

Port Operator Solves Logistical Nightmare with NETSCOUT Wireless Performance Management

AirMagnet Enterprise Solution Pinpoints the Source of Intermittent Wireless Interference

OVERVIEW

Business Challenge

- Random and intermittent disruption to wireless communications caused slowdowns of operational data transfer between the system and crane operators
- Created significant operational delays to the speedy, smooth and efficient unloading and warehousing of cargo containers, resulting in lower operating margins and triggering penalty clauses
- Network vendor unable to identify source of wireless interference and determine a suitable and effective solution



NETSCOUT Solution

- AirMagnet Enterprise solution offers comprehensive 24/7 wireless intrusion detection (WIDS), wireless intrusion prevention (WIPS), and WiFi network and cellular security
- Enables port operator to monitor airspace around the facility for security, performance and compliance of WLANs
- Within a week of deployment, solution pinpointed the interference as a legacy 2.4 GHz wireless security camera and a bank of microwave ovens

Business Value

- NETSCOUT® solution eliminated disruptions to the port's wireless communications, improving operations and minimizing any negative financial consequences, such as penalty clauses
- As port facility grows, IT can take preventative measure, automatically deploying AirMagnet Enterprise to monitor and safeguard the wireless system during any new deployment
- Operational productivity has also been dramatically improved, with remote sites now being managed centrally, negating the need for a five-hour trip to investigate the cause of disruptions

Customer Profile

PD Ports is a major maritime port operator owning and operating nearly half a dozen ports handling 36 million metric tons of goods each year. All of the company's port operations are backed by a comprehensive logistics network, enabling the smooth functioning of these complex commerce hubs.

Business Challenge

Moving tons of goods through a busy sea port on a daily basis is a very complex logistical process. For this major maritime port operator, a 2.4 GHz wireless mesh network was relied upon to support the new automated Container Terminal Operating System (NAVIS), which coordinates and optimizes the planning and management of container and equipment movements within the terminal environment.

Unfortunately, random and intermittent disruption to wireless communications caused slowdowns of operational data transfer between the system and crane operators. As a result, crane operators were experiencing long time lags or forced to reboot as a disruption occurred, creating significant operational delays to the speedy, smooth and efficient unloading and warehousing of containers.

This slowdown in ship unloading turnaround time came at a steep cost – triggering penalty clauses amounting to thousands of pounds. Inefficient container handling and storage costs threatened to further compromise already low operating margins. And in today's highly competitive marketplace, these operational problems threatened the potential loss of future business.

NETSCOUT Solution

To address the company's critical wireless communication issues, the IT team turned to trusted NETSCOUT partner [Full Control Networks](#) who recommended the AirMagnet solution. AirMagnet Enterprise offers comprehensive 24/7 wireless intrusion detection (WIDS), wireless intrusion prevention (WIPS), and WiFi network and cellular security. NETSCOUT enables the port operator to monitor the airspace around the facility for security, performance and compliance of its WLANs. AirMagnet Enterprise provides complete WIPS and WIDS, remote network troubleshooting, and enforced no-wireless zones.

NETSCOUT Solution in Action

Four AirMagnet Enterprise sensors were installed at each corner of the port facility for maximum coverage. AirMagnet Spectrum XT professional, a USB-based RF spectrum analyzer, was used to pinpoint the source of the intermittent wireless interference once the general location of the problem had been identified.

Due to the size of the site, PD Ports staff had to climb base station towers to allow them to ID the source of the interference, a task made difficult by the large number of storage containers, which each stand approximately 2.6m tall and can be stacked up to seven containers high, effectively creating a metal barrier and blind spots. Within a week of deployment, the NETSCOUT solution pin-pointed the interference as a legacy 2.4 GHz wireless security camera, which was activated randomly by security personnel. In addition, AirMagnet Enterprise also identified a bank of microwave cookers located in an on-site amenity block as source of interference as well.

Business Value

Beyond identifying the source of the wireless interference, the monitoring capabilities of the AirMagnet Enterprise solution also detected that the 2.4 GHz frequency was highly congested from visiting ships' internal WiFi, which also operated on that frequency. This insight allowed IT move away 2.4 GHz access, establishing a new company-wide policy requiring that only 5 GHz be used, thus eliminating the congestion. As the port facility continues to grow, the IT team has taken a critical preventative measure, automatically deploying AirMagnet Enterprise to monitor and safeguard the wireless system during any new deployment.

As a result of the NETSCOUT solution, disruptions to the port's wireless communications have been eliminated, improving operations and minimizing any negative financial consequences such as the activation of penalty clauses and any reputational damage to the company that could hurt potential future business. Operational productivity has also been dramatically improved, with remote sites now being managed centrally by AirMagnet Enterprise, negating the need for a five-hour trip to investigate the cause of disruptions before a resolution could be achieved.



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