

Houston County Board of Education Enhances Learning through Wireless Technologies with Help from Xirrus and AirWatch



Located in the heart of Georgia, the Houston County School System educates approximately 28,000 K-12 students on 38 campuses. Houston County students excel in many areas, outperforming state and national test averages, winning academic competitions and earning sports championships.

The Houston County Board of Education's mission is to provide every child in the district with a high-quality education – and that requires equipping both students and teachers with access to the latest technology. As part of an ongoing mobility initiative, the school district sought a strong wireless network in order to implement new cloud-based collaboration and learning management systems.

Bringing BYOD to the Classroom

To achieve its vision of building a world-class infrastructure for education, the Houston County Board of Education first had to streamline their network to ensure optimal performance across all campuses at all times. With many schools employing a mix of wireless devices from multiple vendors, the network was unable to scale to meet the requirements of the district's new technology initiatives.

Making matters worse, the county's Bring Your Own Device (BYOD) initiative, a deadline project to support at least one wireless-enabled device per student in the classroom, was falling behind due to this network's inefficiency. This prompted the school board to evaluate multiple Wi-Fi providers. The district officials considered Meraki's Wi-Fi offerings, but ultimately selected Xirrus due to the directional signal control and modular platform that guarantees the scalability to future-proof the network and provide robust wireless services.

Securing School Networks

"We designed our wireless system with the intention of going full-blown BYOD," said Sharon Lunceford, Director of Information Technology, Houston County Board of Education. "The education system is moving towards cloud-based collaboration, so to maximize efficiency in the classroom, we knew that a reliable wireless network was imperative. Xirrus and AirWatch™ by VMware were the natural partners for this shift. The integration reduced the burden on IT to provision every device and minimizes the number of helpdesk inquiries."

Requirements

- High-performance wireless network to support an increasing number of mobile devices in the classrooms
- A secure wireless network to expedite BYOD program throughout the school district
- Simple management solution to monitor and control wireless infrastructure at 45 locations
- Robust mobile device security to allow only authorized users, devices and applications

Solutions

- 721 Xirrus XR Arrays (equivalent of 1225 traditional APs)
- 153 XR-1220 Arrays
- 537 XR-4420 Arrays
- 31 XR-4820 Arrays
- Xirrus Management System (XMS-Enterprise)
- AirWatch Mobile Device Management
- AirWatch Mobile Email Management
- AirWatch Mobile Application Management

Benefits

- Seamless and reliable access to 30+ high-bandwidth devices (one wireless device per student) such as tablets and laptops per classroom
- Future-proofed Wi-Fi network that will scale as students bring more devices into the classrooms and as buildings and schools expand
- Lower TCO by deploying 504 fewer devices compared to traditional APs, as well as fewer cable runs and switch ports
- Flexibility to upgrade to 802.11ac technology with modular architecture
- Automatically push class content, curriculum, and applications and ensure the proper educational materials are present on a device

Houston County IT officials deployed 721 Xirrus Arrays with more than 2,550 radios throughout the district. This is the equivalent of 1 225 2-radio APs, meaning Houston County deployed 504 fewer devices than they would have with traditional solutions. In addition, the Xirrus Management System (XMS), a wireless-network management platform, was installed to provide full monitoring and control of the Xirrus wireless network. IT administrators were concerned with the security of the network, especially with students bringing their own wireless-enabled devices to campus. The board was concerned about the risk and implications of misuse of the network. They implemented a multi-layered security strategy to secure network access to the Internet with SonicWALL firewalls, allowing only authenticated access and securing the devices using the AirWatch enterprise mobility management solution.

Xirrus also outfitted Houston County schools with a guest network specifically for BYOD. This BYOD network is reserved strictly for Internet access – no device on the guest network is allowed access to the secure school network, which houses critical administrative data.

The Advantages of Partnering with Xirrus and AirWatch

The Xirrus-AirWatch joint solution brings together the best-in-class high performance wireless provider with the world's leading mobile security and enterprise mobility management provider to ensure secure mobile access for Houston County's fleet of devices. While Xirrus enforces access policies as the mobile devices access the network, AirWatch uses its agent and/or profiles installed on the device to enforce access policies from within. The Xirrus-AirWatch solution provides the school board's devices with comprehensive protection.

With AirWatch, Houston County's IT administrators can track board-issued devices, configure policies and settings, distribute apps and secure access to school networks and resources all through a single Web-based console. AirWatch allows IT administrators to ensure devices are compliant with school policies and monitor violations in real-time.

Wireless technology is the new norm; it is among the most effective tools to enhance the learning experience and create a more engaging atmosphere for students. Xirrus provides the scalability, upgradability and simplicity of management that the Houston County School District required to implement an elastic network to meet the needs of students for many years to come. Unlike any other vendor, Xirrus modular Arrays enable capacity to be scaled by adding additional modules to the platform. Additionally, software programmable radios can be switched from 2.4 GHz to 5 GHz when needed as newer devices are deployed. The ability to scale, upgrade and easily manage mobile devices enabled Houston County School Board to roll out their BYOD program as planned.

With the explosion of smartphones and tablets, consumers expect to connect wirelessly whenever and wherever they want. Organizations require high-bandwidth connections to send and receive voice, video and data from any device, and no vendor delivers this better than Xirrus. The Array-based solutions from Xirrus draw from cellular tower design principles to provide wired-like reliability, increased user density and capacity as well as optimal security. Xirrus solutions perform under the most demanding conditions and have lower infrastructure requirements than traditional AP-based Wi-Fi systems. When integrated with business and IT objectives, Xirrus helps organizations do more than ever before.

Mobile technology adoption in the classroom enhances learning by enabling teachers to engage students in new, more effective ways. Xirrus delivers wireless that is scalable, simple to deploy, and very cost effective.



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Sharon Lunceford, Director of Information Technology, Houston County Board of Education

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