



Alabama State University

Alabama State University Makes the Grade with Comprehensive Wi-Fi from Aerohive

Challenges

- Upgrade campus network to ensure comprehensive Wi-Fi access and a standardized network platform
- Procure a cloud-enabled network management solution
- Meet budget constraints without sacrificing enterprise-class features

Results

- Deployed ubiquitous Wi-Fi across entire campus with robust security and management features
- Enabled mobility and greater digital learning for students and staff
- Achieved simplified network management and eliminated constraints

About Alabama State University

Alabama State University (ASU) has a rich history since its founding in 1867, and today welcomes more than 5,000 students, offering nearly 50 undergraduate and graduate degree programs. Located in Montgomery, Alabama, the heart of the civil rights movement, the school was founded by nine freed slaves and many of its distinguished alumni are notable figures from the civil rights era.

The large campus has over 60 physical sites and employs approximately 2500 faculty and staff. ASU has recently experienced tremendous growth, adding buildings on its 170-acre campus, including a new football stadium and residence halls.

The Challenge

The University first implemented Wi-Fi in 2004 for approximately 20 percent of its campus, which was adequate for the needs at the time. As technology has moved toward wireless and demands have evolved, ASU upgraded its wireless infrastructure from Cisco to Meru.

In recent years, density increased significantly and ASU began to experience poor connection quality and issues with reliability. Students demanded greater throughput with the introduction of social media and streaming video. Faculty and staff were also using video more regularly for instruction, as well as a variety of apps for administration. Its current Wi-Fi solution had not evolved to meet the demands of a robust wireless infrastructure and the University began to explore alternative solutions.

The Solution

ASU considered solutions from Meraki, Meru and Ruckus before deciding to choose Aerohive for enterprise Wi-Fi. In addition to selecting a solution that was within budget, ASU also recognized that the wired network was limited, and didn't enable mobility. "There are costs to hard wire each classroom and dormitory, and we recognized that the wired network was limited, and required more overhead. As the use case was evolving, we recognized that moving to wireless as our primary access layer was going to give relief to our budget, and meet the demands of students and staff," explains Brian Webb, Lead Engineer at Alabama State University.

"From an IT perspective, Aerohive has made it possible for us to concentrate on our network without having to manage controllers, which has saved us a valuable amount of time and expense. Then, throw in simple deployment and insightful reporting tools, and the bottom line is that Aerohive turns problems into solutions."

—Brian Webb

Lead Engineer
Alabama State University

At the initial launch of the Aerohive solution, ASU set up a flat network, with one SSID across its entire campus. The University deployed Aerohive AP230 802.11ac access points, and implemented personal WPA to each student. After several weeks, the University realized students were sharing their assigned WPA with friends and the edges of the campus network saw a tremendous increase in activity.

ASU moved to establish two SSIDs, one for students and another administration, and also utilized Aerohive's Private Pre-Shared Key (PPSK) for a flexible and secure solution, ideal for a large campus environment. Other constraints were placed on the network, for example, blocking social media for students during peak instruction hours to prevent students from accessing particular sites during classes. With over 4,000 devices at peak times on the network, the flexibility of the Aerohive features allowed ASU to ensure comprehensive coverage across its entire campus.

Other tools that were especially helpful during the deployment included Aerohive's mapping feature and planning tools, which enabled ASU to easily upload maps and decide the placement of access points. "One of the strongest selling points for the mapping features is the fact that using these enterprise tools replaced conducting a detailed site survey for our institution, and in the end we saved 40 man-hours, or up to \$5K," states Webb.

ASU is using HiveManager Online with plans to upgrade to HiveManager NG by the end of the year. The IT team has found the interface to be clean and elegant, with little to no need for complex configuration. Having the network management in the cloud has allowed ASU not to worry about software upgrades and simplified management tremendously. ASU will also soon deploy Aerohive AP1130 802.11ac outdoor access points to install in some outdoor areas, including student apartment complexes.

Results

ASU now enjoys ubiquitous Wi-Fi across its entire campus, without issues of reliability or connectivity. The deployment went smoothly and with Auto-Provisioning from Aerohive, each access point was up and running seamlessly and rapidly.

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Now the entire campus enjoys greater mobility, accessing Google and Blackboard apps for education, Skype and iTunes for podcasting, and facilitating greater collaboration with Google Hangout and other apps. A large number of professors use Apple TVs and the library staff uses a variety of apps for research and instruction.

Other places on campus where Wi-Fi is quite visible is found in the sports complexes. Wi-Fi is now available in the football stadium and on practice fields, including weight rooms, coaches' offices and training facilities. The stadium uses iPads with a POS solution for ordering food and concessions at games. Software from DVSPORT is used for athletic personnel to send footage to mobile devices.

Having Aerohive in place has given ASU much more control and visibility into the wireless network, which has proved to be particularly helpful and valuable. With a granular view, the IT team can see which access points are utilizing greater bandwidth than others, and has shaped application use on the network.

With cooperative control, the Aerohive solution allows the IT team to make changes to one access point without affecting the entire network. A recent success came when the IT team discovered that while the University had blocked BitTorrent through its firewall, one access point was using a large amount of bandwidth. The IT team discovered someone had been able to access the app from inside the firewall. The ability to use filters on that particular AP to block the application was especially helpful. Another Aerohive advantage is the ability for the access point to work as a firewall, blocking traffic at the edge instead of across the entire network.

Expanding the Campus Network

With a firm foundation in place for greater connectivity on campus, the IT team now has some breathing room to look at greater expansion on the network. Many campus departments such as Transportation and Facilities are brainstorming how to leverage wireless for operations and greater efficiency. Professors are also continuing to adapt to reach students through technology, including using portable projectors for greater digital instruction.

In the near future, ASU hopes to expand the guest access functionality on its network, using features from Aerohive like Social Login and ID Manager. In the next football season, box seats will be equipped with Wi-Fi for fans. The entire ASU community is benefitting from the comprehensive Wi-Fi coverage and will continue to grow and evolve to meet student and administrative requirements.



Contact us today to learn how your organization can benefit from Aerohive wireless LAN architecture.

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