GIGABIT WI-FI IS THE NEW ESSENTIAL RESOURCE

BENEFITS

- Leverages Aruba 802.11ac APs for Gigabit Wi-Fi speed.
- Scalable, intelligent enterprise Aruba WLAN helps district continue its tradition of excellence.
- Patented Aruba ClientMatchTM intelligently pairs devices with the best AP.
- Aruba Mobility Access Switches provide unified access architecture for streamlined wireless and wired networking.
- Includes Aruba AirWave for centralized network optimization and management.

With Aruba Mobility-Defined Architecture enterprise WLAN, including 802.11ac AP's, Mobility Access Switches and AirWave, Worthington City Schools takes its tradition of excellence into the future.

With wireless access statistics showing a trend toward saturating existing infrastructure, Keith Schlarb knew it was imperative to update the WLAN at Worthington City Schools to ensure his Worthington, Ohio, district could continue its tradition of excellence.

"As one of the top school districts in our area, about 90 percent of our students move on to higher education," notes Schlarb, Director of IT for Worthington, which serves 9500 students, operates 21 facilities and employs 1200 teachers and staff.

"With an increasing amount of student, teacher and administration materials moving online, having the right infrastructure to enable modern instructional models was imperative," Schlarb adds.

Worthington's Assistant Superintendent, Trent Bowers, agrees. "Every day 100 percent of our 750 teachers use technology in their classrooms," he says. "We needed to continue evolving our infrastructure to enable current and future possibilities for teaching and learning."

"Our Aruba wireless network, including 802.11ac APs, Mobility Access Switches and AirWave, enables us to dream about the possibilities and provides us with a firm foundation that we can build on for years to come."
Keith Schlarb
Director of IT, Worthington City Schools

STEPPING UP TO ARUBA ENTERPRISE 802.11AC

Worthington sought to supply high-performance experiences at the device level. So, the district decided to step up to the latest wireless access point (AP) standard, IEEE 802.11ac, commonly known as Gigabit Wi-Fi. Worthington's recent adoption of a 10 Gigabit Ethernet backbone between buildings was a key enabler that allowed them to deliver this performance across the network.

The 802.11ac standard not only offers three times the performance, or 1.3 Gigabits per second (Gbps), for newer compatible devices but also significantly boosts speeds for 802.11n, and older, devices as well.

Building on a Positive Partnership

To build on an established positive partnership, Worthington turned to Aruba for the 802.11ac upgrade initiative.

"During our initial adoption of Aruba we conducted significant research and quantitative comparisons," says Schlarb. "We chose Aruba because it offered an enterprise-class solution and has proven to be a rock-solid wireless network for us."

Patented Aruba ClientMatch Boosts Performance

With Aruba's 802.11ac-enabled APs Worthington not only gained wire-speed bandwidth but also benefits from unique patented ClientMatch technology.

Aruba's ClientMatch intelligently pairs wireless devices with the best available access point. In a nutshell, ClientMatch prevents "sticky clients." This improves overall Wi-Fi network performance and user experiences as students, teachers and staff move between locations within enabled buildings.

MOBILITY ACCESS SWITCHES IMPROVE EFFICIENCIES

Another critical element of the WLAN build-out was adding Aruba's Mobility Access Switches, which integrate seamlessly with Aruba APs and enterprise management tools such as AirWave Network Management and ClearPass Access Management System.

A key component of the Aruba Mobility-Defined Network architecture, Aruba's Mobility Access Switches enable organizations like Worthington to extend role-based user access, security and operational simplicity available in its wireless network to its wired network as well. This capability is known as unified access architecture.

"The Mobility Access Switches enabled us to extend the performance benefits of our 10-Gig backbone to devices within our buildings," says Schlarb. "By leveraging Aruba's unified access architecture we have full visibility into our entire network, including every component and every device."

ARUBA HELPS DISTRICT MEET BYOD AND OTHER NEEDS

To deploy 802.11ac APs, Worthington elected to take a phased approach. In order to keep up with district-issued device usage and BYOD, it made sense to use 802.11ac to address access demands in buildings with the greatest needs, first.

"Our BYOD policy permits students, teachers and staff to utilize their own devices for Internet access," says Bowers. "In the classroom, teachers determine whether or not students can use their devices."

"For many instructors, leveraging BYOD improves instruction and enables broader learning opportunities," he adds.

Effectively Staging Deployment with Aruba AirWave

Using Worthington's previously-deployed Aruba AirWave, the district visually determined its two high schools and four middle schools were most in need of 802.11ac-enabled coverage and capacity.

"AirWave showed many more personal devices accessing the network at the secondary level," acknowledges Schlarb. "This enabled us to upgrade those schools to 802.11ac. Then, we re-purposed the existing Aruba APs we replaced with 802.11ac to our 12 elementary schools, improving density in those buildings."

"Over the next few years we'll upgrade our elementary schools to 802.11ac as well," he adds.

Gaining Granular Insights for a Healthy Network

With AirWave, districts like Worthington can gain critical and granular insights into the health score of their Wi-Fi network. This includes the types of devices logging on, the specific access points devices are connected to and the total number of devices on the network at any given time.

Further, AirWave's AppRF technology and intuitive dashboard feature allows an organization's IT staff to identify and chart how applications are used on the network. This assists with setting policies and throttling usage to ensure applications don't interfere with each other.

"AirWave not only helps us with delivering quality wireless experiences, but also with being proactive," says Schlarb. "With AirWave, we knew when our device trends were reaching critical levels. AirWave also helped us determine how many 802.11ac APs we would need and where they should be placed."

"From an operational perspective," he adds, "AirWave enables us to efficiently use our IT resources by centralizing management to provide us with vital information for troubleshooting our many remote locations.

Given the data AirWave produced, Worthington ultimately deployed 360 Aruba AP-225 access points at the first six upgraded buildings.

> **"** Our 802.11ac-enabled WLAN is an essential resource **"**

INTELLIGENT WLAN KEEPS PACE WITH EVOLVING ENVIRONMENT

Now, with its next-generation intelligent Wi-Fi network, Worthington can meet quickly-evolving educational developments and comply with changing standards. This includes cutting-edge adaptive lessons as well as the Common Core State Standards and associated online assessments.

"Our Aruba network truly allows us to dream about the possibilities and then turn those dreams into reality," Schlab says. "We see it in our classrooms where teachers are regularly using Skype or streaming video during the course of instruction."

Teachers Call Aruba Wi-Fi an Essential Resource

Just one example of classroom impact is John Jordan's International Baccalaureate (IB) geography class at Worthington Kilbourne High School.

"Wireless technology is an essential resource for inquiry-based learning in my classroom," says Jordan, who is also the IB Programme Coordinator. "It allows my students to conduct spontaneous research using their wireless devices in response to questions that emerge in the course of our lessons."

802.11ac WLAN Enables Curriculum Advances

Aruba infrastructure is also enabling Worthington to take advantage of new curriculum applications and technologies.

"Our new math curriculum is a hybrid that's part online, which aligns to the Common Core, and part classroom-based," Bowers says. "Also, homework is adaptive. So, students take online assessments and then practice where they need it rather than doing remedial work in areas where they don't."

Sixth-grade math instructor Allie Seilig sees the rewards every day. "Our wireless network definitely assists with individualizing math instruction," says Seilig, who teaches at Worthington Hills Elementary.

"My students use laptops in the classroom, enabling me to tailor my instruction to meet their individual requirements," she adds. "I'm now able to provide the rigor and challenges required to help my students develop the proficiencies they need for college, career and beyond."

District Administration Also Advanced

Outside of the classroom, Worthington's updated Aruba WLAN assists in myriad other ways. "In our district, everything teachers and administrators need is available from our private cloud," Bowers says.

As an example, he cites Ohio's new statewide teacher evaluations and the impact of the district's Wi-Fi network's the ability to maximize outcomes.

"Our principals take their laptops with them everywhere and continuously record classroom observations," Bowers says. "Because that information is housed in the cloud, teachers can access it quickly and securely for support and guidance."

Partnership Positions Worthington for the Future

Over all, Bowers and Schlarb emphasize that partnering with Aruba and adopting 802.11ac ensures Worthington is favorably positioned for the future.

"Deploying the best possible infrastructure allows us to pivot with educational shifts and meet new needs," Schlarb says. "Although it can be very hard for a school district to keep pace, our Aruba wireless network provides a firm foundation that we can build on for years to come."

ABOUT ARUBA NETWORKS, INC.

Aruba Networks is a leading provider of next-generation network access solutions for the mobile enterprise. The company designs and delivers Mobility-Defined Networks that empower IT departments and #GenMobile, a new generation of tech-savvy users who rely on their mobile devices for every aspect of work and personal communication. To create a mobility experience that #GenMobile and IT can rely upon, Aruba Mobility-Defined Networks™ automate infrastructure-wide performance optimization and trigger security actions that used to require manual IT intervention. The results are dramatically improved productivity and lower operational costs.

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