



Arriving in style

Viracopos International Airport experiences eight-fold growth with HPE Networking

Objective

Upgrade and integrate existing network infrastructure to accommodate rapid, eight-fold business growth with the addition of a new terminal

Approach

Engaged with HPE Technology Services Consulting, systems integrator Johnson Controls, and HPE Gold Preferred Partner Ziva to design a next-generation network for massive scalability

IT Matters

- Provides a service infrastructure to accommodate a quadrupling of passenger traffic
- Enables smooth transition to a new airport operator in just three months
- Delivers simplified creation and management of wired and virtual networks

Business Matters

- Scales quickly to deliver an eight-fold increase in customer services
- Preserves the initial investment of legacy infrastructure with leading integration capabilities
- Offers superior systems visibility and management with industry leading software tools

In 2012, the Aeroportos Brasil Viracopos won the concession to operate the Viracopos International Airport for the next 30 years. Formerly state operated, the transfer was a crucial period for the new operator to familiarize itself with the technology landscape and prepare for opening a new terminal in 2014. In order to modernize its Layer 3 network to MPLS protocol, the airport collaborated with HPE partner Ziva Tecnologia to choose HPE Networking Solutions. With HPE FlexFabric portfolio products in its data center, the airport relies on HPE Intelligent Resilient Fabric (IRF) technology and HPE Intelligent Management Center (IMC).

Temporary home to millions

The logistics involved in moving people, cargo, and luggage from point A to point B can be dizzying. As a locus on the never-ending cycle of arrivals and departures, an airport in any metropolitan area serves a multitude of functions as people pass through on the way to their final destinations.

Just outside of Sao Paulo, Brazil, Viracopos International Airport welcomes close to 10 million passengers each year in its existing 35,000-square-meter terminal. It's a figure that's going to change significantly when the terminal is fully open to process international flights next year.

New management, high expectations

The new terminal saw its first action during the 2014 World Cup when it handled the arrival and departure of the top soccer teams on the planet. Five times larger than the existing facility, the new terminal will process 25 million passengers, and the 30-year plan is to process more than 80 million passengers.

In addition to a major expansion, the airport recently went through a change of management. Previously operated by the state, the operations of the airport were granted to a company called Aeroportos Brasil Consortium as part of a national initiative to grant airport concessions to private corporations. The transfer occurred in 2012, leaving Aeroportos Brasil in the position

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– Marco Beme, Systems and IT Manager, Aeroportos Brasil Viracopos

of coming up to speed quickly to plan for the expansion project. “When we took over operations, we had about three months to understand the airport’s existing network infrastructure before we had to start running things,” remembers Marco Beme, systems and IT manager at Viracopos International Airport.

A legacy worth continuing

During the transfer of the concession, Aeroportos Brasil had three months to take over all operations of the airport from the state. To Beme’s relief, the existing systems in place at the airport were functioning without issue.

“The airport is a full infrastructure and services provider to all the businesses under our roof,” Beme says. “And all the connectivity in the campus is provided by the airport administrator, which is us. When we arrived, we saw the network running well, supporting all the airport’s customers, and we saw no reason to replace it.”

To deliver network services to all the restaurants, retail shops, ground handlers, cargo companies and airlines, Beme and team decided to build on what was already working well at the existing facility: Hewlett Packard Enterprise (HPE) Networking solutions.

“We looked at solutions from other leading vendors,” Beme recalls. “But only HPE was going to allow us to build out services in our new terminal with the kind of integration we needed across the entire HPE legacy campus.”

Partners for growth

So Beme and team engaged with systems integrator Johnson Controls, HPE Technology Services, and local HPE partner Ziva Tecnologia to plan the building and integration of the new network and the modernization of its Layer 3 protocol to MPLS.

With the help of HPE Technology Service Consulting, the team designed a network that relied heavily on HPE IRF technology to provide rapid failover capabilities and high performance for the airport’s mission-critical applications.

“Specifically, with our move to MPLS protocol, we needed to understand how we could improve our services to our customers within the airport,” Beme relates. “Working with Ziva and HPE Technology Services really helped us decide which technologies and solutions to go with as we undertook the building of the new terminal network.”

Case study

Aeroportos Brasil
Viracopos

Industry

Transportation

Customer at a glance

Hardware

- HPE 10500 Switch Series
 - HPE 10508-V Modular Ethernet Switches
 - HPE 10504 Modular Ethernet Switches
- HPE 10500/7500 20G Unified Wired-WLAN Module
- HPE 5500 HI PoE+
- HPE 5900AF-48G-4XG-2QSFP+ Switch
- HPE HSR 6602
- HPE Firewall 1000E
- HPE F5000 Firewall
- IPS S2600 NX
- HPE 5900AF-48G-4XG-2QSFP+ Switch

Software

- HPE Intelligent Management Center Enterprise Software Platform
- HPE Intelligent Resilient Fabric

HPE services

- HPE Technology Services Consulting
- HPE Premium CarePack Services

Built on IRF

HPE IRF switch platform virtualization technology gives Beme and team the flexibility to reduce network complexity while delivering increased redundancy as well as higher capacity connections between users and network resources.

With a pair of HPE 10508-V Switch Series Modular Ethernet switches connecting the legacy terminal to the MPLS backbone, Beme and team have a virtualized, redundant switching fabric that can support the needs of its massive network. The airport manages its Layer 3 access to both wired and wireless services with several HPE 10504 Modular Ethernet switches, with HPE 5500 HI Switch Series managing wireless access.

For Beme, that added flexibility is a huge benefit for the airport. “We carve up the network into many dedicated VLANs to give each airline, cargo, and commercial company its own virtual network connection,” Beme says. “On top of that, we have an exclusive VLAN for security.”

Built on IRF technology, the choice of HPE FlexFabric in the data center and FlexCampus solutions in the network core serves another important function for the airport. “HPE IRF gives us the ability to preserve the initial investment of the existing network infrastructure in the old terminal while fully integrating it with the network we’re building in the new terminal,” Beme explains. “We see it all as one virtual network that can continue to grow with us.”

IMC scales to the challenge

With more than 7,000 news network ports being installed in the new terminal, management and configuration could easily become a complicating factor. However, with HPE IMC Enterprise Software Platform, Beme and team have end-to-end business management of IT, scalability of system architecture, and the ready accommodation of new technologies and infrastructure. For Beme, it’s a solution that solves problems daily for his IT people working in the network operational center.

“HPE IMC gives us the ability to manage every aspect of our network,” Beme says. “Whether it’s our physical network infrastructure or VLANs, we can manage our services on a global or per-device basis, while monitoring the status of the entire campus from a single screen.”

It’s all about integration

Ultimately, the ability to integrate the existing network environment with the new infrastructure has enabled not just the smooth transition from one airport operator to the next, but also a new model of scalability for massive future growth.

As trials begin on the new terminal network, Beme is confident not only in the technology, but the people he chose. “Together with HPE, Johnson Controls, and Ziva, Aeroportos Brasil will be expanding our network services by a factor of eight, while accommodating an eight-fold increase in passenger volume,” Beme explains.



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