



Network Modernisation for Athens International Airport

The backbone of an airport that cannot pause. Rebuilt without stopping.

Software-defined campus and data centre network, delivered without operational disruption.

Athens International Airport's FBCC network is the invisible backbone of Greece's busiest gateway — bridging flight control, building management, and the IT and OT systems that passengers never see but always depend on.

When the infrastructure required replacement, Performance designed and delivered the migration while the airport kept running. Performance modernised AIA's FBCC operational network using HPE Networking and Software-Defined Networking, with VXLAN/EVPN campus architecture and Spine-Leaf data centre fabric, managed 24/7 under ongoing NOC operations.

The 1 Thing

AIA did not just upgrade its network — it replaced the operational foundation that its entire digital future depends on.

The FBCC network is the connective fabric between flight systems, building controls, OT, and every passenger-facing digital service. Replacing it in a live 24/7/365 environment — without a single unplanned disruption — is the foundation a Smart Airport programme is built on.

Industry: Transportation & Aviation •

Challenge: Ageing FBCC operational network unable to meet modern capacity, security, and resilience demands — complete replacement required with zero tolerance for service interruption • **Outcome:** Fully modernised campus and data centre network, zero-downtime migration, 24/7 managed operations • **Vendors:** HPE Networking

Situation & Complication

Athens International Airport is Greece's primary international gateway — a 24/7/365 operation where the network is not supporting infrastructure, but the operational fabric connecting everything.

The FBCC network — Flight and Building Control Communications — sits at the core of this fabric. IT, OT, building management, flight control: every system that keeps the airport running flows through it. It is not a network that supports the airport. It is, in operational terms, the airport itself.

The existing FBCC infrastructure had reached its limits. Growing data volumes, evolving security requirements, and the ambitions of a digital transformation programme exposed the gap between what the network was designed to carry and what was now expected of it. Capacity, modern security protocols, and scalability were all required — and urgently. The choice was not whether to replace it, but how.

The architecture was clear. Executing the transition in a live airport was not.

Every component of the FBCC carries live traffic serving systems that cannot tolerate interruption — not for maintenance windows, not for migration phases, not for testing. Any unplanned outage would cascade across flight operations, building control, and passenger services.

The transition had to be executed to zero tolerance, in a 24/7/365 environment, without a single service noticing.

Resolution

Performance Technologies approached this as a precision operational challenge first, and a network architecture project second.

The real challenge was not which architecture to design. It was executing the transition without the airport noticing.

The campus modernisation replaced the entire access, aggregation, and core switching layer. A new high-capacity backbone, dimensioned for the data volumes a Smart Airport programme generates, replaced the existing fabric. The architecture moved to VXLAN/EVPN — delivering immediate gains in flexibility, east-west traffic efficiency, and central management control. Provisioning tasks that previously required manual configuration across individual devices became automated, removing change risk and significantly reducing deployment time.

The data centre was rebuilt around a Spine-Leaf architecture with two Active-Active facilities interconnected by redundant 100 Gbps links. Single Points of Failure were systematically eliminated. A failure in either facility now triggers automatic failover without manual intervention and without service interruption — a resilience standard the previous architecture could not approach.

Software-Defined Networking introduced centralised orchestration across both campus and data centre, with a single control plane automating configuration, reducing operational complexity, and providing unified visibility across the estate.

Throughout the migration, Performance Technologies' 24/7 NOC monitored all changes in real time. Staged rollouts, intensive parallel testing, and verified rollback mechanisms at every phase ensured that each transition step was fully controlled before the next began.

How Performance Made It Possible.

Performance Technologies held end-to-end ownership — from architecture study and migration planning through on-site execution and 24/7 managed operations thereafter. A meticulous phase-by-phase migration plan coordinated multiple teams in a zero-tolerance live environment, with rollback verified and ready at every stage. HPE Platinum Partner expertise enabled the VXLAN/EVPN and SDN design at the precision this environment demanded, and the NOC provided continuous real-time control throughout.

Impact

Athens International Airport now operates on network infrastructure built for the demands of a digital future — without its operations missing a single beat.

The campus and data centre transformation is complete. VXLAN/EVPN delivers the flexibility and control the previous infrastructure could not. Spine-Leaf with Active-Active data centres and 100 Gbps inter-site links eliminates the resilience gaps that existed before.

Under 24/7 NOC management by Performance, the network is actively monitored with SLA-backed response around the clock.

What no technical dashboard captures: throughout the entire migration, not a single passenger was affected and not a single critical service went offline.

The new infrastructure changes how AIA operates, every day:

- **Resilience by design** — Active-Active data centres with redundant 100 Gbps interconnects eliminate single points of failure; every critical airport service now has a fully resilient path
- **Automation-native operations** — VXLAN/EVPN and SDN orchestration reduce provisioning from lengthy manual planning cycles to rapid, error-free deployment
- **24/7 managed accountability** — Performance Technologies' NOC monitors and manages the estate under agreed SLAs, with continuous visibility and verified incident response at all times
- **Smart Airport-ready architecture** — the network is already dimensioned and designed to integrate next-generation digital services and Smart Airport initiatives without re-engineering

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Contact us to discuss how you can modernise critical infrastructure without operational disruption.



210 99 47 100



info@performance.gr

Pillars: HOST | **Solution Areas:** Network & Campus Infrastructure, Data Centre Networking, Managed & Cloud Networking