

About Woodward Academy

Woodward Academy combines the proud traditions of Atlanta's oldest college-preparatory school with an innovative, challenging, well-rounded educational experience. In a broadly diverse community, Woodward Academy embraces the uniqueness of each individual. Guided by the core values of excellence, character, and opportunity, Woodward Academy champions student success.

The Challenge

Increased demand for enhanced technologies and internet access for innovative learning programs was creating a strain on the controller-based wireless system. An expansion was needed that would accommodate future growth and positively contribute to Woodward Academy's Sustainability initiative.

The Solution

Woodward Academy transitioned from the ADTRAN Bluesocket controller-based solution to the Virtual Wireless LAN (vWLAN) solution operating on VMware. The school was able to provide internet access for its 2,600 students, spread across two campuses and forty miles, by adding 218 Bluesocket 1800 plug-and-play access points managed from one centralized virtual controller.

The Benefit

Streamlined management and grow-as-you-go functionality were major decision factors for Woodward Academy. The VMware platform brought everything under one management point instead of having multiple hardware controllers. Plus, future bottlenecks are easy to address simply by adding access points. With a virtualized solution, the school reduced CAPEX, OPEX, and WLAN energy usage costs.

Woodward Academy Combines Tradition and Innovative Learning with vWLAN®

Woodward Academy is the largest independent school in the continental United States. It offers a full-range of college preparatory instructional tracks to more than 2,600 students in pre-kindergarten through grade 12 on two campuses. A quick look shows that Woodward Academy is a unique learning environment. A typical graduating class sends 100% of its members to college and devotes 5,000 hours to community service projects.

Woodward Champions Student Success with vWLAN

The school wanted students to be immersed in innovative learning programs enhanced by technology and on-demand access. To get to this level of integration, an informal Bring Your Own Device (BYOD) arrangement was implemented. Students, faculty, staff, and guests were invited to bring their own laptops, tablets, and smartphones, with the knowledge that the wireless network would need to be expanded.

Jim Shanks, network administrator, along with Andy Morris, systems administrator, were tasked with making this goal a reality. They required a scalable solution that would easily accommodate two campuses spread across 40 miles that have a combination of new, renovated, and older buildings. Woodward Academy was already a satisfied ADTRAN®



"My two favorite topics are VMware and Bluesocket. We're enjoying our virtual wireless LAN."

**Jim Shanks, network administrator
at Woodward Academy**

Bluesocket® client with four hardware-based controllers and about 80 access points. Their previous solution had several classes sharing wireless access. Shanks and Morris knew with the push for student hand-held technology in the classroom and the overall move to wireless that they needed a more robust, easily expandable plan for the future.

Shanks and Morris were excited to learn about Bluesocket's vWLAN solution that operates on VMware®. Since Woodward Academy was already a VMware user, this solution was a great possibility. The move to a virtual management environment meant no additional investment in hardware, which was a big plus, according to Shanks. With no hardware to purchase, support, and maintain, the ADTRAN Bluesocket virtual solution had a much

lower Total Cost of Ownership (TCO). Other benefits included centralized management, speedy deployment, and infinite scale.

The duo was also looking to avoid the “bottleneck effect” that hardware-based controllers can have. With the new virtual solution, most of the traffic is pushed to the edge of the network. This alleviates bandwidth issues or bottlenecks.

During the transition, Woodward Academy moved from using Active Directory solely, to incorporating 802.1x with A.D. for authentication, which is working well and saving a lot of time for the IT department. There were some challenges at first to integrate all the different types of school and home devices from registered and guest users. Some of the challenges were due to users not knowing the full capabilities of their devices. Other challenges were due to the device not accepting 802.1x, so MAC authentication was used for devices like Apple TV and Kindles.

The Woodward Academy Community is Embracing the Technology Advances

The most obvious benefit for the school is vastly increased access for all members of the Woodward Academy community. In the past, most of the wireless access was reserved for the faculty, IT department, and the limited shared usage in classrooms. The expanded access afforded by the ADTRAN vWLAN solution has opened up access for all students, other groups like visiting parents or guests, and facilities. As an example, the school has automated HVAC systems, so it's been very helpful for facilities to be able to use their laptop on the roof to examine the physical and automated mechanisms at the same time.

Woodward Academy has realized its goal to bring technology to the students. With the infrastructure in place, teachers are implementing more innovative programs. The Middle School is using 30 iPads to enhance learning, including using award-winning educational applications that encourage students to dig deeper into a topic. Upper School students have access to math, English, and writing software programs, plus get hands-on experience with online project research. The library has remote access to audio books, research tools, and Kindles that can be checked out. Students in all grades are encouraged to blog,

contribute to wikis, and complete online reviews of books they read. To keep everyone connected, there's Edline, an online community for directories, homework, and reports.

One of the overarching goals of Woodward Academy is to provide an example of a “world without boundaries.” vWLAN is assisting with that goal. The Primary School students recently participated with 381,000 people from 31 countries in what the Guinness World Records called the “World's Largest Sport Stacking Event.” Sixth graders were given the opportunity to Skype with a professor in the United Kingdom. Upper School students are able to take a college-level course via web conference.

“We will be able to celebrate what we are learning by sharing pictures, stories, reports, poems, and lots more! Some of your work may even be displayed on our wiki.”

– Note from the second grade teachers

Virtualizing the Future at Woodward Academy

Shanks and Morris have about 85 percent of the buildings covered the way they want and have a second roll-out planned to add more ADTRAN Bluesocket access points and gig-capable PoE switches. They also have a wired license that they plan to incorporate into the mix soon. The wired license is a software upgrade to the ADTRAN Bluesocket access point that provides access to wired users and any access points, which is a helpful migration path for organizations with existing third-party access points. This upgrade enables the network to manage these connections as part of the seamless vWLAN network.

The ADTRAN Bluesocket solution and technical support has exceeded Woodward Academy's expectations and they look forward to being able to meet the growing demand as their school embraces technology even more in the future. As Shanks says, “My two favorite topics are VMware and Bluesocket.”



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