Case Study

Jordan School District Turns to AirMagnet Enterprise for Complete Visibility and Security of Wireless Networks Across 55 Locations

At a Glance

Customer:
Jordan School District

Industry:
Education

Location:
West Jordan, Utah, USA

Challenge:
Gain complete visibility into the vast wireless network that is frequently inundated with outside devices. Keep student and district employee information secure. Ensure network operates at peak performance levels.

Results:
IT staff has complete network visibility and can perform remote spectrum analysis and troubleshooting to ensure WLAN security and performance.

Solutions:
Fluke Networks' AirMagnet Enterprise

Customer

Jordan School District, located in West Jordan, Utah, serves more than 50,000 students across 33 elementary schools, nine middle schools, eight high and technical schools and three specialty schools. The district employs more than 4,500 faculty and staff across its 55 locations.

Challenges

With more than 55 locations, 1,300 access points (APs) and 25,000 networked devices, the district's wireless network supports more than 50,000 students and faculty and is essential to the day-to-day operations of the district and individual schools.

With wireless devices increasingly being integrated into class curriculum on a regular basis – for example for test taking – and with both students and staff constantly bringing in the latest gadgets to campus, it became vital that the district IT staff have complete visibility into the network and the ability to easily determine whether devices are friend or foe, and approved or unapproved.

> ***"The ability to remotely utilize the integrated spectrum analysis capability allows our team to pinpoint the exact physical location of WLAN interference and deploy staff already at remote sites to help remediate. Being able to proactively understand the exact source and impact of these problems allows us to restore critical network service as quickly as possible to all users."***
>
> – Ron Bird
> Network and Technical Services Manager
> Jordan School District

"District users previously spent the majority of their time - 90 percent - on the wired network. After a complete overhaul of the wireless network last year, this has shifted dramatically, with users now spending more than 60 percent of their time on the wireless network. This massive uptick in usage, combined with an explosion of wireless devices inside and outside the classroom, exposed many security and performance flaws, making us realize that we needed better visibility into what was happening on our WLAN," said Ron Bird, network and technical services manager at Jordan School District.

It was also important that the IT staff keep student and staff information safe from external threats and ensure applications' performance.

Solution

To gain this visibility into its network, the Jordan School District selected AirMagnet Enterprise for it's wireless LAN security, performance and compliance needs. Not only does AirMagnet Enterprise provide dedicated 24x7 security and performance monitoring (intrusion detection and prevention, WIPS/WIDS) and remote troubleshooting 100 percent of the time, but it also provides an intelligent spectrum analysis capability, a key differentiator over the competition.

Using the AirMagnet Enterprise dedicated radio hardware, Jordan School District IT staff can quickly detect and specifically classify sources of RF interference that can severely impact the performance of the Wi-Fi network. The system is the only WIPS/WIDS solutions on the market today that offers this integrated capability.

Furthermore, AirMagnet Enterprise's AirWISE engine constantly analyzes all wireless devices and traffic using a combination of frame inspection, stateful pattern analysis, statistical modeling, RF analysis and anomaly detection, enabling detection of hundreds of specific threats, attacks and vulnerabilities such as rogue devices, spoofed devices, DoS attacks, man-in-the-middle attacks, evil twins, as well as the most recent hacking tools and techniques such as MDK3, Karmetasploit and 802.11n DoS attacks.

Results

"In addition to standard district devices causing interference, such as mobile labs, wireless video cameras, A/V systems, temperature controls and more, we have thousands of students bringing in new gadgets that can affect network performance and security. The ability to remotely utilize the integrated spectrum analysis capability allows our team to pinpoint the exact physical location of the interference and deploy staff already onsite to help remediate. Being able to proactively understand the exact source and impact of these problems allows us to restore critical network service as quickly as possible to all users," Bird said.

Jordan School District has also benefited from the easy integration of the system with its existing array of infrastructure technology. "Most districts are a hodge-podge of wired and wireless networking technology, and we're no different. We needed a solution that would easily integrate with various infrastructure vendors. Enterprise is designed to be an overlay system, so this interoperability, so to speak, was not a problem," Bird added.

AirMagnet Enterprise's new dynamic threat update (DTU) technology is also important to the district and Bird's staff. DTU allows the district's system to be automatically updated with the latest signatures to protect against new threats or vulnerabilities, saving the team both time and resources.

"Knowing that our WLAN monitoring system will be automatically updated to detect the latest security and performance threats means that we can focus on delivering technology benefits to our students and educators, and rely on the experts at Fluke Networks to keep us continuously at the leading edge of wireless protection capabilities," Bird said.

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