

When Poor Wireless Impacts Learning, It's Time For A Change

E-Rate Funds Reduce Costs

Industry

Education

Client Profile

Maumee City Schools is a high-achieving Ohio district of 2,400 students. Technology is an important cornerstone in all aspects of the Maumee curriculum.

Business Situation

A District-wide 1:1 initiative, along with growing smartphone and wearable use, put a strain on wireless performance, eventually impacting classroom learning and online testing.

Solution

ITSavvy worked in tandem with HPE Aruba to roll out new wireless hardware and cloud management software throughout five school buildings. The District was able to utilize ITSavvy's E-Rate funding to reduce costs.

Benefits

- Faster connectivity
- E-Rate eligibility
- Standardized testing compliance
- More secure guest network
- Easier to manage
- Room to grow

About the Client

Maumee City Schools is a high-achieving district of 2,400 students who consistently score above national and state averages. Located in northern Ohio just outside of Toledo, the district includes two K-3 elementary schools, an elementary school for grades 4-5, a middle school and a high school.

The District has a strong commitment to ensuring appropriate technology in all aspects of its curriculum. District-wide, teachers utilize technology to enhance their lessons and to better engage students in learning. The District believes that access to the right technologies can help students achieve success inside and outside of the classroom. All five Maumee schools have a fully-equipped STEM (science, technology, engineering and math) lab.

Their Challenge

Several years ago, the District passed a 1:1 initiative providing all students in grades 4 through 12 with a Chromebook device to use throughout the day. That alone would test the capabilities of any District's wireless network, but nearly every student and faculty member also bring a smartphone with them, and many have wearables as well, all of which connect to the network. "Realistically, our network services 30-40 devices per classroom, and our old network just couldn't handle it," said Jason, Director of Technology for Maumee City Schools. "A big part of our day was responding to help desk tickets about Wi-Fi service."

Issues ranged from spotty service to slow service to no service. When the IT team started looking into it they discovered unusual connectivity issues. "We found students in Room 100 that were connected to the access point (AP) in Room 104. Students in Room 121 were connected to the AP in Room 221, one floor above. Or when students changed classes, their devices remained connected to the AP in their previous location," Jason explained.

A larger challenge was ensuring adequate connectivity during periods of standardized testing. "Each fall we have 2,500 devices all taking the Ohio state tests on wireless Chromebooks," said Jason. "Making sure each room had good Wi-Fi was stressful for everyone."

"We have worked with ITsavvy on many Ed Tech projects. When there is that kind of familiarity, you are confident of the outcome."

Jason, Director of Technology

In order to address these issues, Jason's team spent a lot of time adjusting AP power and placement to resolve overlap and interference between channels. "We moved hardware around and finagled channels. It was really time-consuming, and in the end, really didn't improve service. It became clear we had to look into replacing our entire wireless network." Jason explained.

Our Solution

Finding a solution that would meet all of the District's needs wouldn't be easy. In addition to resolving user issues, any replacement solution had to also keep up with growth and emerging technologies. While most of the students in the District leave their devices at school, the high school students are assigned a device when they arrive as freshmen that they keep with them all four years. The District gifts them their devices when the seniors graduate. That means the District is continually purchasing the most up-to-date Chromebook versions for entering freshmen.

"We needed to make sure any new network could handle all of the upgrades, features and capabilities that are introduced by device manufacturers each year. Resilience and scalability were critical," Jason explained.

He turned to ITsavvy for guidance. "We have a longstanding relationship with ITsavvy. 100% of our infrastructure has been through ITsavvy. I value their knowledge."

Scott Gibson and Shawn Hendrickson, Senior Client Executives who are ITsavvy Ed Tech experts, knew HPE Aruba was the only solution to meet all of the District's requirements. They reached out to HPE Aruba to propose a District-wide strategy for the Maumee City Schools. "HPE Aruba

was integral to the success of the project," said Scott. "They agreed to bring in demo units for a pilot installation to ensure the product solved all of Jason's problems."

A year-long pilot program deployed 15 HPE Aruba 802.11ac Wave 2 APs and HPE Aruba AirWave Network Operations Manager software in a dedicated area of one of the elementary schools. Jason's team periodically moved devices and analyzed connectivity and performance, particularly during standardized testing. "It worked flawlessly," said Jason.

They then retrofitted 130 APs between the remainder of the pilot building and the high school. The completion of this project now means the District is 100% HPE Aruba.

"Shawn is local and is always available to meet with us. He helps expedite the resources that we need."

Jason, Director of Technology

Their Success

The HPE Aruba AirWave has provided Jason's team with a centralized user interface for real-time monitoring, proactive alerts, historical reporting and fast, efficient troubleshooting. They can view potential RF coverage issues, application performance and network health on a single dashboard.

"This has definitely saved us several hours during each day that we used to spend chasing down Wi-Fi problems," said Jason. "We can even locate the whereabouts of devices when a student reports a lost Chromebook or iPad." In addition, HPE Aruba future-proofs its systems and can accommodate the annual technology upgrades from the latest device manufacturers.

In addition, the District applied for E-Rate funding through ITsavvy to complete the three remaining school installations, providing much needed cost savings. "Perhaps the greatest value has been the expertise that ITsavvy has brought to us through HPE Aruba," said Jason. "We run a lean operation. We rely on their guidance and industry knowledge to support our in-house team."



Hardware

HPE Aruba 802.11.ac Wave 2 Access Points



Software

HPE Aruba AirWave Network Operations Manager



Partners

HPE Aruba

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