

SUCCESS STORY

NEW WIRELESS NETWORK ACCESS SYSTEM

helps Talbot County Public Schools prepare for the future



What Data Networks Did for Talbot County Public Schools:

- Delivered a comprehensive solution for wireless network access, including upgrades to the existing infrastructure
- Performed a site survey and technical assessment for the current network
- Redesigned the network for scalability to support a one-to-one initiative and further growth
- Procured, staged, installed, and configured Aruba controller & APs and Juniper EX Series switches
- Leveraged existing cabling infrastructure to reduce costs

Abstract

This wireless network access control solution included a new controller, access points, switches, and upgrades to existing infrastructure.

The challenge

Talbot County Public Schools (TCPS), located in Maryland's eastern shore, devotes a significant portion of its academic learning improvement plan to complying with the Maryland High School Assessments (HSAs) requirements. The HSAs are three tests (algebra/data analysis, biology, and English) that comprise one part of Maryland's graduation requirements. An emphasis must be placed on learning and preparing to pass these exams, for which TCPS has developed a four-year improvement plan to ensure success.

In an effort to ensure that every student demonstrates improved academic achievement, TCPS instituted a one-to-one computing initiative which provides each its Easton High School students with an Apple laptop computer to encourage technology-based learning. TCPS was then faced with a range of challenges to ensure their users have reliable and secure wireless access.

Talbot County Public Schools enlisted Data Networks to implement a complete wireless network solution, from design to installation and configuration. An emphasis was placed on keeping existing core network equipment and cabling infrastructure, while positioning the core network for growth. In addition, TCPS needed a solution that could scale as more schools upgrade, with central management from EHS, and allow appropriate and secure access for students, teachers, staff, and guests.

The solution

Data Networks performed a site survey and developed a new Wireless SAN solution and related infrastructure upgrade at Easton High School, providing professional services related to the staging,

installation, configuration, testing, and project management necessary for implementing this solution. Leaning on our premier partners Aruba and Juniper, Data Networks designed a solution that supplies the performance, security, management, and scalability TCPS needed at the lowest TCO.

The Aruba portion of the solution included:

- Installation and configuration of a new Aruba Networks 6000 series Wireless Controller
- Upgrade to latest supported version of ArubaOS
- Replacement of existing Access Points with 80 new Aruba AP-125 802.11ABGN dual-radio access points

The Juniper portion of the solution included:

- Installation of four (4) new Juniper EX4200 Ethernet switches in existing equipment rack in the MDF; two (2) new Juniper EX4200 Ethernet switches in the server room and one (1) Juniper EX3200 Ethernet switch in each of the three existing IDF's
- Upgrade to the latest supported version of JUNOS
- Configuration of 802.11 trunk port on one 10GE uplink (SFP + LRM) to the existing Cisco switch
- Configuration of switch stacks in a Virtual Chassis for centralized management
- An end-to-end test of the wired and wireless networks

Mission accomplished

Using a dynamic configuration deployment method, the existing network was leveraged to provide the configuration details needed for access points to locate and communicate with the mobility controller to receive a software image, initial configuration parameters, and post-deployment configuration. The controller contains an integrated network management system that configures, controls, and operates all mobility controllers and access points in the entire network, and allows for up-to 512 access points as the network expands.

"To position TCPS with a scalable solution, Data Networks was able to provide secure wireless network access and integrate upgrades to the existing infrastructure," says Dwayne MacKenzie, Data Networks' Networking & Security Solutions Architect. "The EHS students, teachers, staff, and guest users now enjoy fast, secure wireless with minimal impact on the TCPS technology staff."

About Data Networks

Data Networks provides effective technology-based solutions to meet your unique needs. Our solutions are specifically developed to help you drive productivity and manage change.

INNOVATIVE TECHNOLOGY

By partnering at the highest levels with the industry's most respected manufacturers, Data Networks can deliver the right products for your environment with the most aggressive pricing possible. Our strong vendor relationships also bring technical training opportunities, expedited help desk resources, and professional service liaisons for consulting and project engagements.

INSPIRED ENGINEERING

Our goal is to be your trusted technology advisor. So we staff highly-qualified engineers who bring years of experience and the most advanced technical certifications to every engagement. We assign them a single area of technical focus, a unique approach that allows them to continually update their skills and expand their specialized technical knowledge. And we arm them with documented best practices developed over more than 30 years of public-sector service.

We invite you to learn more at datanetworks.com or by calling 800-283-6387.