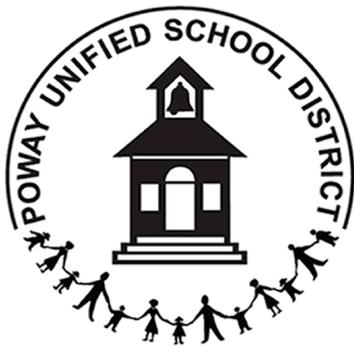**CASE STUDY**

INSTANT WI-FI POWERS MOVE BEYOND 1:1 AND BYOD

Poway Unified School District taps Aruba's 802.11ac Instant™ AP technology, along with ClearPass and AirWave, to provide a pervasive, secure Wi-Fi infrastructure as it moves beyond 1:1 and BYOD to achieve personalized learning environment goals.

BENEFITS

- 2,200 Aruba 802.11ac Instant APs connect over 40 facilities spread across 100 square miles.
- Pervasive, scalable and secure Aruba WLAN infrastructure enables fast, seamless Wi-Fi experiences for an anticipated 100,000 district-issued and personal devices.
- Cost-effective and easy to deploy, Instant APs are affordable for K-12 budgets and efficient for lean IT staffs.
- Aruba ClearPass Access Management System, with Guest and Policy Manager, provides secure wireless learning environment.
- AirWave Management delivers reliable, high-performance Wi-Fi to over 45,000 users, including teachers, students and staff.

"As we move toward a personalized learning model, our Aruba WLAN, with Instant APs, ClearPass and AirWave, enables us to deploy, fast, secure Wi-Fi and troubleshoot it from a central location."
Robert Gravina
CIO, Poway Unified School District

Having spent a half-dozen years providing his organization with the wireless infrastructure necessary for the transition to 1:1, BYOD and digital classrooms, Robert Gravina knew it was time to take the next innovation step.

"We recently kicked-off a district-wide personalized learning initiative, which moves us beyond 1:1 and BYOD," explains Gravina, CIO at the 41,000-student Poway Unified School District, which covers the suburbs of San Diego and neighboring rural communities.

"Among other things," he continues, "we needed to prepare for a many-to-one environment where we could see 100,000 district-issued and BYOD devices on our wireless network in the foreseeable future. To do that, we needed to adopt what's the newest 802.11ac wireless standard."

Commonly known as Gigabit Wi-Fi, the 802.11ac standard not only offers the Poway, California, district three times the performance, or 1.3 Gigabits per second (Gbps), for newer compatible devices but also significantly boosts speeds for older devices.

Beyond performance, Poway also needed simplicity, security and resilience. "Our district is spread over 100 square miles, with 39 school buildings and two administrative sites," Gravina notes. "Plus we have about 4,000 employees that require Wi-Fi access as well our student population."

ARUBA INSTANT WITH 802.11AC ADDRESSES PERSONALIZED LEARNING GOALS

Building on an established partnership, Poway tapped Aruba Networks for the 802.11ac initiative. "Over time, Aruba technology has proven scalable and reliable," says Gravina. "With Aruba, our lean IT staff is able to be agile and cost-effective with delivering the necessary wireless infrastructure."

For the 802.11ac upgrade, Poway chose to deploy 2,200 Aruba Instant access points (APs). It also significantly increased AP density by replacing a model where two classrooms shared an AP to a format that places an AP in every classroom, along with multiple AP's in group collaboration areas.

"In addition to traditional learning spaces, we provide Wi-Fi to our cafeterias and other areas where students and teachers collaborate, including outdoors," Gravina says.

Zero-touch Instant Enterprise Wi-Fi Cost-Effective and Easy to Deploy

By selecting controllerless Aruba Instant, Poway gains a zero-touch WLAN solution that enables a fast, secure, resilient enterprise wireless deployment that fits its K-12 budget. With Instant, a single AP automatically distributes the network configuration to other Instant APs.

"With APs distributed across such a large geographic area, we needed a solution that minimized AP configuration and ongoing management," Gravina says. "With Aruba Instant, we can even ask a non-technical person to plug in a replacement AP, freeing us to concentrate on more mission-critical tasks."

Users Experience Smooth Transitions With ClientMatch™

Additionally, Aruba 802.11ac-enabled APs include Aruba's patented ClientMatch, which helps improve user experiences by enabling smooth transitions as mobile users move from room to room, or building to building.

"Mobile devices sticking to the wrong AP can be a common problem in high-density set-ups," says Gravina. "With Aruba's technology, we knew we could avoid this issue."

> " With Instant, even a non-technical person can replace an AP "

ARUBA CLEARPASS + AIRWAVE = SECURE, RELIABLE NETWORK

Naturally, Poway is also adopting other components of Aruba's Aruba Mobility-Defined Networks architecture to meet the needs of its #GenMobile students, teachers and staff. #GenMobile are the new breed of technology users defined by their preference for mobility.

For security, Poway is deploying the ClearPass Access Management System with Guest and Policy Manager. And, to ensure the performance required for high-quality user experiences, the district is adopting AirWave Network Management.

With ClearPass, Poway gains a vendor-agnostic tool providing the robust security features of a wired network in a wireless environment. In a nutshell, ClearPass combines context-based policy management with next-generation AAA (Authentication, Authorization, and Accounting) services for secure #GenMobile connectivity.

Optimizing WLAN Health With Granular Insights from Aruba AirWave and VisualRF™

For optimizing WLAN health, vendor-neutral AirWave supplies Poway with critical and granular visibility, resulting in substantial savings through operational efficiency, reduced downtime and consolidated management toolsets.

Using AirWave's map-like interface, Poway IT staff have a visual representation of each AP, and its location, at every facility. This includes real-time and historical information on the total number of connected devices, the types of devices logging on, which devices – and how many – are connected to specific AP's and whether each device is district-owned or BYOD.

In addition, AirWave's VisualRF provides detailed reporting on device applications and their performance.

Naturally, such visibility cuts problem resolution from hours to minutes. And, the district can plan for where APs are needed – or whether other steps should be taken – to maximize performance.

"Rather than trying to run from building to building, or campus to campus, we needed solutions that centralized administration," emphasizes Gravina. "Aruba's enterprise tools really streamline management, saving us time and resources."

EDUCATORS REPORT INSTANT LEARNING GAINS

According to district educators, Poway's new 802.11ac-enabled WLAN is having an immediate and significant impact on the transition to personalized learning.

Middle Schoolers Report Immediate Improvements

"Our kids immediately noticed the 802.11ac upgrade," says Casey Currigan, Principal at the Oak Valley Middle School. "They gave us great positive feedback."

"Also," he adds, "many of our teachers can now require students to work and collaborate in the Google Docs environment, rather than just ask them to do it sometimes."

Collaborating Smoothly and Seamlessly

It's a similar story at the Pre K-8 Design39Campus. "Our wireless network allows our teachers and students to work without interruption," reports Sonya Wrisley, Principal at Poway's newest school, which is the first to completely transition to personalized learning.

> ❝ Our partnership with Aruba has proven invaluable ❞

"Our students take for granted that they can move from class to class with their devices while staying completely connected," Wrisley adds. "Their collaboration with classmates has been seamless and, in a word, amazing."

Turbocharging AP Courses

Naturally, high school students are also benefitting from the move to Instant APs with 802.11ac.

"Most students use their devices to connect daily," notes Kris J. Hizal, A.P. U.S. Government and Politics Teacher and Social Science Department Chair at Poway. "For research, using a mobile device is becoming the norm."

"For example," Hizal continues, "during a recent project on the Federalist Papers, our students were able to quickly and easily locate word definitions online. This is critical because we no longer have paper dictionaries in our classroom."

NEW 802.11AC WLAN DELIVERS RESULTS DISTRICT-WIDE

According to Gravina, Poway's new Aruba 802.11ac-enabled WLAN is delivering significant rewards across the enterprise. "With so many facilities covering a large territory, it's a big job for our IT staff to manage our wireless environment," he says.

"Aruba Instant APs, combined with ClearPass and AirWave, enable us to deploy, secure and troubleshoot from a central location," Gravina adds. "This really helps keep costs and productivity in line with our K-12 budget."

"Overall," he concludes, "we have a secure, reliable wireless environment where our teachers can concentrate on delivering curriculum and inspiring our students to tap into their natural fascination and passion for learning. Together, this helps us meet our district's mission to ensure College Readiness for All."

ABOUT ARUBA NETWORKS, INC.

Aruba Networks (NASDAQ:ARUN) 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.

Based in Sunnyvale, California, Aruba has operations throughout the Americas, Europe, Middle East, Africa and Asia Pacific regions.

To learn more, visit http://www.arubanetworks.com or get real-time updates on Twitter and Facebook. For the latest technical discussions on mobility and related solutions, visit Airheads Social at http://community.arubanetworks.com.

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