

## Grand Valley University Selects the AirWave Management Platform to Control its Cisco Wi-Fi Network



**G**rand Valley University was an early adopter of Wi-Fi technology, installing its first wireless access points more than three years ago in several campus locations. Since then, the wireless LAN has expanded

dramatically, evolving into a true mission-critical network used everywhere from the student residences to the campus bookstore. The network is comprised of more than 250 wireless access points today, with significant additional growth expected in the future. Like most universities, Grand Valley does not have a large IT staff and supporting the wireless LAN quickly began to occupy a significant part of network analyst Jim McPherson's time, preventing him from focusing on other important tasks.

McPherson began to explore wireless network management solutions to automate routine tasks and centralize control of the network. After reviewing proprietary management solutions, Grand Valley selected the AirWave Management Platform (AMP) software from AirWave Wireless. "When we looked at all the options available to us, it became clear that AMP offered the greatest flexibility and the best value," said McPherson. "It gives us complete control and visibility into wireless network performance without locking us into a single-vendor solution."

### Improved Visibility

"We had a wireless network before we installed AMP, but we never really knew how much it was being used," said McPherson. Now, using the AirWave Management Platform's web-based user interface, he can see exactly how many users are connected to the network, where they are located, and how much bandwidth they are using. AMP's integrated reports also provide critical historical information about network usage, so the IT staff can monitor heavy usage areas and plan intelligently to expand the network. According to McPherson, the most used access points are in the DeVos Center building and in student study areas, as well as the campus store where handheld devices are used for inventory tracking and other applications.

AMP's real-time monitoring screens also help improve response time when students call to report network problems. In the past, a student complaint would often require McPherson or a colleague to visit the student's dormitory room to gather enough information to troubleshoot the problem. Now, with a few mouse clicks, the IT staff can determine exactly where the student is connected, assess signal quality, search for likely causes of RF interference and determine whether the problem seems to be affecting other users. "AMP really pays off for us when I can resolve a problem remotely instead of having to walk across campus," said Jim McPherson.

### OVERVIEW

Grand Valley University ([www.gvsu.edu](http://www.gvsu.edu)) has been ranked one of the "100 Best College Buys" in the U.S. for the past 10 years. The university, founded in 1960 by the Michigan legislature, has 22,000 students enrolled at its 1,200 acre campus in Allendale, MI and other educational centers in the state. The university's wireless LAN covers academic buildings, libraries, public spaces, and campus housing.

### REQUIREMENTS

- **Improved visibility** to see who is using the network and to measure usage and performance.
- **Manageability** to ensure centralized control over a large and growing network.
- **Security** to combat unauthorized rogues access points, especially in student residence.

### SOLUTION

- **AirWave Management Platform™ Professional Edition** wireless network management software
- **RAPIDS** rogue access point detection software module
- **VisualRF** module
- **Cisco Aironet 1200** wireless access points

### Manageability

With a network of 200+ wireless access points, even routine software updates or configuration changes can take hours to perform. "A wireless access point is really another router on your network," said McPherson. "You can't add 200 routers to your network without adding more staff or finding a good centralized management solution." With AMP, routine tasks are automated for Grand Valley's IT staff and can even be scheduled to occur late at night, when fewer users would be affected. Even individual access point settings (like the RF channel) can be automatically optimized and controlled via AMP's user interface.

### Security

Grand Valley's top network security concern was to automatically detect and locate unauthorized 'rogue' access points, especially in student dormitories. Grand Valley provides a wired network port in each dormitory room and wireless access in public areas the school's network security policies prohibit students from connecting their own wireless access points to the network. "We put this policy in place for security reasons, but also because improperly configured wireless routers in student rooms would result in support calls. Some of them even ended up serving up addresses and impacting overall network performance," said McPherson. "Without AMP, it would be very difficult to enforce this policy proactively." AirWave's RAPIDS rogue access point detection module automatically scans the school's entire wired network searching for unauthorized access points. When it detects a suspected rogue device, it alerts the IT staff, who can remove the wireless access point before network performance is impacted.

### RESULTS

Grand Valley's wireless network is extremely popular with students, faculty, and administrators. Now, with the AirWave Management Platform, the Wi-Fi network no longer represents a significant management burden for the IT staff. This has led Grand Valley to plan to expand the size of its wireless LAN by 20% or more in the near future. With the wireless infrastructure in place and performing reliably, other new applications are possible on campus – including wireless voice over IP. The IT staff is even considering whether Grand Valley can migrate to 'all wireless' buildings in the future, saving cabling costs on new construction.

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