

California's Biggest Indian Casino Expands its Wireless LAN

Pechanga Resort and Casino deployed a Cisco Unified Wireless Network to support hotel guests and roving employees.

EXECUTIVE SUMMARY

PECHANGA RESORT AND CASINO

- Hospitality
- Temecula, Calif.
- 5000 Employees

BUSINESS CHALLENGE

- Desire to give roving employees consistent and uninterrupted network access
- Desire to differentiate the resort with advanced Internet services for hotel guests
- Need to support wireless voice traffic over the IP network
- Need for a wireless LAN that can scale easily without compromising network security

NETWORK SOLUTION

- A secure, wireless LAN with centralized deployment, operations, and management
- WLAN access for both hotel employees and guests
- Business results:
 - Reduces telecom costs by eliminating the need for cell phones for on-site employees
 - Allows constant communications with help desk employees for improved customer service
 - Helps transform the facility into a weekend destination for tech-savvy business travelers

Business Challenge

Opened in June 2002, the Pechanga Resort & Casino is one of the largest Indian gaming facilities in the United States. The second-largest private employer in California's Riverside County, with a staff of 5000, the resort enjoys a distinguished, four-diamond rating from the American Automobile Association. A 2004 expansion tripled the size of the casino floor to 188,000 square feet, making it the biggest casino in California. The resort's hotel has 522 rooms and 40,000 square feet of conference space for business functions, plus multiple clubs and a 1200-seat concert venue. Pechanga's RV park includes 170 hookups. All in all, the resort property spans more than two square miles.



Pechanga has offered basic wireless Internet access to employees since the 2004 expansion, along with limited guest access in some conference rooms. But recently, the resort decided to expand the wireless network, largely in order to cut its cell phone service costs.

"With the number of employees that we have, communicating while we are all moving about [the facility] meant we have always had cell phones," says Gilbert Mendoza, IT security director at Pechanga, which has an IT staff of 78. "While [cellular service] costs are coming down, they are still expensive. A wireless voice over IP phone makes more sense."

A second motivation for the resort's wireless expansion was the ability to offer free wireless network access in all its hotel rooms to guests, in addition to wired Ethernet access.

Network Solution

Mendoza wanted a wireless network with simplified management, one that could be managed from a central controller—a change from the resort's existing WLAN, in which each access point was managed separately. In addition, Mendoza required seamless roaming between access points to avoid dropped calls with the wireless IP phones being used. Mendoza says, "We have a 24-hour

help desk, so when those employees are out on the floor, we have to make sure the voice over IP coverage is there.”

Pechanga decided to upgrade its wireless network from Cisco Systems®. The resort already had an installed base of Cisco® equipment, including Aironet® 1200 series access points.

“We have always been happy with the support and the quality of Cisco’s hardware, but also the end-to-end management,” Mendoza says. “And it is better to have common ground on the network rather than several vendors doing different things.”

Furthermore, Cisco offers industry-leading security, including wireless security protocols that go beyond the industry norm. Through the Cisco Compatible Extensions (CCX) program, several third-party handheld computer vendors’ equipment also supports these Cisco innovations. This was important because Pechanga uses handheld devices from a mix of vendors.

“We encouraged those vendors to update their drivers,” Mendoza says. “We did not want to sacrifice security, so we went out of our way to find devices that either supported CCX or WPA [the Wi-Fi Protected Access protocol] or WPA2.”

Mendoza finalized the network upgrade plan in April 2006. To create the WLAN, Pechanga purchased three Cisco Catalyst 6500 Series Wireless Services Modules (WiSMs) for its Catalyst 6500 Ethernet switches. Although the existing base of Cisco Aironet access points had not been originally designed to work with a wireless LAN controller, they were converted to support the Lightweight Access Point Protocol (LWAPP) necessary for the upgrade, with firmware available from Cisco at no charge. In addition, Pechanga also acquired 180 Cisco Aironet 1130 Series access points, for a total of 300 unified access points distributed across the property. The resort is also using the Cisco Wireless Control System (WCS) in conjunction with the Cisco 2700 Series Wireless Location Appliance. With Cisco WCS, network administrators have a single solution for RF prediction, policy provisioning, network optimization, troubleshooting, user tracking, security monitoring, and wireless LAN systems management, all with a robust graphical interface. “The new equipment lets us find out exactly where our clients have been, tells us their radio levels, and provides intrusion detection—features that our previous system lacked,” Mendoza says.

The entire installation has been fairly easy, according to Mendoza.

“We are really just putting in the wireless LAN controllers, converting the wireless access points to the new software, adding Cisco WCS for management and that is pretty much it,” he says.

The Cisco Unified Wireless Network allows Pechanga to create independent wireless LANs to allow multiple groups to use the same network. Each wireless LAN is defined by a unique network name through Service Set Identifiers (SSIDs). Separate SSIDs can be defined for guests and employees, keeping guests from gaining access to any sensitive corporate data on the resort’s network. Pechanga has the full solution, including the WiSMs, up and running. Access to the WLAN is planned to be available in hotel guest rooms by the end of the year.

“If the business expands geographically, so will the network. Having this unified model makes it much easier to grow and expand.”

—Gilbert Mendoza, IT security director, Pechanga Resort & Casino

In terms of the voice over wireless LAN deployment, in the next several months Pechanga plans to deploy between 500 and 1000 wireless VoIP handsets to its employees—a combination of Cisco 7920 Wireless IP phones and softphones from other vendors.

Business Results

Deploying a wireless network that supports voice will allow Pechanga to cut down on the number of cell phone accounts that the resort issues to employees. Employees who roam about the campus will be able to use the wireless IP phones, without the network fee that a cell phone requires. And they will only use the phones while they are at work.

“A lot of our employees do not need to be called after hours,” Mendoza says.

Employees will also be able to use their wireless devices to access various data applications in the casino.

Each WiSM can support up to 300 access points, so Pechanga has plenty of capacity to expand the WLAN. Currently the resort is awaiting state legislation that would allow the casino to increase its number of slot machines beyond the current limit of 2000. The goal is to eventually deploy a total of 7500 machines. This growth would almost certainly increase network traffic.

“If the business expands geographically, so will the network. Having this unified model makes it much easier to grow and expand,” Mendoza says. “In the next year or so, our network could potentially double or triple in size.”

In the meantime, multiple controller modules help to ensure constant network uptime. If one module experiences a problem, it automatically fails over to another. That is important because casinos and hotels must always be open for business. “There is no downtime,” says Fred Mayne, the Cisco account manager in charge of the Pechanga deployment. “It is a 24-hour shop.”

PRODUCT LIST

- Cisco Aironet 1130 Series wireless access points
- Cisco Catalyst 6500 Series Wireless Services Module
- Cisco Wireless Control System
- Cisco 2700 Series Wireless Location Appliance
- Cisco 7920 Wireless IP phones

Wireless LAN access in each hotel room is a service that travelers—especially business travelers—have come to expect. “Wireless access in the rooms is definitely a feature that many customers are asking for,” Mendoza says. “We need to make sure we are always competitive. We want to be a destination resort, where people want stay a full weekend.”

Pechanga will offer wireless access in its hotel rooms free of charge, he says.

Next Steps

Although the initial wireless voice deployment is designed for employees, Pechanga is looking to give special guests access to the wireless IP phones during their stay at the resort.

“In a casino, the cell coverage can be spotty,” Mendoza says.

In addition, Pechanga plans to enable guests to order event tickets and read ads and service announcements from the wired and wireless IP phones in their rooms, helping increase resort revenues, he says.

The resort is looking at various ways to extend its wireless services to the nearby 5550-acre Pechanga Reservation, home to the Pechanga band of Luiseño Indians. The facility already offers

some wireless Internet access to the tribal residents and may eventually provide them with voice over wireless LAN and video services over a wireless mesh network.

"Pechanga is not just a casino," Mendoza says. "Ultimately there is a community to support."

"Cisco will be a part of that," he says.



Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
www.cisco.com
Tel: 408 526-4000
800 553-NETS (6367)
Fax: 408 527-0688

Asia Pacific Headquarters
Cisco Systems, Inc.
16B Robinson Road
#29-01 Capital Tower
Singapore 068912
www.cisco.com
Tel: +65 6317 7777
Fax: +65 6317 7788

Europe Headquarters
Cisco Systems International BV
Heesterbergpark
Heesterbergweg 13-18
1101 CH Amsterdam
The Netherlands
www.europe.cisco.com
Tel: +31 0 20 620 6791
Fax: +31 0 20 557 1100

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