

# Network Virtualization Transforms Busy Airport

Los Angeles World Airports leverages existing network to enhance security and better serve tenants.

EXECUTIVE SUMMARY
<p><b>Customer Name:</b> Los Angeles World Airports (LAWA)</p> <p><b>Industry:</b> Transportation</p> <p><b>Headquarters location:</b> Los Angeles, California</p>
<p><b>BUSINESS CHALLENGE</b></p> <ul style="list-style-type: none"> <li>• Improve network services for LAWA employees and airport tenants</li> <li>• Improve airport security through expanded video surveillance</li> <li>• Improve network security for different user groups</li> </ul>
<p><b>NETWORK SOLUTION</b></p> <ul style="list-style-type: none"> <li>• Network Virtualization with MPLS to support shared services</li> <li>• Expanded video surveillance on multicast network</li> <li>• Leveraged existing borderless network to reduce up-front and ongoing expenses</li> </ul>
<p><b>BUSINESS RESULTS</b></p> <ul style="list-style-type: none"> <li>• Transformed LAX and other airports by broadening shared network services capabilities</li> <li>• Made Los Angeles World Airports safer and more secure</li> <li>• Delivered value by leveraging existing network investment and streamlining IT processes</li> </ul>

## Business Challenge

Los Angeles World Airports (LAWA), the airport oversight and operations department for the city of Los Angeles, owns and operates three airports: Los Angeles International Airport (LAX), the world’s sixth busiest airport, LA/Ontario International Airport in the city of Ontario, and Van Nuys Airport in the San Fernando Valley. The airports must meet current and future demands, a daunting mandate for many reasons. Airport management has become more challenging in recent years in the face of heightened security, escalating costs, and the demand for better, faster service by airlines and passengers.

These challenges, in turn, have placed more demands on airport technology infrastructures. The network that supports all three of LAWA’s airports must deliver high availability with maximum flexibility to accommodate many needs, from video surveillance and digital signage services for tenant airlines to public wireless traffic, as well as support for internal staff.

At LAX in particular, improving video surveillance capabilities emerged as a top priority. The airport needed to replace an aging analog video surveillance platform, not only by increasing the number of cameras by threefold, but also by moving to a more

reliable digital system to improve security, reduce overhead, and hasten response times. In addition to supporting enhanced security, LAWA had a vision for enabling new revenue streams by becoming a network service provider to its customers, the tenant airlines. This strategy called for a flexible, high-performance, shared architecture where network connections could be provisioned easily among multiple groups while keeping network traffic isolated and private.

“Our IT organization has many different demands, with security and efficiency topping the list. We try to provide the best service to our multiple tenant airlines, as cost effectively as possible, and deliver it in a very secure manner so passengers are protected at all times,” says Nathan Look, chief technology officer for Los Angeles World Airports.

## Network Solution

### Virtualization to Meet Many Demands

Although the department already had a secure, flexible, and scalable infrastructure, LAWA needed a network upgrade to accommodate expanded capabilities. LAWA turned to network virtualization, a strategy designed to accommodate multiple groups and run a variety of services on the same physical network infrastructure, while keeping them logically isolated. The next step was helping ensure that the incumbent network would be capable of supporting the many requirements of the new, shared infrastructure.

“We had a high comfort level with our existing system, due to its reliability, familiarity, and ease of maintenance,” says Look. “Especially because we are a public agency that must keep a tight rein on costs, we wanted to leverage our existing investments while scaling system performance and integrating next-generation services to attract more tenants onto our network.”

“Our upgraded network affords better uptime, greater scalability, and more flexibility in moving applications. With network virtualization, we have gained many advantages in running our operation and keeping the public safe.”

— Nathan Look, Chief Technology Officer, Los Angeles World Airports

### Investment Protection

Although LAWA considered moving to the cloud, the Cisco Catalyst® 6500 Supervisor Engine 2T, the latest addition to the Cisco® Catalyst 6500 family of Supervisor Engines, provided an alternative to cloud-based options that lacked the security LAWA demanded.

The department was able to leverage its existing borderless network to maximize cost effectiveness, while providing the flexibility, scalability, uptime, and security that LAWA required. Supervisor Engine 2T is designed to provide fast virtual switching, increased scalability, and end-to-end network virtualization through support for both Multiprotocol Label Switching (MPLS) and native Virtual Private LAN Service (VPLS) for secure Ethernet-based LAN access.

Additionally, Supervisor Engine 2T supports the needs of the video surveillance infrastructure using the multicast VPN (mVPN) Extranet functionality. This functionality enables the airport authority to create a hierarchy of access to the video surveillance multicast. Upon upgrading, LAWA was able to dynamically provision private, multicast, multitenant support over the existing MPLS network to better support high-bandwidth applications such as video surveillance.

### Enhanced Borderless Network

The upgraded network also equips LAWA to meet increasing demand for more secure, cohesive client connectivity, wired or wireless, all managed through the Cisco Wireless Service Module 2 (WiSM2) controller. In the near future, LAWA plans to implement authenticated network access to wired Ethernet networks and wireless 802.11n networks. This move is expected to enhance security and streamline deployment through centralized user identification and authentication.

“With public safety as our top priority, we’re looking at authenticated network access to give users secure, locked-down access and another layer of validation, whether users are on the wired network, or requesting wireless access in a conference room or terminal area,” says Look.

## PRODUCT LIST

### Routing and Switching

- Cisco Catalyst 6500 Series Switches with Supervisor Engine 2T

### Network Management

- Cisco Wireless Service Module 2

### Security

- Cisco ASA Service Module

## Business Results

### Reduced Costs

According to Look, the network upgrade took only a few months, from consideration to full implementation, and was completed without business disruption or major hurdles. It provided a cost-effective way to achieve LAWA's goals as a provider without replicating resources or building out a new network from scratch, an expensive proposition for a public agency.

Today, LAWA can manage its network more efficiently than ever to deliver more value and reduce ongoing overhead. From an operational standpoint, network virtualization and WiSM2 give staff greater ease in administering and maintaining wired and wireless network requirements. IT staff can administer multiple physical switches through a "single pane of glass" interface, and they have much more flexibility to provision or decommission networking components, or load and modify software without interrupting service to users.

### Virtualized Network to Create New Revenue Streams

The upgraded network enables LAWA to accommodate almost any need through virtualized networking technology, all while maintaining exceptional uptime. From video surveillance and public safety to wireless access for tenants or the public, virtual switching and MPLS provide the required flexibility and robust availability. According to Look, the security, flexibility, and scalability of the network allow LAWA to assume a service provider role with revenue-generation potential and to support multiple tenants and internal staff with ease. The team can provide IT services to anyone, anywhere on the network securely and privately, without having to duplicate network resources or increase IT management burdens.

"Network virtualization affords us better uptime and scalability, as well as greater flexibility to move services fluidly and provision them where they are needed; it is a key enabler in our strategy of becoming a service provider supporting both internal staff and tenants," says Look. "Our upgraded network affords better uptime, greater scalability, and more flexibility in moving applications. With network virtualization, we have gained many advantages in running our operation and keeping the public safe."

### For More Information

To find out more about the Cisco Catalyst 6500 Supervisor Engine 2T, go to: <http://www.cisco.com/go/6500>.



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