NSI INSTALLS CISCO MANAGED WIRELESS NETWORK FOR AN UPSCALE DOWNTOWN CHICAGO HIGH RISE

Overview

An upscale Downtown Chicago High Rise was seeking to replace their existing wireless network with a new system that will comprehensively cover the building's 30 floors. Previous attempts at wireless networking were met with poor results—therefore, the HOA mandated a new solution that offered nearly complete coverage of the building while providing all users ease of use.

Challenge

Simplicity of access to the new wireless network was a key consideration in the project. The building's wireless network had to be accessible to all guests of the building, not just the tenants since this building was a "mixed use" facility and they had business centers as well as condos. NSI was retained to design, implement and configure the new wireless network. NSI was also tasked with providing project documentation and conducting a knowledge transfer to NSI's technical personnel which would be providing ongoing support.

Due to time and budget constraints, the HOA wished to approach this project in two phases: the first of which would include five pre-determined high-priority areas to offer existing tenants an immediate improvement over the old wireless network. After successfully implementing the first phase, the wireless network would be extended to the rest of the building. NSI recommended a centrally managed wireless solution based upon Cisco wireless hardware. The advantages of the type of architecture NSI recommended and implemented are many: centralized policy control, automated configuration of new access points and seamless transition between access points during client roaming. To centrally manage the access points, Cisco's Wireless Control System (WCS) management software was deployed. A feature of this system allowed NSI to construct a visual "heat map" of the area covered by the installed lightweight access points. The system was also capable of being expanded to provide wireless location tracking services. Authentication for the new wireless network was handled through Cisco's Secure Authentication Control System (ACS). In accordance with the HOA's existing wireless standards, web authentication was used as the primary security mechanism, authenticating user credentials against the HOA's main database.

Solution

NSI developed a project plan to implement, test and prove the wireless network to meet the client's objectives. First, NSI conducted a site survey to ensure the optimal placement of the wireless access points. After those were installed, NSI coordinated with the client's building management team to properly address and configured the wireless devices. From the Wireless LAN Controller, the access points were discovered and added to a test wireless network. Next, the wireless functionality of the devices was confirmed by both NSI and the client.

Once wireless networking was established, NSI installed and configured WCS, the central management software. To validate the software, NSI configured new access points remotely without requiring physical access to the wireless devices or the controller. A disaster recovery plan was designed and proved while NSI documented the entire configuration for the client. In the most complex segment of the project, NSI implemented the web authentication piece. NSI was able to provide the mandated authentication using Cisco's ACS connecting to an external Radius server. Any tenant or guest throughout the building was able to sign in to the wireless network using their existing credentials.

Results

Following a successful two-week pilot of the new wireless network, the wireless network was enabled in full production mode. The wireless coverage exceeded the client's expectation and feedback from tenants, the HOA and business center guests were overwhelmingly positive.