

U.S. City Public Wi-Fi Performance Monitored and Secured by NETSCOUT

AirMagnet Enterprise Provides 24x7 Network Monitoring and Wireless Intrusion Detection and Prevention

OVERVIEW

Business Challenge

- U.S. Western City IT team designing and installing free Downtown-area Wi-Fi Hotspots for residents, tourists, and employees
- IT Security team required enhanced Wi-Fi network monitoring and security to prevent rogue use and cyberattacks
- Budget considerations factor in new City IT deployments

NETSCOUT Solution

- AirMagnet® Enterprise network monitoring and Wireless Intrusion Detection/Prevention System for Wi-Fi
- NETSCOUT® Delivery Service for AirMagnet Enterprise deployment

Business Value

- NETSCOUT and City IT teams designed an efficient AirMagnet Enterprise Wi-Fi network monitoring and security system to secure Wi-Fi Hotspots for residential use and convenience
- IT Team equipped with 24x7 Wi-Fi network monitoring platform
- Lower-cost NETSCOUT solution accommodates City's IT budget framework



Customer Profile

This Western U.S. City employs a veteran Information Technology Department (ITD) that oversees service delivery for municipal data center operations supporting courts, parks registration, ticketing, utilities, and emergency responder departments.

A Strategic Plan guides the introduction of new service offerings and allows the ITD to also retain focus on updating legacy technology, including taking advantage of a private cloud to support an expanded virtualized environment.

In addition, the ITD focuses on creative solutions and best practices for offering enhanced technology services to the community.

Business Challenge

As part of its strategic IT Objectives in supporting the City, the ITD commenced an initiative to offer free Wi-Fi service in the Downtown business area, as well as municipal locations that included museums, libraries, theaters, and athletic facilities.

In this first phase of rolling out the municipal Wi-Fi program, the ITD selected a leading public Wi-Fi equipment vendor to establish to establish wireless Access Points (AP's) throughout the Downtown area.

As defined in the ITD's Strategic Plan for all IT projects, the Security Operations team requires inclusion of intrusion detection and network monitoring solutions for any service connected to the City's equipment room locations or employee assets.

The Security Operations team shared particular concerns regarding rogue and/or misbehaving users disrupting wireless access or, worse, collecting private information. Outdoor access points that offer community Wi-Fi are known as being susceptible to Hotspot attacks (e.g. Karma tool), and unknowing users could be targeted for sensitive data or personal information.

As a result, the Security Operations team identified a need to bolster the safeguards afforded by the third-party wireless AP's.

NETSCOUT Solution

After reviewing Air Magnet Enterprise demonstrations and engaging in follow-up communications with the NETSCOUT Wireless Systems Engineering team, the ITD Security Operations team selected the AirMagnet Enterprise solution to monitor and secure the City's Wi-Fi Hotspots.

The AirMagnet Enterprise system consists of three major components: AirMagnet Enterprise Server (including database), AirMagnet Enterprise Console (client connecting to the server that serves as monitoring and reporting interface), and AirMagnet Sensors (deployed in the network to proactively monitor the environment).

In serving as the user interface, the AirMagnet Enterprise Console provides the ITD's Network and Security Operations staff with immediate and specific information on root cause of any threats to the Wi-Fi system or the City's assets, enabling the IT team to better respond before users and business critical applications are impacted.

The City's AirMagnet solution also includes a Spectrum Analysis license (that enables detection and classification of RF jamming attacks, Bluetooth devices, and many other non-802.11 transmitter types) and a Server license for 802.11n features.

In extending the consultative approach that Wireless Systems Engineering team provided in advance of deployment, NETSCOUT's AirMagnet Enterprise Delivery Services ensure that the AirMagnet deployment will be conducted using best practices.

NETSCOUT Solution in Action

AirMagnet Enterprise provides comprehensive 24x7 Performance Monitoring and Wireless Intrusion Detection System (WIDS) / Prevention System (WIPS) that enables the ITD to meet the Security Operations team's security and performance requirements for network-connected technology. The AirMagnet Enterprise's centralized WIDS/WIPS, with 802.11ac and 802.11n SmartEdge sensors, defends wireless environments by automatically detecting, blocking, tracing, and locating threats on City Wi-Fi channels.

NETSCOUT designed the AirMagnet Enterprise solution to include AirMagnet sensors to cover four of the City's outdoor wireless AP's in the 1 square-mile downtown area.

In ensuring optimal and reliable wireless network availability of the City Wi-Fi service, AirMagnet provides the ITD with a solution for 24x7 monitoring for connectivity issues, such as channel interference, coverage, malformed packets, and de-authorization attacks.

AirMagnet Enterprise Automated Health Check (AHC) technology actively tests and verifies complete wireless LAN connectivity from the wireless link all the way through to application servers or the Internet, automatically detecting critical outages or network degradation while pinpointing the exact source of trouble.

Business Value

The City views the free Wi-Fi program as offering as a convenient means to allow residents, vacationers, and employees to stay online in the connected world. The program also offers City businesses the potential of improved foot traffic from those using the Wi-Fi service to identify restaurants and shopping destinations.

In selecting AirMagnet Enterprise to secure this service, the ITD was able to employ a vendor-neutral Wi-Fi network monitoring and security solution that extends the encryption security provided by the City's third-party wireless AP's for the free Wi-Fi network.

In this manner, the AirMagnet Enterprise solution satisfies the Security Operations goals of blocking rogue access points, identifying rogue behavior exhibited by an AP or client (e.g., spoofed MAC addresses), turning off rogue devices, and triangulating the geographic location of rogue activity (e.g., a restaurant or club).

AirMagnet Enterprise's dedicated WIDS/WIPS solution provides the ITD with peace of mind and assurance that the City's free Wi-Fi network is protected on a 24x7 basis for the enjoyment of residents, vacationers, and employees.



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