

A background image of a modern airport terminal with a network overlay of nodes and lines, suggesting digital connectivity.

# Black Box Enabled End-to-End Network Intelligence and Application Visibility, Enhancing Operational Efficiency for a High-Traffic U.S. Airport

## Overview

At one of the busiest airports in the United States, a major transportation hub managing over 400,000 flights and nearly 40 million passengers annually, uninterrupted digital performance was non-negotiable. Every aspect of airport operations, from passenger check-in and security screening to baggage routing, parking coordination, and cargo logistics, was deeply reliant on a sophisticated, interconnected digital ecosystem. Ensuring a seamless travel experience demanded not just cutting-edge infrastructure but also the ability to anticipate and neutralize any disruption swiftly.

However, as operational demands grew more complex, the need for real-time situational awareness across the digital environment became increasingly evident. The airport leadership recognized that maintaining service excellence and operational continuity required a proactive approach to network and application management grounded in full visibility, agility, and intelligence. This marked a pivotal shift in the airport's digital operations strategy.

## Challenges

Although the airport operated on advanced digital systems, its IT team lacked end-to-end visibility across the network. This meant they often reacted to problems after they had already affected operations, rather than catching them early. Pinpointing the root cause of issues across various network layers, vendors, and applications was time-consuming and unclear. Critical services like digital parking faced performance dips without timely alerts or diagnostic insights. Gaps in monitoring key protocols, such as DHCP, DNS, and security certificates, added to the risks and raised compliance concerns. Without a single, easy-to-use dashboard, tracking network performance or creating quick reports became a time-consuming task. This slowed down internal troubleshooting and made it harder to work with third-party vendors. In the end, this lack of visibility was affecting both the airport's efficiency and its revenue.

## AT A GLANCE

### CHALLENGES

- Limited end-to-end visibility into network, application, and protocol performance
- Reactive fault isolation leading to prolonged outages and revenue impact
- Absence of centralized performance analytics hindered vendor collaboration and reporting

### SOLUTIONS

- Implemented NETSCOUT's nGenius® for real-time, enterprise-wide performance monitoring
- Integrated Deep Packet Inspection (DPI) for precise root cause analysis
- Optimized traffic collection and distribution for holistic network observability

### RESULTS

- Resolved the month-long parking transaction issue within hours
- Decommissioned insecure protocols (SMBV1, TLS1.0), strengthening cybersecurity
- Reduced Mean Time To Resolution (MTTR) through proactive fault detection

### BENEFITS

- Transitioned IT operations from reactive to proactive monitoring
- Enabled data-driven forecasting, capacity planning, and SLA enforcement
- Established a resilient, scalable network framework supporting digital transformation



## Solutions

To turn things around, Black Box implemented NETSCOUT's nGenius® Enterprise Performance Management solution. This strategic deployment provided real-time performance insights, enabling the airport to transition from reactive troubleshooting to proactive capacity planning. The integration of Deep Packet Inspection (DPI) significantly enhanced issue detection and resolution capabilities. The solution also streamlined traffic collection and distribution, ensuring comprehensive monitoring across the entire network infrastructure. Ultimately, it delivered improved visibility into latency, outages, and critical application performance, facilitating more informed and timely decision-making.

## Result

The implementation of Black Box's solution yielded tangible and significant improvements across network performance, security, and operational efficiency. Notably, a persistent month-long parking payment issue was resolved within hours, directly enhancing transaction efficiency and revenue generation. The solution also facilitated the elimination of outdated and vulnerable protocols (SMBV1, TLS1.0), substantially strengthening the airport's cybersecurity posture. This strategic shift enabled the IT team to transition from a reactive troubleshooting model to proactive monitoring, significantly reducing Mean Time To Resolution (MTTR). Enhanced data visibility provided critical insights for improved forecasting, precise capacity planning, and seamless application integration. Fundamentally, the solution empowered IT leadership with actionable insights, serving as a catalyst for driving digital transformation initiatives.

## Why Black Box?

Partnering with Black Box and deploying NETSCOUT's nGenius® solution gave the airport's IT team the clarity and control they needed to manage complex systems with confidence. Black Box's expertise ensured a smooth transition to proactive network management, empowering the airport to stay ahead of issues, support mission-critical services, and deliver a seamless travel experience.

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Supported by a global team of around 3,600 professionals and strategic partnerships with leading technology providers, Black Box delivers end-to-end solutions in network integration, digital connectivity infrastructure, data center buildouts, modern workplace solutions and cybersecurity. Its technology products portfolio enhances business operations with cutting-edge solutions in AV, IoT, KVM, networking, infrastructure and cables. For more information, visit [blackbox.com](https://blackbox.com).