



CASE STUDY

MARKET: **TRANSPORTATION**

REGION: **LATIN AMERICA**

COMPANY: **SÃO PAULO AIRPORT**

# MORE EFFICIENT OPERATIONS AND BETTER PASSENGER SERVICES ENABLED BY IP-BASED VOICE INFRASTRUCTURE AT SÃO PAULO INTERNATIONAL AIRPORT

Advanced voice and unified communications services increase staff mobility, enhance logistics management, and improve passenger services for airport authority, airlines, and retailers



São Paulo International Airport is one of the major airports in Latin America and the largest in Brazil. The two existing terminals underwent extensive renovations, a new Terminal 3 was opened in May 2014, and work has begun on a new Terminal 4 to address growing flight and passenger traffic demand. As part of the improvement program, GRU Airport wanted to update, upgrade and extend the legacy voice communications network in the existing terminals to the new terminals to support more users, and provide new IP-based voice services to operations staff, airline operators, and retailers.

## CHALLENGES

- Provide more voice capacity for GRU Airport personnel and other operators
- Upgrade existing infrastructure to support IP-based voice services
- Support anytime access to voice service from anywhere in the airport and by mobile employees
- Improve operations and enable a consistent level of passenger service

## SOLUTION

- Dramatically increased capacity with the integration of additional Alcatel-Lucent OmniPCX™ Enterprise Communication Servers
- Cost-effectively enhanced voice network upgrade and integrated IP-based network built on the advanced business telephony features of the Alcatel-Lucent OmniPCX Enterprise Communication Servers, Alcatel-Lucent OmniStack™ LS 6200 Stackable LAN Switches and the Alcatel-Lucent OmniSwitch™ 6400 Stackable LAN Switches
- Instant access to the network for personnel on the move enabled by the deployment of Alcatel-Lucent OmniAccess™ AP61 Access Points
- More productive interactions between all stakeholders with integrated IP connectivity and telephony features provided by Alcatel-Lucent 8 Series IP Touch Phones
- Efficient operation of the entire infrastructure with centralized network management provided by the Alcatel-Lucent OmniVista™ 4760 Network Management System for enterprise IP telephony



*“We inherited an Alcatel-Lucent voice infrastructure when we took over airport operations in 2012 and, after an extensive review and analysis that included surveys and conversations with all users, we quickly concluded that the system Alcatel-Lucent had put in place in the existing terminals was very well executed and could support our expansion plans. So we made a decision to continue to use that system, increase capacity to support more users, and improve the infrastructure to address our current needs and future growth.”*

**– Luiz Eduardo Ritzmann CIO of GRU Airport – São Paulo International Airport**

## THE CHALLENGES

To meet the growing demand for more efficient air travel, GRU Airport embarked on an ambitious revitalization program designed to increase operational capacity and enable delivery of improved passenger services by its own staff and by employees of all airlines, support teams, and on-site retailers. With the opening of the new Terminal 3 facility, operational capacity increased to 42 million passengers per year, 40 percent more than the potential of the other two terminals operating together. The terminal area more than doubled from 191,000 m<sup>2</sup> to 387,000 m<sup>2</sup>, aircraft courtyard capacity increased from 61 aircraft positions to 108, and parking facilities jumped from 3,900 to 8,000 parking spots.

With the expansion, GRU Airport employees were faced with maintaining efficient operations over a wider area, and communicating with the central office while on the move. Airlines needed reliable and direct connections with agents in the terminals and at flight ramps. Ground crews and logistics personnel needed ready access to frontline personnel to ensure every flight was processed quickly and efficiently to deliver a high quality passenger experience. And the multiple retailers across all three terminals needed to maintain links with employees, suppliers and the airport authority to enable daily operations.

## BENEFITS

- Major investment protection with cost-effective upgrade rather than rip and replace
- Significantly reduced capital expenditures with a single integrated IP-based network upgrade
- 20 percent reduction in projected maintenance costs per year with only one network to manage
- Sufficient capacity to support current user requirements and future expansions, as needed
- Lower risk of potential downtime with improved network management

As with most airports worldwide, communication by all stakeholders across the airport grounds was supported by a combination of external cellular systems, internal wireless systems, and an analog voice system installed by Alcatel-Lucent Enterprise in 2008.

### Legacy voice network could not meet growing demand

Although the Alcatel-Lucent voice system was effectively meeting the voice communications demands of the 12,000 users in the original terminals, it was not designed to provide the capacity to support an additional 13,000 users GRU Airport expected to serve after the expansion.

"There were two key objectives we wanted to achieve," said Luiz Eduardo Ritzmann, CIO of GRU Airport – São Paulo International Airport. "The first was to address the expected increase in demand for service with more capacity and extensions on the network to handle a higher volume of use, cover the increased area that needed service, and support a higher number of users. And the second was to make a transition from analog to digital and IP phones and ensure that the network could support IP-based voice services, such as unified communications, messaging, voice conferencing, softphone applications, and eventually, video messaging."



*"We wanted a voice network solution that would deliver the increase in capacity to handle more users and deliver new services, but also provide us with a more efficient and cost-effective infrastructure. Alcatel-Lucent Enterprise offered an IP-based solution that would allow us to save infrastructure deployment costs because we could use the same cabling for voice communications that we would use for computer networks throughout the facilities. It would also allow us to save on ongoing maintenance costs because we would only have to manage one network. And it would allow us to integrate all users on one network rather than having to deploy multiple networks."*

**– Luiz Eduardo Ritzmann CIO of GRU Airport – São Paulo International Airport**

## THE SOLUTION

To address the objectives of GRU Airport, Alcatel-Lucent Enterprise delivered an integrated IP-based network built on the advanced business telephony features provided by the Alcatel-Lucent OmniPCX Enterprise Communication Server. Two new servers were added to the existing network to provide the additional capacity the airport needed and improve communication with a comprehensive set of IP-based telephony services, including auto attendant, call by name directory, voice messaging, conferencing, voice over IP (VoIP), and computer-based softphone applications.

Advanced switching for IP services was added with the Alcatel-Lucent OmniStack LS 6200 Stackable LAN Switches and the Alcatel-Lucent OmniSwitch 6400 Stackable LAN Switches. Together, these switching platforms ensure always-on, robust IP service delivery for all users on the airport network. Access to the network for personnel on the move was enabled from anywhere in the facility by deployment of Alcatel-Lucent OmniAccess AP61 Access Points. And IP-based voice services were provided across the airport with the addition of 10,000 Alcatel-Lucent 8 Series IP Touch Phones, which deliver integrated IP connectivity and telephony.





Finally, to ensure efficient operation of the entire infrastructure, centralized network management was added with the OmniVista 4760 Network Management System for enterprise IP telephony. This robust management platform provides the airport authority with real-time visibility of the entire network and offers the ability to avoid potential problems before they impact service.

“With this solution we have one integrated IP-based network in place that provides service to all users at all times, wherever they need it anywhere on the airport grounds,” said Ritzmann. “So all of the different users in the airport, from operations personnel, to airline personnel, caterers and ground crews, now have a network they can rely on to connect with any other service in the airport. They don’t have to make outside calls on external networks to make those connections. They can use the internal infrastructure to do their jobs every day.

“One of the things that made this possible is the fact that the system that was already in place could be easily upgraded and expanded. When we made our assessment we discovered that the Alcatel-Lucent network would be able to support our needs for 10 to 15 more years. It was able to provide the extra capacity we needed, and it was able to support the new technologies we wanted to integrate, such as IP voice.”

## THE BENEFITS

“As a result of the upgrade process we have a very robust and reliable network that can easily handle the volume of traffic and users we have now and can support the increase in volume and users we expect in the near future,” said Ritzmann. “It provides all the functionality we envisioned and it has the ability to support new services as needed.

Alcatel-Lucent understood the operational changes we wanted to implement and how the voice network needed to adapt to support those changes. They were able to provide a solution that met all our requirements, without needing to remove and replace what was already installed. This made the upgrade process more cost-effective and more efficient.”

Ritzmann added that every airport is a community with many stakeholders, from airlines to food caterers. All stakeholders have different requirements for communication service that makes the voice network a very complex and difficult infrastructure to manage. But Alcatel-Lucent worked closely with the airport authority to ensure the right solution was put in place to allow all stakeholders to provide a consistent level of service to travelers as they pass through the airport to wherever their flight takes them.

## CUSTOMER SUMMARY

GRU Airport – São Paulo  
International Airport

**MARKET:** Transportation

**EMPLOYEES:** 1,717

**NUMBER OF PASSENGERS:** 42  
million passengers per year

**URL:** [www.gru.com.br/en-us/](http://www.gru.com.br/en-us/)