



Broward County Public Schools

Broward County Public Schools Select Aerohive to Overhaul WLAN and Bring Connectivity to 300,000 Students

Challenges

- Identify WLAN solution to meet requirements of one of largest and most diverse districts in the nation
- Meet budget requirements for upgrading wireless infrastructure in over 230 schools and 40 support facilities
- Provide connectivity for all students and staff with simplified network management

Results

- Achieved more than 30 percent overall cost savings compared to previous product solution
- Able to manage over 11,000 access points at 270 locations with agile IT team
- Provided robust Wi-Fi to meet the demands of expanding digital teaching and learning activities, and business operations

About Broward County Public Schools

As the sixth largest school district in the nation and the second largest in the state of Florida, Broward County serves over 225,000 students, 175,000 adult students, and is home to 238 schools and 99 charter schools. With an extremely diverse student population, schools welcome students representing almost 200 countries, and more than 190 spoken languages. The District has approximately 14,000 teachers and approximately 32,000 employees.

The IT team is tasked with providing networking to over 270 physical locations, increasingly relying on technology to support the delivery of strategic goals to provide high quality instruction. Broward County

is proud to have been the first fully accredited school district in Florida and recently celebrated 100 years of educational excellence.

The Challenge

Over 10 years ago, the District deployed a wireless network with access points from Airespace, providing Wi-Fi in limited areas. When the controller era of wireless networking emerged and Airespace was acquired by Cisco, the District logically deployed Cisco across the majority of its campuses.

As the District grew and the wireless needs changed and expanded, challenges arose similar to what they had experienced in the early days of deploying autonomous access points. Managing the network became more complex and expensive, and as the District faced upcoming technology refreshes, the increased cost for additional controllers and support became a major concern. With over 270 controllers and the need for increased Wi-Fi coverage to support digital learning initiatives and BYOD, the District needed to consider an alternative solution.

With a district this large, the IT team needed to balance cost and superior performance, while ensuring the Department could meet the larger instructional goals for Broward County. With the increase in online assessments, 1:1 computing in many of its schools, various programs relying on BYOD, and the move from print to digital

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—Doug Pearce

Director of Technical Support Services at Broward County Public Schools

instructional resources, these programs drove demand for connectivity, capacity, and reliability in all schools across the District. Broward County also aimed to significantly mitigate disruption at all schools for online testing. For example, when conducting testing for 5,000 students at one high school, it's beneficial to administer testing all at once to minimize the disruption to instructional time and activities. In order to support this large testing environment, the District had to ensure a robust and reliable wireless infrastructure with consideration for density and capacity.

In addition, the District was moving into a new era of cloud computing, with any new technology acquisitions moving away from being tied to an individual server or device.

The Solution

The IT team became aware of cooperative control as a new era of wireless networking emerged, and the District began to take a deeper look at Aerohive technology.

"For a district of our size and complexity, deploying new technology is a large undertaking. We tend to standardize on core networking solutions, so when we took a look at Aerohive we were not only impressed by the cost savings, but also the performance. The decision to move to a new Aerohive standard across our entire school district made a lot of sense," explains Doug Pearce, Director of Technical Support Services at Broward County Public Schools.

Broward County adopted Aerohive as its new standard for wireless, initially implementing Aerohive's 802.11n access points in every other classroom. Work is currently underway to upgrade that install base to the newer 802.11ac standard with an Aerohive AP230 802.11ac access point in every classroom. The District uses HiveManager on premise and the initial deployment includes over 11,000 access points, with a target of nearly 20,000 once the rollout is complete. The District also plans to expand outdoor wireless access across its campuses in the near future.

Given the magnitude of this wireless deployment, the District has focused on delivering reliable connectivity. The District has pockets of 1:1 programs in place and in other settings can provide the benefits of 1:1 without having to supply every student with a device. Thousands of mobile carts help schools provide the advantages of 1:1, and a recent bond initiative has enabled the District to acquire tens of thousands of new student and teacher computers.

The Results

One of the greatest benefits from moving away from a controller-based environment has been the enormous cost savings for Broward County. At one school alone, the projected savings totaled \$45K, and overall the District saved more than 30 percent across the board. When you add up the cost savings among all 238 schools, the value is monumental.

A diverse district such as Broward County has continuous programs that depend upon its wireless infrastructure. As a district with a wide variety of alternative programs designed to meet specific challenges, as well as adult education with technical and vocational programs, Broward County has an immensely diverse student population. "To say that Broward County increasingly relies on technology to meet the strategic goals of our district is an understatement," adds Pearce. "With Aerohive, we are still amazed that we're able to run an environment as broad and populous as ours without a large Wi-Fi support team."

Schools leverage many types of wireless technology and applications in the classroom. Broward County has approximately 90 elementary schools participating in the Digital 5 program, which combines online instructional materials, digital resources and equips every student with a laptop. Other programs run over Wi-Fi include computer science curriculum from Code.org, a Learning Management System from Schoology, Microsoft's Office 365, Student Advantage and One Drive, as well as a host of digital instructional materials and online textbooks.

With 80 percent of devices on campus having wireless connectivity, over 80,000 devices connected to the WLAN at one time, and a projected 140,000 laptops entering schools within the current three year time block, Broward County must provide rock-solid connectivity as a district that relies on Wi-Fi to deliver instruction. As wireless display technologies and VoIP take a bigger role, the District is poised to meet these demands.

Meeting Strategic Goals

The driving force behind every technology decision for Broward County Public Schools is to ensure that the technology needed to support high quality instruction has been put in place and operates seamlessly. Doug Pearce and his team have been very pleased with the Aerohive solution from day one. "Aerohive technology works with high reliability, which was obviously our first priority for Broward County. We're also pleased to be moving to an all 802.11ac WLAN environment in our schools because of the increased capacity it offers. Having a wireless solution that was simple to deploy and manage was a key advantage to selecting Aerohive, and the strong partnership we have forged with Aerohive has benefitted our IT team, our students, and our staff members," adds Pearce.

Schools face enormous challenges as they transform their instructional and business operations to digital solutions. Broward County Public Schools is not only realizing significant cost savings and operational efficiency in its move to Aerohive, but, more importantly, the District is installing infrastructure that fully supports the transformation to the mobile, digital, personalized instruction, providing high quality education for all students.



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

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