AirWave Helps Christian Resource Provider Manage its Wireless Network

LifeWay Christian Resources is one of the world's largest providers of Christian products and services, including Bibles, church literature, books, music, audio and video recordings, church supplies and Internet services. The nonprofit organization also owns and operates more than 135 LifeWay Christian Stores throughout the United States, as well as two of the largest Christian conference centers in the country. The company's vision is to "help people and churches know Jesus Christ and seek His Kingdom by providing biblical solutions that spiritually transform individuals and cultures."

LifeWay's IT organization is responsible for selecting, installing and operating the technical infrastructure used by the rest of the organization. Thus far, the IT group has implemented wireless networks in three different environments: its home office in Nashville, Tenn., its distribution center and warehouse and its conference centers in North Carolina and New Mexico. At the home office, the wireless LAN is used primarily to provide access to laptop users in conference rooms. At the distribution center in Lebanon, Tenn., the most important wireless application is the inventory system, in which multiple handheld wireless units are utilized for inventory tracking and control. At the conference centers, the wireless network provides access for conference attendees and onsite guests.

The LifeWay network today consists of more than 150 Proxim AP-4000 wireless access points across all these sites, with additional expansion planned as the network covers more of the home office facilities. To support this expanding and increasingly mission-critical network, LifeWay's IT group selected the AirWave Wireless Management Suite™ from Aruba Networks.

Remote Visibility and Control

While LifeWay operates a large and geographically distributed wireless network, its IT staff is relatively small. The network team has only two members working primarily from the home office,

who are responsible for supporting both the wired and wireless networks, servers, and other infrastructure on a 24 x 7 basis. Supporting the conference center networks was the most significant challenge. "For some of our clients, the availability of wireless network is an absolute requirement and they would not be able to hold their events and conduct their programs at our facilities if we could not provide wireless access. Before we installed the AirWave software, supporting these users was challenging because we do not have dedicated onsite IT staff to address any issues. If there was even a basic problem with a wireless access point, it might take hours or days before one of the local audio-visual technicians would be available to help us diagnose and resolve the problem," said David Elliott, senior engineer in Lifeway's Enterprise Technology department.

Requirements

- Remote visibility and control to enable a small centralized IT staff to support multiple sites hundreds of miles apart

- Network planning and capacity management to ensure that network capacity is matches demand

- Automated configuration management to reduce the support burden on the IT staff

Solution

- AirWave Wireless Management Suite™ AWMS¬200 Edition

- Proxim AP-4000 wireless access points

Now, AirWave allows the IT staff to view real-time information from remote sites, enabling them to quickly diagnose and resolve most common wireless problems. "When a guest at a conference center reports that he cannot connect to the network, I can quickly check to see if he is associated to one of our access points, determine whether he has an IP address, assess the strength of his signal and perform other diagnostics to see if the problem is with our network or with the guest's device," noted Elliott. "If I need to change to configuration of the access point, I can do that remotely. This has saved us an enormous amount of time." By examining the detailed client connection history report, Elliot can determine whether the particular client machine has a long history of connection problems. "This helps us determine whether the most likely cause of a user's problem lies with the client device or with the network itself," stated Elliott.

Because AirWave has a fully web-based user interface, the members of the network team can fully control the network from anywhere they have internet access: from the NOC, on the road, and even at home. This is critically important, since LifeWay's conference facilities are in use around the clock – especially on weekends and during the summer months. "With only two people on our team, we cannot always have someone located in the network operations center at all times – we need to be able to support the network from wherever we are," said Elliott. "There have been times when I'm onsite at a conference center and I receive a call saying there's a problem back at our headquarters. AirWave makes it easy for me to get the information I need, no matter where I am."

Network Planning and Capacity Monitoring

As the LifeWay network grows, Elliott needs to determine where to install new wireless access points to provide the coverage and throughput required. "AirWave allows me to predict and visualize the coverage area for a specific access point location, so we can make more intelligent decisions when we're deciding where to locate new APs,"

said Elliott. "Then, once the network is operating in that location I can verify that the actual coverage area and signal quality meets our expectations."

AirWave also provides numerous reports and alerts that help Lifeway ensure that the capacity of its WLAN meets the demand. The software generates alerts whenever more than a specified number of users connect to an AP or when a bandwidth utilization threshold is exceeded. AirWave's historical trend reports illustrate how usage patterns have changed over recent weeks, months, or even years – helping LifeWay take proactive steps to ensure that sufficient capacity is available in all its diverse locations.

Configuration Management

Provisioning and configuring more than 150 wireless access points was a difficult task for a small IT department, especially since APs in the different operating environments had distinct configurations. At LifeWay's home office, for example, the wireless infrastructure had to be configured to support strong encryption and authentication while the networks at the conference centers were open to allow guests to connect. AirWave supports centralized group-based configuration of the LifeWay wireless infrastructure, automating the process of configuring and auditing the APs. Elliott uses AirWave's interface to define the exact configuration policies that should be applied to the access points in each group (location). The AirWave software then automatically configures each AP to comply with the appropriate policy and even audits the device configurations on an ongoing basis to ensure that they always remain in compliance. "Automating the configuration process has saved us a great deal of time, and frees us up to focus on other important initiatives," said Elliott.

Results

"With AirWave, the management of the wireless LAN is much less of a burden, which makes it possible for us to plan to expand our network and increase usage," said Elliott.

Organization Overview

LifeWay Christian Resources www.lifeway.com is a leading provider of Christian products and services, including Bibles, church resources, retail operations and Christian conferencing. The IT organization supports an extensive wireless network in support of these activities.

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David Elliott

Senior Engineer
LifeWay Christian Resources

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