MAKING THE SWITCH

The University of Findlay combines Aruba's WLAN, Mobility Access Switches and the ClearPass Access Management System to reduce networking complexity and improve Wi-Fi experiences for all.

To help support his institution's tradition of excellence, which includes consistently high rankings among colleges and universities, Tim Stuart sought to continue evolving The University of Findlay's wireless and wired network infrastructure.

"Wireless is the connectivity of choice at our campus," says Stuart, Manager of Network, Security and Operations for the 3700-student institution located in Findlay, Ohio. "It's used exclusively in our classrooms, with 100 percent of our faculty integrating technology into their lessons. And, in our dorms, 97 percent of our students connect wirelessly."

SEEKING TO ACCOMMODATE NEW REQUIREMENTS AND EXPECTATIONS

Like many other institutions, University of Findlay (UF) was experiencing a dramatic increase in the number of personal, mobile and wireless devices its students and staff were bringing onto campus. Plus, the University's faculty members were anxious to use Wi-Fi to leverage this wealth of BYOD options in the classroom.

"With students bringing an average of three to four wireless devices per person to campus for communication, entertainment and academic purposes, it's important for our network to provide exceptional user experiences," says Stuart. "In addition, we wanted to ensure that our faculty could use the network and mobile devices to drive student learning in and out of the classroom."

BENEFITS

- Pervasive, unified Aruba wireless and wired network significantly reduces networking complexity.
- Aruba Mobility Access Switches enable cost-effectively scaling-out the Wi-Fi network to meet long-term needs and goals.
- Aruba ClearPass Access Management System enhances security and workflow for institution-owned and BYOD devices.
- AirWave Network Management centralizes management and compliance across wired and wireless networks.
- Supports future adoption of 802.11ac APs.

"Combining Aruba's ClearPass Access Management System with its Mobility Access Switch is a significant part of our network security and management strategy today."
Tim Stuart
Manager of Network, Security and Operations, The University of Findlay

UNIFYING WIRELESS AND WIRED NETWORK IS THE ANSWER

Although UF was already using Aruba Networks access points (APs) and Aruba AirWave Network Management as a part of its WLAN architecture, the institution saw the value of upgrading other equipment to robust enterprise solutions for secure, high-quality classroom and off-hours access.

In the process, UF sought to unify the wired and wireless network to assure performance and capacity requirements could be met, both short and long term. "We needed to continue advancing our wireless capacity," says Stuart. "We also needed to ensure our backbone was sufficient to support Wi-Fi capacity and performance needs."

To find the right mix of solutions, UF conducted a rigorous evaluation process. "After we narrowed the field to Aruba and Extreme Networks, we conducted a proof-of-concept," Stuart explains.

In the end, UF selected Aruba's Mobility Access Switches to unify its wireless and wired networks as well as the ClearPass Access Management System to provide the desired security and administration capabilities.

"Having a unified connectivity system, end-to-end with the Aruba mobility switches was really appealing," says Stuart. "Plus our analysis and testing of the ClearPass solution showed it was the superior choice."

MAKING THE MOVE TO ENTERPRISE MOBILITY ACCESS SWITCHES

A key component of the Aruba Mobility-Defined Network architecture, Aruba's Mobility Access Switches enable organizations like UF 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.

Unified Access Architecture Centralizes and Simplifies Management

Aruba's unique unified access architecture enables organizations like UF to centralize management and policy enforcement of wired and wireless ports.
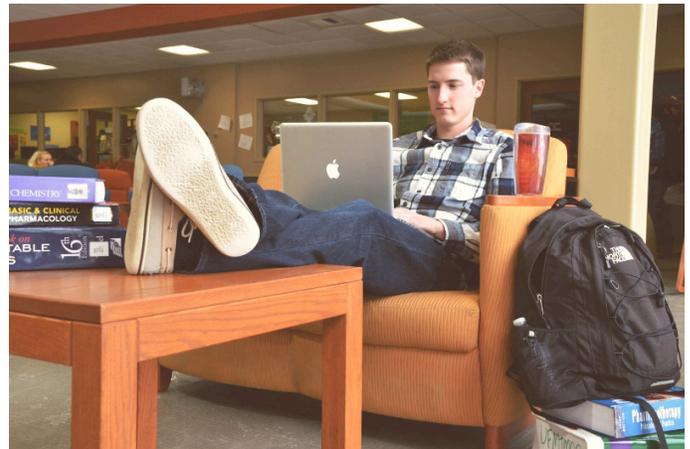
"For example, our security policies are derived from the Aruba Mobility Controllers we already had installed, says Scott Wolke, Network Engineer for UF. "By adopting Aruba's mobility switches, all traffic now tunnels back to the controllers, which centralizes security policies."

Other network management benefits to UF and its lean IT staff abound. "Aruba's unified access architecture enabled us to reduce the number of VLANs on campus from 40 to 14," says Wolke. "And, we no longer need to manage our 200 edge switches separately. Together, these benefits significantly reduce network complexity and support needs."

Performance and Reliability Rewards

By unifying the access layer with Aruba, issue resolution will also be faster, contributing to network performance and reliability. "Troubleshooting an edge switch or other device will take less time because we'll be able to quickly isolate the issue and fix it," affirms Stuart.

Instead of physically inspecting each switch and device to locate an issue, as was the case before, UF can now determine the location of a problem from the central console and, in many cases, resolve it from the same centralized console.

"For example, if a switch needs to be repaired or replaced, we'll leverage Aruba's tools to rebuild it automatically rather than doing so by hand," Wolke says. "In about a third of the amount of time, and with a few clicks, the equipment will be up and running again."

THE POWER OF MOBILITY ACCESS SWITCHES WITH CLEARPASS

UF also appreciates the power of combining Aruba's mobility switch with ClearPass. "It's enabled us to become 100 percent role-based," says Wolke. "For our users this has significant benefits. No matter what device you are using — whether it's university issued or BYOD — or where you are, you can connect anywhere on the network and get the same role."

Indeed, ClearPass provides AAA (Authentication, Authorization, and Accounting) and context-based policy services. Such capabilities assist institutions like UF with comprehensively managing network policies, securely onboarding and managing devices and admitting guest users — all from a single platform.

"ClearPass is critical for validating devices and users so that we can ensure secure access everywhere on campus for all of our students, faculty, staff and guests," comments Stuart. "ClearPass ensures that each of our users has the right access privileges based on who they are and what device they're using."

Policy-based Management Improves Educational Opportunities

In addition to role-based policies, ClearPass provides higher education organizations with the ability to establish policies controlling network priority. This ensures wireless activities related to teaching and learning don't compete with off-hours endeavors.

At Findlay, the result is enterprise Wi-Fi that faculty and students can depend on to maximize education. "Our business students can witness real-time trading on the New York Stock Exchange," says Stuart. "Students in the arts programs view exhibits or performances from anywhere in the world and, in our health professions programs, students can now read in-depth case studies from their mobile devices."

"Also," he adds, "regardless how a user connects, the experience is the same. Our Aruba solution enabled us to eliminate the different connection processes we had for different types of devices and different forms of network access."

> **" Now we have the flexibility to scale out our network "**

The implementation and rollout of ClearPass and the Mobility Access Switches also proved successful. "We completed the deployment over the summer, while students were away," Stuart explains. "In the fall, when students began arriving on campus, we scaled up our IT team for the influx. But, our Aruba solution was so solid that we had over-anticipated our support needs."

STEPPING UP TO GIGABIT WI-FI AND BEYOND

Moving forward, UF's Aruba unified wired and wireless infrastructure, along with robust management and security systems, lay the foundation for cost-effectively scaling to meet future needs. This includes moving up to the next Wi-Fi standard for access points, IEEE 802.11ac, commonly known as Gigabit Wi-Fi.

"We've already started evaluating 802.11ac access points," Wolke says. "In fact, we've deployed our first wireless lab using 802.11ac."

Most importantly, Aruba's solutions position UF to keep advancing its unified wireless and wired network as new needs develop. "Aruba has enabled us to be very agile," says Stuart. "Now we can act quickly as new challenges or needs arise."

"In short," he continues, "the combination of Aruba's Mobility Access Switch and ClearPass is a huge part of our network security and management strategy today. With Aruba solutions, we have the flexibility to scale out our network to meet expanding needs and achieve new educational goals."

ABOUT THE UNIVERSITY OF FINDLAY

The University of Findlay is a comprehensive university with a hands-on approach to learning located in Findlay, Ohio, approximately 45 miles south of Toledo. Findlay is noted for its innovative, career-oriented programs in nearly 60 majors and 12 graduate and professional degrees. Unusual and well-recognized programs include equestrian studies, pre-veterinary medicine (animal science/pre-veterinary medicine option), nuclear medicine technology, occupational therapy and physical therapy, as well as environmental, safety and occupational health management.

http://www.findlay.edu/aboutuf/

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.

Listed on the NASDAQ and Russell 2000® Index, Aruba is based in Sunnyvale, California, and has operations throughout the Americas, Europe, Middle East, Africa and Asia Pacific regions. To learn more, visit Aruba at www.arubanetworks.com. For real-time news updates follow Aruba on Twitter and Facebook, and for the latest technical discussions on mobility and Aruba products visit Airheads Social at http://community.arubanetworks.com.

aruba NETWORKS®

1344 CROSSMAN AVE | SUNNYVALE, CA 94089
1.866.55.ARUBA | T: 1.408.227.4500 | FAX: 1.408.227.4550 | INFO@ARUBANETWORKS.COM

www.arubanetworks.com

CS_Findlay_070814