CASE STUDY

Transportation and Hospitality

McCarran Airport Takes Off To Aruba with Nation's Largest Free Wi-Fi Deployment

When the IT department of the Las Vegas McCarran International Airport, the seventh largest destination airport in the United States, decided to provide the largest free public and private airport-wide wireless fidelity (Wi-Fi) service in the country, the security, scalability and control of the network were paramount concerns.

The scope and importance of the wireless network applications to be used by both the public and airport personnel were immense. The network would have to provide service from anywhere in the airport to the over 36 million travelers passing through McCarran each year -- and growing monthly by double digits.

But more important, McCarran viewed their Wi-Fi network as a strategic tool to help increase the efficiency of the airport, improve the experience of travelers within the airport and ultimately help to lower travel rates. Considered on of the most technologically sophisticated airports in the country, McCarran's plans includes supporting a wide range of innovative new applications, such wireless dispatching of wheel chairs, wireless fastrack boarding, wireless-enabled flight information display systems and wireless reservation kiosks. In addition, the new wireless network would have to support airport productivity and operational applications. And finally, the airport also plans to offer airline carriers customized wireless services tailored to their specific needs.

The airport had already installed first-generation wireless LAN (WLAN) access points (APs) in some of their conference rooms. But the IT department quickly realized that as a distributed solution it would scale poorly and would be costly. Numerous and expensive fat access points and switches for each wiring closet would be required. Because McCarran will have diverse public as well as private users and applications, there will also be greater contention, interference and security issues that the system would need to solve.

As a result of the size and potential complexity of the deployment, McCarran then focused on three main requirements for choosing an airport-wide wireless system:

1. Centralized security and management
2. Fast and easy scalability
3. Affordability, in terms of total cost of ownership and value

After carefully considering all the issues and requirements, the airport chose the centralized WLAN switching and security system from Aruba Wireless Networks. By using Aruba's centralized system, McCarran realizes greater economies of scale because the system:

- centralizes all security and RF controls,
- provides the most advanced wireless security available today, and
- requires less equipment and configuration time than alternative solutions.

McCarran INTERNATIONAL AIRPORT

Requirements:

- Centralized RF management and troubleshooting
- Seamless operation and deployment over existing IP fiber network
- Simple partitioning of the WLAN for multiple carriers
- Plug-and-play installation and automatic configuration
- Secure authentication and access controls
- The ability to redirect users, based on domains to different authentication servers

Solution:

- Aruba 5000 and 2400 Mobility Controllers
- More than 30 Aruba single and dual-radio access points
- ArubaOS management applications

Benefits:

- Centralized wireless delivered lowered cost of ownership
- Simplified management
- Airport-wide wireless coverage managed from a single point
- Remote troubleshooting
- Integrated firewall enabled differentiated user access

"Aruba's centralized system is an order of magnitude better solution than alternatives in terms of their advanced security, ease of management and scalability, and overall value," said Samuel Ingalls, Assistant IS director at McCarran International Airport.

"The system lets us easily and securely partition our RF environment so we can provide each carrier or vendor with their own virtual wireless network along with the requisite services and security they desire. Other airports have service providers that charge people to get online. We don't because our system gives us the flexibility and controls to realize ROI in other ways such as providing service to companies doing business within the airport."

Ingalls also added that, unlike other airports, McCarran is able to provide free service because it owns and operates its own airport-wide telecommunications infrastructure.

"As for contention, Aruba provides an elegant solution. For instance, Aruba's APs automatically search for channels with less interference. If they find one, they alter the central controller and make the change. And because the APs are low-cost thin APs, I can deploy lots of them everywhere, so a smaller number of users are contending for access to any given AP," said Ingalls.

McCarran has deployed both single and dual radio Aruba 802.11a/b/g access points (APs) throughout the airport. The network is centrally managed by an Aruba 5000 modular Mobility Controller in the main terminal along with the Aruba 2400 Mobility Controller for distributed management. Both switches are equipped with ArubaOS VPN and wireless intrusion protection software modules. These modules provide McCarran with a statefull policy engine that can be used to enforce strict security and access controls for each user and the ability to automatically detect and eliminate rogue APs, wireless interference sources, ad-hoc networks and to block a variety of wireless intrusions and attacks.

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Company Overview:

Owned and operated by the Clark County, Nevada Airport System, McCarran is the seventh largest airport in the United States. Servicing the fastest growing city in the U.S., the airport is experiencing double digit passenger growth monthly. Covering 2.6 million square feet, the airport serves over 36 million passengers a years and consists of 92 aircraft gates and two separate terminal buildings, including international.

"Centralized wireless management and security from Aruba let's us see and control every aspect of our wireless environment from a single point. Not only can we now easily offer pervasive and free Wi-Fi access to travelers, but we can use the same network to offer carriers and other companies within McCarran their own, secure wireless network."

Samuel Ingalls

Assistant Director of Information Systems McCarran Airport.

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