TRAPEZE NETWORKS

A BELDEN BRAND

Manchester Airports Group

CASE STUDY

Trapeze WLAN allows airport staff, business tenants and travelers to securely share single, common wireless infrastructure

Manchester Airport

Objective

These days, both business and leisure travelers expect to be able to check their e-mail and surf the Web no matter where they are, and they are in airports a lot. Wireless access is a necessity in airports. For travelers who are constantly moving from place to place within and between terminals, being tied down to a small hotspot is as inconvenient as being tethered to wires.

With 20 million passengers a year passing through Manchester Airport alone, Manchester Airports Group (MAG), which runs four regional airports in the United Kingdom, looked for a dual-purpose wireless LAN solution that would allow airport staff and business tenants to access a private corporate network and simultaneously give travelers access to the Internet through a public Wi-Fi network.

The challenge became more complicated when MAG's IT staff required a wireless LAN system that could operate over a single common infrastructure running the entire 1.5-kilometer length of the airport, a facility constructed of glass and concrete. According to Aaron Bazler, network and infrastructure manager at Manchester Airport, many airports that have implemented multiple wireless infrastructures have experienced less-than-favorable service.

"Traditionally, airports have suffered from dilution of wireless service due to the presence of multiple uncontrolled wireless infrastructures that are both difficult to manage in terms of conflicting spectrums and also potentially confusing for the traveling public," Bazler says. "MAG is revolutionizing this approach by teaming up with partners that can offer a single, common wireless infrastructure that will allow our traveling passengers to access wireless services in all passenger areas of the terminal."

Bazler adds that with a Wi-Fi network, airport staff, tenants and service partners are able to carry out tasks without physical boundaries across the common infrastructure. For example, a wireless LAN can help airport operations by providing information about flight times and aiding passenger check-in.

Solution

Bazler and his team selected the wireless LAN Mobility System from Trapeze Networks for its campus-wide deployment.

From the very start, the Trapeze Mobility System showed why it has earned industry accolades. Even before the deployment, the airport used RingMaster, the industry leading wireless LAN lifecycle and management suite from Trapeze Networks, to plan the wireless LAN deployment. They imported CAD drawings of the airport facility into RingMaster, and RingMaster calculated how many wire-

> "Trapeze enables MAG to provision the network and create separate zones and access privileges for operational staff, business tenants, and passengers."
>
> —Aaron Bazler
> Network and Infrastructure Manager
> Manchester Airport

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DESCRIPTION

Manchester Airports Group (MAG)— the second-largest airport operator in the United Kingdom—runs the airports of Manchester, Nottingham East Midlands, Bournemouth and Humberside. Manchester Airport is the United Kingdom's third largest airport and handles 20 million passengers a year to more than 180 destinations worldwide.

OBJECTIVE

- Implement a campus-wide wireless network at the Manchester Airport that will allow secure access for both staff and travelers.
- Deploy a single, comprehensive solution rather than multiple networking infrastructures for easier management.
- Install a standards-based wireless LAN solution that includes built-in security protection.

SOLUTION

- Ninety Trapeze Mobility Point access points provide wireless coverage to three airport terminals.
- Two Trapeze Mobility Exchange 400 wireless switches deliver reliable Wi-Fi service for large numbers of users and support 802.11a, 802.11b and 802.11g.
- Trapeze Identity-Based Networking ensures that users access only what they are authorized to use.
- RingMaster, with its admission control and RF intrusion detection system, identifies and disarms unauthorized access points and rogue users.
- RSA Security SecurID tokens allow airport staff to authenticate themselves to their device and the network.

RESULT

- RingMaster simplified the planning and deployment of the wireless LAN.
- Airport travelers and employees gained public Internet access throughout the airport, rather than in isolated hotspots.
- MAG can provision the network easily and keep public and staff traffic separate with centralized policies for network access and mobility services.
- Public and private access to the network is separated through VLANs.
- Wireless LAN success has prompted plans for expansion to the tarmac and to three more airports.

Manchester Airports Group (continued)

less access points and WLAN controllers were needed for sufficient capacity and coverage, and where they should be located.

The Manchester deployment consists of 90 Trapeze Mobility Point (MP) access points covering the three airport terminals. Bazler and his team started out with 28 MPs as a pilot to cover the airport's executive lounges and food courts—areas where many travelers congregate. The system has since been expanded by 62 MPs to provide wireless coverage to almost every part of the airport's terminals.

MAG has installed two Trapeze Networks Mobility Exchange 400 (MX-400) WLAN controllers at Manchester Airport to ensure its Wi-Fi service is reliable and meets the demands of large numbers of users. The airport deployment supports all three wireless standards-802.11a, 802.11b and 802.11g, and takes advantage of band-steering and client load-balancing features to maximize capacity with the minimum number of access points.

Because the network consists of a single contiguous infrastructure, rather than isolated connection spots, the public Wi-Fi access, which is offered by T-Mobile, can generate revenue anywhere in the airport. If a wireless user is already a T-Mobile customer, the usage charges appear on his or her phone bill. And of course, becoming a T-Mobile customer is easy with MAG's customized Web login page.

Results

Trapeze delivers stringent security to protect the wireless LAN from prying eyes. One of the most critical capabilities for Manchester Airport is rogue detection and prevention, so unauthorized access points are automatically blocked from the network.

Trapeze combats rogues in multiple ways. First, with Identity-Based Networking, Trapeze delivers services based on a user's identity, rather than by the switch port to which the user is physically attached. Identity-Based Networking enables IT to centralize policies for network access, traffic prioritization and mobility services in the authentication, authorization and accounting (AAA) servers, which provides consistent controls wherever users roam.

Manchester Airport set up multiple virtual LANs (VLANs) for public and private use, so the traffic will remain isolated. Centralizing policies for network access and mobility services allows MAG to provision the network easily and create separate zones and access privileges for operational staff (customer service and security personnel) and the public (travelers and businesses within the airport).

RingMaster remains vigilant against the constant threat of attacks. Trapeze's state-of-the-art admission control and RF intrusion detection system identifies and disarms rogues before they can cause damage.

As an extra measure of protection, airport employees use RSA Security SecurID tokens to authenticate themselves to their device and the network.

The Manchester Airport wireless project has been so successful that Bazler plans to install laptop stations at various places around the airport. Another phase includes expanding the wireless network outdoors so engineers and other personnel can access information from the tarmac. He also would like to extend the deployment to MAG's three other airports.