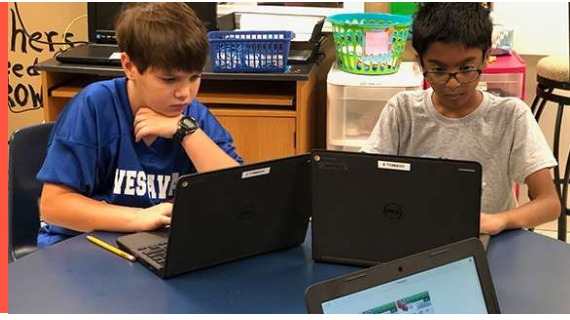
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Less IT overhead makes funds go further

In IT, Price reports his lean staff is significantly more productive and agile. "System upgrades that formerly required weeks to schedule and provision now take minutes," he says. "Similarly, our regular monthly maintenance windows are slashed from 48 hours to less than two."

Moving forward, Vestavia Hills plans to leverage more of the automation advances within its network solution, such as dynamic segmentation. This feature replaces manual configuration tasks, across wired and wireless networks, with dynamically and efficiently routing data traffic based on the user, device, and 'thing' roles that Price's team establishes.

" With teaching and learning changing every day, our secure, self-healing Aruba wired and wireless networking infrastructure ensures we can provide our students with the best digital environment, no matter what comes next."

KEITH PRICE, DIRECTOR OF TECHNOLOGY, VESTAVIA HILLS CITY SCHOOLS