SOLUTION BRIEF: AVIATION

Don't Be One Network Change Away from a Ground Stop

Why airlines and airports can't afford a reactive NOC

The Resiliency Problem in Aviation IT

When the network goes down, so does the operation. Reservations, check-in, baggage, jet bridges, crew scheduling, flight information display systems (FIDS), common-use passenger processing systems (CUPPS), access control, and tenant networks all share the same critical infrastructure. A single network event can ground thousands of flights, take down a concourse, or trigger federal investigation.

A 2024 information technology (IT) outage cost one major US carrier over $500M. A 2022 operational meltdown at another carrier cost more than $750M. The US Government Accountability Office (GAO) documented 34 IT outages across 11 of 12 US airlines in a single three-year window. Flight disruptions now drain $34B per year from the global aviation economy. Airports face the same exposure on a different P&L: a concourse shutdown is local news, a terminal shutdown is national. The pattern behind every headline is the same—configuration drift, change errors, and a network operations center (NOC) where every severity-1 incident starts from scratch.

$500M+
single-outage cost to one major US carrier in 2024

$34B
annual drain on aviation from flight disruptions

45%
of outages root-cause in config and change errors

Two Sides of Aviation Coin (Airlines and Airports); One Operational Truth

Commercial carriers are private companies where the CFO and COO are accountable for revenue tied to ticket sales, irregular operations (IROPS) recovery, and Department of Transportation (DOT) cancellation performance. Airport authorities are often public entities accountable to commissioners, where airlines are tenants rather than customers and the network underlies passenger movement, baggage, operational technology (OT), security, and concessions at once. Two P&Ls. Same operational truth: when the network is reactive, the cost gets measured in headlines.

What Aviation IT Leaders Want

Per Amadeus 2024, 50% of Full-Service Carriers and 28% of Low-Cost Carriers are now prioritizing modernization of network management. Airport chief information officers (CIOs) are looking for the same operational guarantees on a public-entity P&L — lower mean time to resolution (MTTR), safer changes, hybrid and IT/OT visibility, and audit-ready evidence produced as a byproduct of operations rather than reconstructed after.

How NetBrain Delivers Aviation-Grade Resiliency

NetBrain runs Agentic NetOps as a continuous layer over your existing network and IT service management (ITSM) stack—automated assessment, first-response troubleshooting, and change validation that operate 24/7 without adding seat licenses. Same platform, two operational deployments: airlines run it across reservation, check-in, baggage, dispatch, and crew scheduling; airports run it across critical infrastructure, Cisco Application Centric Infrastructure (ACI) fabrics, OT, and tenant spaces.

CONTINUOUS NETWORK ASSESSMENT

- Auto-Discovery decodes golden configs across on-prem, hybrid cloud, ACI / Software-Defined Access (SD-Access), and OT-adjacent infrastructure.
- Continuous drift detection against golden configs, Payment Card Industry (PCI) and SOC 2 baselines, device hardening, and end-of-life / end-of-sale (EoL/EoS) — surfaced before an audit, not during one.

TRIGGERED AUTOMATION: SHIFT-LEFT FIRST-TOUCH TROUBLESHOOTING

- Automated Level 0 fires on every alert — first response 50% faster, up to 65% of tickets auto-closed, Priority 1 and Priority 2 incidents auto-escalated with full context.
- Senior engineers freed from blank-screen triage; tier-1 staff safely run senior-level diagnostics via ChatNBT, no seat license required.

AUTOMATED CHANGE MANAGEMENT

- Pre-change validation, automated execution, post-change comparison — 50% more changes shipped safely, critical for tight airport maintenance windows.

ACI / SD-ACCESS FABRIC MAPPING AND IT/OT VISIBILITY (AIRPORTS)

- Single-IP lookup collapses a multi-step, multi-team MAC/firewall/ACI workflow into one. Visibility extends into tenant, field, and OT spaces (baggage, jet bridges, HVAC, FIDS, CUPPS) on the same dynamic map.
- Feeds the ServiceNow configuration management database (CMDB) and the airport's digital twin program rather than fighting them.

Operational Results Delivered at Peer Aviation Operators

Symptom	After NetBrain
Interface Bad Link	**2 hours**
Interface Utilization or Error	**5–30 minutes**
WiFi Issue	**≈91.5 hours**
Device Unreachable	**30 minutes**
Environment Power Supply	**≈30.6 hours**
BGP Down	**10 minutes**

Ready to see this on your network?

Contact NetBrain to schedule a personalized demonstration tailored to your aviation environment.

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