

HIGHER EDUCATION INSTITUTION IMPROVES NETWORK VISIBILITY AND CONTROL

Challenges

The drive for technology within K12 schools is being seen through innovative and interactive teaching techniques, an increased number of students and faculty using mobile devices, and the Partnership for Assessment of Readiness for College and Careers requirement (PARCC). PARCC assessments are heavily focused around online testing and have forced each school to more heavily invest in their network infrastructure. When a New York Metro school district approached Vandis to redesign their wireless environment to accommodate new learning/teaching applications before the start of the new school year, Vandis recognized the need for a strong wireless environment and a stable infrastructure.

Vandis has worked with numerous schools on a wide variety of network and infrastructure projects and, as a result, our experience played a major factor in being selected to execute this work. Through successful wireless implementations at other local school districts, Vandis was able to secure recommendations that allowed the client to feel comfortable working with us on their wireless initiatives.

Selection Criteria

The main focus of this project was to create a solution that enabled teachers to utilize online tools within the classroom, allow the school district to securely move their local resources to the cloud (Gmail & Google Apps), and continue the process of rolling out Chromebooks for their students. To accomplish these goals and support new educational initiatives such as online testing, the school district wanted to deploy a high-bandwidth network. In order to meet the school district's expectations, Vandis Engineers recognized that the school's current network was too old to support the new wireless project and would need to be upgraded. In addition to addressing the immediate needs of the school district, Vandis was able to design an environment that would allow them to scale their network for the future as well.

Solution

In order to successfully upgrade the infrastructure, Vandis recommended that EX 4200 Juniper switches be used for wired access and for powering the access points. A successful proof of concept was completed by having the school district evaluate Aruba Instant.

This allowed controller-less APs to be managed through the web and placed as point solutions within specific departments to create a test environment. This test environment allowed the school district's IT department to start out on a smaller scale Aruba rollout and grow into a controller-based model. Due to the strong performance during the proof of concept, low support costs, and great AP design, the customer then bought the latest Aruba AP 225s with 802.11ac technology and Aruba ClearPass to complete the overhaul of their wireless network. The ac access points were chosen because of their ability to provide higher user density and serve more users while simultaneously increasing both capacity and bandwidth. The purchase of ClearPass enabled the school district to implement guest management, grant better security for internal user authentication, and automate the BYOD (Bring Your Own Device) process.

A primary reason why this solution worked was due to the high level of integration between the Juniper and Aruba products. The Juniper gear communicated seamlessly with Aruba's Airwave and ClearPass technology to help create a very tight network. Utilizing SNMP polling on the switches, Airwave was enabled to identify what devices were connecting to specific ports across the campus.

Results

Due to Vandis' expertise and the ability to control the installation and deployment, there were no unexpected issues and the process ran smoothly from start to finish. With the network refresh complete and the upgrade to their wireless environment finalized, the school district now has complete coverage over all of its grounds as well as their new sports complex. With educational institutions moving towards PARCC, this school is now able to hold tests such as the Regents Exams and allow their students to connect wirelessly. Vandis' experience working with school districts allowed us to advise the customer on the best practices for wireless planning and provide several integrated solutions for the network refresh and wireless upgrade. The newly implemented solution has increased the speed of their network and the additional capacity of the new AP 225s will satisfy their future demands. As a direct result of working with Vandis, they were able to achieve their new technological education initiatives for the new school year.