NETSCOUT

Service Assurance in Air Transportation

The air transportation industry, including airlines and airports, is among the most data-heavy industries in existence. While digital transformation is required for success, it can be challenging for airlines to process and manage the amount of information they need to operate and integrate with airports, customers, technology partners, and others.

With intense competition and rapidly-increasing customer expectations, airlines and airports know that automation is the key to streamline processing passengers and baggage, improve efficiency, and enhance the customer experience, while reducing costs and optimizing physical resources. New technology is constantly developed and deployed to meet these needs. Biometrics of fingerprints and facial recognition for security boarding, artificial intelligence to automate social media and mobile application interactions, laws requiring real-time baggage tracking, and IoT's unlimited possibilities, are all trends that will impact airline and airport operations – including IT strategy and delivery. These changes are in addition to the top priority of cyber security and compliance when storing customer and payment information, integration with partners, and meeting governmental regulations.

Multiple attention-grabbing headlines tell the story of the risks and costs associated with any type of service degradation anywhere in the complex information process. Airlines have experienced failures of switches and power in their data centers, and multiple other technical issues, which have led to thousands of flights being delayed or cancelled. Others have been hit with security breaches exposing millions of customers' personal and financial information. The financial impact includes direct cost of overtime and wages, rescheduling flights, compensating passengers, offering free credit monitoring services, and even facing potential legal action. Losses of $8 million to over $50 million have been reported, with legal costs and award decisions that could drive the losses substantially higher. Share prices have dropped. Indirect costs are more difficult to measure, but ultimately include damaged reputations and customer loss to competitors.

IT teams are challenged to keep pace with the changes, information, and systems needed to support these 24/7 requirements and avoid or mitigate the serious risks. With so many aspects of an airline's day-to-day operations dependent on a continuous and reliable IT infrastructure, IT needs end-to-end

visibility into all the inter-related applications, networks, services, and servers that make up the highly distributed, often multi-cloud, complex airline and airport environments.

Our Approach

NETSCOUT's approach to business assurance is built on a foundation of visibility that delivers high quality data and real-time analytics. Based on network traffic, NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology provides the most robust data source available to ensure services are delivered by measuring the actual transactions and dependencies of the service. The nGenius® platform also offers an option to run automated synthetic tests – even when no one is on the system, and monitor the underlying infrastructure delivering the critical services. NETSCOUT® analytics are the industry-leading standard for scalability and ease-of-use, enabling proactive service triage to keep myriad systems in the airline transportation ecosystem running smoothly. NETSCOUT provides unmatched capabilities that ensure the reliable and uninterrupted delivery of critical services, so they do not cause delays that affect travelers and cost the company revenue and reputation loss.

The benefit of this approach is getting the right information to the right people at the right time, enabling faster Mean Time to Resolution (MTTR) for any issues that may arise anywhere in the complex mix of systems, data centers, cloud-hosted applications, airports, ticketing, baggage claim areas, pilot and crew applications for scheduling and flight information, and other segments of the ecosystem. Logical, intuitive workflows have been developed to reduce the mountain of data and statistics found in high-volume, globally distributed, complex IP networks, down to actionable intelligence generated from ASI metadata and synthetic test results. By minimizing noise and maximizing essential information, IT organizations at airlines and airports have greater effectiveness in troubleshooting complex customer-impacting issues with the NETSCOUT solutions.

AIRLINE STAKEHOLDERS
Customers / Travelers / Flight Crews

Pre-Travel
- Web Sites
- Reservations
- Rewards Programs
- Call Center
- Billing Data
- Customer Data
- Transportation
- Crew Scheduling

At the Airport
- Mobile Apps
- Agent Check In/ Ticketing Kiosk
- Baggage Process/Tracking
- Lounge
- Boarding
- Passenger Manifests
- Pilot Flight Plans

Airport Customer OPs
- Security
- WiFi access/ HotSpots
- Mobile Apps
- Airport Navigation
- Baggage Handling

Adaptive Service Intelligence (ASI)

NETSCOUT SMART DATA

ATLAS Intelligence Feed (AIF)

Airline Data Centers
Airports, Ticketing, Baggage Claim Areas, Kiosks, and more...

SaaS

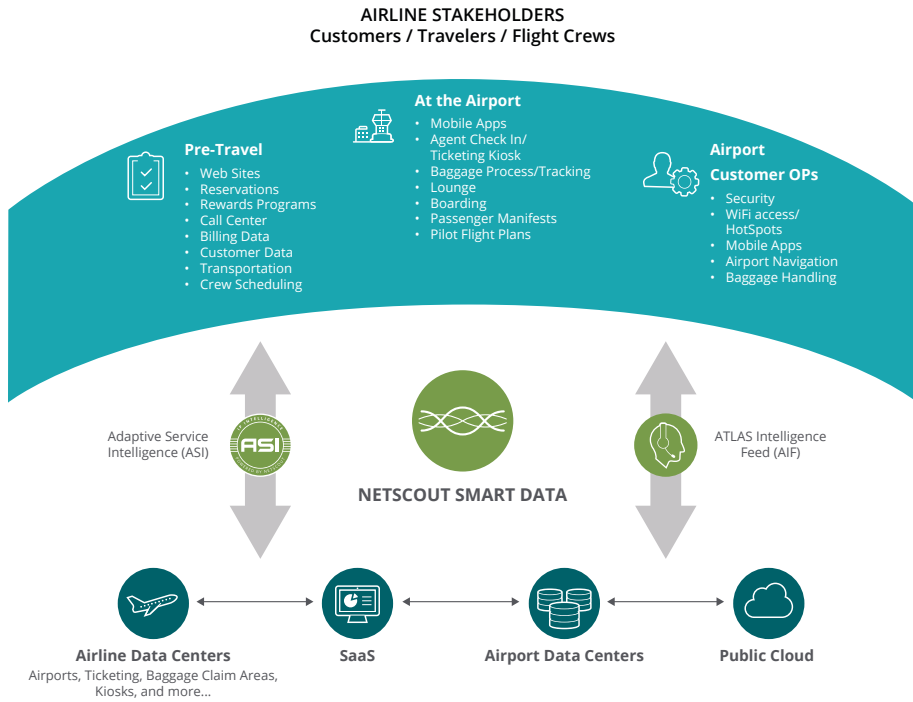**Airport Data Centers**

Public Cloud

Figure 1: The NETSCOUT solution provides visibility into the performance of components necessary for service delivery across the entire airline/airport experience.

Rather than look at individual elements in isolation, the nGeniusONE solution provides an overarching view into the performance characteristics of the components associated with service delivery across the entire infrastructure. This exposes underlying service dependencies between airline solution areas for CRM, operations, and ticketing, and generic business solutions for finance, project management and UC&C, along with the individual application servers, their databases, and the necessary service enablers, such as DNS and DHCP, and authentication, like LDAP, Active Directory, or RADIUS. A single solution providing visibility for the entire service, including all the components and relationships, allows IT to effectively manage health and availability of critical services and quickly identify the root cause of problems.

Our Value for Airlines and Airports

With NETSCOUT, airports and air transportation companies can:

- Ensure efficient operation of business-critical applications that affect passenger and airline services, as well as generic business solutions, both locally and distributed across the infrastructure
- Reduce MTTR with proactive monitoring and analytics for issues impacting one or many locations, including multiple airports or call centers
- Optimize customer experience by limiting the impact of service issues affecting travelers
- Increase efficiency and reduce cost with proactive management of limited physical resources
- Maintain high levels of safety by helping to assure critical services in traveler identification
- Reduce risk associated with compliance and factors causing negative reputation, through proactive management to avoid costly penalties

Our Solutions

NETSCOUT solutions deliver the flexibility to support both airline transportation specific services such as passenger self-service applications, baggage solutions, and ticketing etc., as well as general business services, such as CRM, email, and UC&C, all over distributed networks, including private, public and hybrid cloud. The nGenius platform provides unrivaled visibility into IP-based services along with contextual workflows to speed problem resolution that is both easy for Level 1 responders to use and powerful for an expert to operate. Powered by ASI, NETSCOUT's Deep Packet Inspection engine, the nGeniusONE® Service Assurance platform delivers real-time performance metrics including Key Performance Indicators (KPIs) from analysis of traffic utilization, application and database servers, and network errors.

NETSCOUT's vSTREAM™ virtual appliance, together with InfiniStreamNG™ software and hardware appliances, provides complete visibility across physical, virtual and cloud networks, presenting real-time views of end-to-end call trace data and network-wide KPIs, to protect the reliability and availability of networks and application services.

nGeniusPULSE compliments the real-time traffic data with synthetic testing that can run automatically to test the availability and performance of applications at any time. By running business service tests even when no one is on the system, IT gets an early-alert to potential problems and the opportunity to respond before employees and travelers are affected. In addition, when there is an issue involving the underlying infrastructure, IT can use contextual workflows to drill nGeniusONE directly to the specific infrastructure element in nGeniusPULSE.

NETSCOUT.