First Industrial Realty Trust (FIRT)

Secure and Affordable Wireless Networking for Headquarters and Branch Offices with Cooperative Control Wireless LAN Equipment from Aerohive

Challenges

- Desired an enterprise wireless LAN to provide the company with conference room Internet access, guest Internet access and wireless mobility

- Needed Wi-Fi coverage in its Chicago headquarters and in its branch offices located throughout the United States and around the world

- Needed a solution that could be easily upgraded to 802.11n and that could support demanding applications, such as voice over wireless LAN (VoWLAN)

- Wanted a controller-less wireless LAN architecture to eliminate bandwidth bottlenecks, latency and jitter which result when traffic is backhauled through a controller

Results

- Estimates Aerohive's controller-less WLAN resulted in 48% cost-savings, freeing a substantial portion of the IT budget for other important initiatives

- Enabled elimination of access to its network by neighboring tenants in its high-rise headquarters, total isolation of guest network users, and strong authentication of devices connected to the network

- Aerohive's enterprise mesh capability enabled First Industrial to connect the access points to the network without running wires, saving effort and expense

- Because Aerohive wireless LANs require no controllers or overlay networks, the upgrade to wireless connectivity has been simple and fast

First Industrial Realty Trust, Inc. NYSE: FR), the nation's largest provider of diversified industrial real estate, chose Aerohive's "cooperative control" wireless LAN equipment because of its lower cost, enterprise-grade security, voice over wireless LAN support, and seamless upgrade path to next-generation 802.11n technology.

The company has 520 employees in more than 40 offices and is in the business of leasing, developing, redeveloping, buying, selling, and managing industrial properties, such as R&D/flex, manufacturing, light industrial, regional warehouse, and bulk warehouse facilities.

The Challenge

First Industrial desired a wireless LAN to provide the company with conference room Internet access, guest Internet access, and wireless mobility, both in its Chicago headquarters and in its branch offices throughout the United States and around the world. The company desired support for all its standard applications, including print serving, file serving, Microsoft Exchange-based corporate email, Citrix-powered internal Web-based applications, Internet access, and more. As an ancillary benefit, First Industrial looked forward to a reduction in the volume of cumbersome Ethernet cabling it required.

Looking for Something More

First Industrial engaged in a rigorous wireless LAN selection process that spanned more than two years. During that time, the company evaluated and rejected several vendors' offerings. For example, Cisco Airespace "fat" access points did not provide connected mobility and were also found to be too cumbersome to manage, as each access point required manual monitoring and maintenance through a

> "Our challenge was to deploy a cost-effective, secure wireless convenience network that has the performance, reliability, and scalability to support both our current applications as well as our future needs, such as voice-over-wireless LAN... We chose Aerohive's controller-less cooperative control wireless LAN solution over controller-based solutions because it easily met our requirements today and gave us the confidence that it could economically scale in the future."
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> **—Nick Colakovic**
> Director of IT, First Industrial Realty Trust (FIRT)

command-line interface. The security of these first-generation access points was also a concern.

First Industrial also evaluated wireless LAN solutions that used centralized controllers to provide the management, mobility, and security missing from fat access points. The company also rejected these solutions. The cost of a controller (or redundant controllers) in each of the company's many branch offices, especially when considered alongside the controllers' cooling and electrical requirements, was simply prohibitive.

In addition, First Industrial desired a solution that could be easily upgraded to 802.11n and that could support demanding applications, such as voice over wireless LAN (VoWLAN). A controller-based architecture is not ideal for either of these, because of the bandwidth bottlenecks, latency, and jitter that result when traffic is backhauled through a controller.

The Solution: Cooperative Control Architecture from Aerohive

Ultimately, First Industrial selected Aerohive's award-winning cooperative control wireless LAN equipment. Aerohive cooperative control access points ("HiveAPs") require no network controllers or overlay networks. Instead, software in the HiveAPs enables them to self-organize into groups called "hives" and to share network control information. The result is enterprise-class management, mobility, and security without the cost, capacity, performance, and availability issues associated with controller deployments.

Substantially Reduced Cost of Deployment

First Industrial estimates that deploying the Aerohive cooperative control wireless LAN solution rather than a controller-based alternative saved the company 48%, freeing a substantial portion of the IT budget for other important initiatives. Controller-based alternatives would have required First Industrial to purchase an expensive wireless LAN controller for each of its branch offices, even for offices having only one or a couple of access points. Aerohive's cooperative control architecture completely eliminates controllers from the network, resulting in significant cost savings.

Rock-Solid Wireless Security

Security was a key concern for First Industrial in its wireless LAN deployment. The company wanted to completely eliminate "drive-by" access to its network, including by neighboring tenants in its high-rise headquarters. In addition, the company wanted isolation of guest network users and strong authentication of devices connected to the network.

Unparalleled Flexibility with Mesh Networking

First Industrial also benefited from the HiveAPs' ability to connect with one another wirelessly via mesh networking. When the company began holding all-hands meetings on an unoccupied adjacent floor of its office building, a HiveAP was deployed there to provide short-term Internet connectivity. Aerohive's enterprise mesh capability enabled First Industrial to connect the access point to the First Industrial network without running wires, saving effort and expense.

In addition to providing deployment flexibility, the mesh networking capability increases the resiliency of Aerohive networks. Aerohive's dynamic mesh failover enables network traffic to be routed around failures in the wired network by dynamically and gracefully establishing a wireless mesh connection between neighboring HiveAPs. As a result, First Industrial can confidently deploy Aerohive wireless LANs for mission-critical applications.

Rapid, Easy Deployment

First Industrial is deploying its Aerohive wireless LAN with the help of Aerohive partner Synapse. To date, the Aerohive equipment has been installed at the headquarters and in two branch offices and is performing flawlessly. Because Aerohive wireless LANs require no controllers or overlay networks, the upgrade to wireless connectivity has been simple and fast. First Industrial's IT organization has already enjoyed positive feedback from the wireless LAN users. The company estimates that the enterprise-wide deployment will be completed in the second or third quarter of 2008.

What's Next for First Industrial and Aerohive

First Industrial expects to deploy 802.11n access points in the future. The Aerohive cooperative control architecture will make it easy for First Industrial to upgrade its access points to 802.11n on an as-needed basis, because Aerohive 802.11n HiveAPs may be seamlessly deployed in a hive along with 802.11a/b/g HiveAPs.

First Industrial may also deploy Wi-Fi handsets and support voice over wireless LAN (VoWLAN), in part because of the poor cellular phone signal in the company's high-rise headquarters. Successfully deploying this application requires the underlying infrastructure to be highly available, to exhibit low latency, and to have sophisticated quality of service (QoS) capabilities. Whole enterprise coverage is also required to ensure that there are not dead spots that would force calls to be dropped or to be switched to expensive carrier connections. Aerohive's highly resilient networks, which feature sophisticated QoS at the network edge, no added jitter or latency, and mesh extensibility, will be ideal for First Industrial's VoWLAN deployment.

Key Facts:
- First Industrial realty trust, inc. Is the nation's largest provider of diversified industrial real estate.
- First Industrial desired conference room internet access, guest internet access, and wireless mobility in its headquarters and branch offices around the world.
- First Industrial's cost to deploy the Aerohive controller-less wireless LAN solution was 48% less than competing controller-based alternatives.
- The Aerohive cooperative control architecture will allow First Industrial to seamlessly upgrade to 802.11N and to deploy demanding, mission-critical applications, such as voice-over-wireless LAN.