

Cruise Line Simplifies Collaboration, Improves Guest Experience

Carnival Cruise Lines guests enjoy wireless Internet access throughout the ship, and crew members collaborate with voice over Wi-Fi.

EXECUTIVE SUMMARY
CARNIVAL CRUISE LINES <ul style="list-style-type: none"> Hospitality Miami, Florida 33,500 Employees
CHALLENGE <ul style="list-style-type: none"> Differentiate guest experience Increase operational efficiency of highly mobile employees Minimize equipment space and power requirements
SOLUTION <ul style="list-style-type: none"> Built Cisco Unified Wireless Network that passengers and crew can use for paid Internet access from anywhere aboard ship Provided crew with Cisco Unified Wireless IP Phones 7925G and 7921G, and loaned them to parents of children in Camp Carnival
RESULTS <ul style="list-style-type: none"> Delighted guests by providing pervasive Internet access Increased Internet access revenues by at least 15 percent Improved operational efficiency for processes ranging from food replenishment to equipment repairs

Challenge

Carnival Cruise Lines is the largest cruise line in the world based on passengers carried (3.8 million in 2009), and is the flagship brand of Carnival Corporation & plc. The newest member of its 22-ship fleet is the Carnival Dream, which entered into service in September 2009.

Vacationers increasingly bring along their Wi-Fi-enabled laptops and smartphones for business or entertainment, and cruise lines have responded by providing fee-based Internet cafes and limited wireless hotspots. But passengers and crew have to make a special trip to the hotspots to connect, discouraging use and decreasing revenue. To differentiate its passenger experience, Carnival Cruise Lines decided to provide wireless Internet access from any location on the ship, including cabins, upper decks, and swimming pool areas.

“Our primary motivation for providing pervasive wireless access was to provide a better guest experience,” says Tom McCormick, manager of voice and network engineering, Carnival Cruise Lines. “Then we realized that we could take advantage of the same network investment to provide wireless voice over IP, increasing our operational efficiency.”

“Wireless voice over IP enables us to respond quickly to guest requests, providing a high-touch experience that encourages passengers to vacation with us again and recommend Carnival to their friends.”

— Tom McCormick, Manager of Voice and Network Engineering, Carnival Cruise Lines

Onboard communications on cruise ships traditionally poses a challenge. A typical Carnival ship has 2000 highly mobile crew members, and fewer than five percent have a traditional office with a desk phone. Carnival ships previously used several systems for crew communications, but each had its limitations. Pagers, carried by food and beverage managers and housekeeping staff, required the person to find a phone to find out what the caller needed, resulting in delays that could affect the guest experience. The ship’s overhead paging system was intrusive, because it was loud and broadcast everywhere aboard the ship, including passenger cabins. Officers and engine-room staff carried push-to-talk radios, but these radios performed erratically and could carry only a limited number of conversations at once. Some newer ships had a Digital Enhanced Cordless Telecommunications (DECT) system, but Carnival could not use the phones at ports where another organization owned rights to the frequency.

“We invested in a wireless network to offer Internet access, and increased our return on investment by adding voice over IP for crew member collaboration.”

— Tom McCormick, Manager of Voice and Network Engineering, Carnival Cruise Lines

Solution

After evaluating voice-over-wireless IP solutions, Carnival Cruise Lines chose the voice-ready Cisco® Unified Wireless Network. “The Cisco wireless voice solution is simple to maintain, because it requires only two voice gateways, for redundancy, and a couple of E1 connections to the Cisco Unified Communications Manager,” says McCormick. In contrast, the other solution required dozens of components, increasing the spare equipment that ships had to carry in the limited space available. In addition, Cisco Aironet® Wireless Access Points can withstand harsh shipboard environments, including the high temperatures in engine spaces.

Cisco Advanced Services provided a readiness assessment and implementation services for the first two ships. Carnival IT staff worked alongside the Cisco engineers, which prepared them to implement the solution on other ships. Today, all 22 ships in the fleet have a Cisco Unified Wireless Network.

The Carnival Dream, for example, uses a Cisco Catalyst® Switch 6500 for wired network connectivity, with an integrated Cisco Wireless Services Module (WiSM) for wireless access. “Using a single device for wired and wireless access is very advantageous on cruise ships because space and power are at a premium,” McCormick says. Depending on the size of the ship, from 175 to 275 Cisco Unified Wireless Access Points are needed to provide pervasive coverage.

Voice Over Wireless

On the Carnival Dream, more than 400 crew members carry Cisco Unified Wireless IP Phones 7925G and 7921G. They can make and receive calls from anywhere on the ship, eliminating the need for pagers and radios. The phones work just like cellular phones that crew members already know how to use.

Results

Improved Collaboration

“We invested in a wireless network to offer Internet access, and increased our return on investment by adding wireless voice over IP,” says McCormick. The ease of reaching crew members on their Cisco Unified Wireless IP Phones has streamlined shipboard operations, collaboration between crew and headquarters, and group communications:

- **Shipboard operations:** Crew members can reach each other in any location to quickly resolve passenger issues, improving productivity and enhancing the guest experience.
- **Collaboration with headquarters:** If equipment such as an automated teller machine, casino game, or point-of-sale (POS) terminal requires repairs, the headquarters IT manager can talk to shipboard technicians as they work on the equipment rather than waiting as the technician walks back and forth between the equipment and a phone. And if headquarters IT staff detect an issue with the shipboard equipment, they can promptly reach the ship’s IT manager, even if the individual is not in the shipboard data center. “The ability to reach IT staff quickly helps us resolve issues before they affect our guests or staff,” says McCormick.
- **Group paging:** A crew member who wants to reach a group of people can send an email directly to their Cisco Unified Wireless IP Phones, using a third-party XML application.

Enhanced Guest Experience

Carnival guests, especially children, appreciate being able to connect to the Internet from anywhere on the ship. And now that crew carry Cisco Unified Wireless IP Phones, a passenger who wants an extra pillow, for instance, can use an in-cabin phone to directly reach their cabin steward in any location on the ship. "Wireless voice over IP enables us to respond quickly to guest requests, providing a high-touch experience that encourages passengers to vacation with us again and recommend Carnival to their friends," says McCormick.

Parents whose children attend Camp Carnival are loaned a Cisco Unified Wireless IP Phone so that staff can easily reach them in any location. The phones are reassuring for parents, who know that they will be called if Carnival staff needs their assistance. The staff, in turn, appreciates not having to search the ship to locate parents if an issue arises.

The Cisco Unified Wireless Network has even simplified the embarkation process. The wireless network extends to the pier, enabling ship operations personnel to efficiently check-in guests even at ports with little or no pier-side infrastructure, decreasing wait times for passengers eager to begin their vacations. For the remainder of the cruise, guests swipe their "Sail and Sign" cards, and crew members swipe their ID badges at security kiosks whenever they embark or disembark. Thanks to the wireless network, the staff can position the security kiosks anywhere, optimizing guest flow.

Increased Crew Satisfaction

Previously, the difficulty of communicating with other crew members complicated even simple tasks such as fulfilling a guest request, coordinating a group activity, or troubleshooting an equipment issue. Crew members without offices had to page each other and then wait for responses. "The ability to reach fellow crew members anywhere on the ship on their Cisco Unified Wireless IP Phone has decreased stress and increased service levels," says McCormick.

Crew members also appreciate being able to connect to the Internet and stay in touch with friends and family from the privacy of their own cabins.

Increased Revenues

Internet access revenues have increased more than 15 percent since Carnival implemented the Cisco Unified Wireless Network. Passengers and crew connect more frequently now that they do not have to make a special trip to a hotspot or wired Internet cafe. Carnival has made it more appealing to connect by offering a social networking experience, through the Carnival FunHub portal. Guests can create a personal profile and use FunHub to meet and interact with other guests. From anywhere on the ship, they can use their laptops and smartphones to send and receive private messages, create groups based on common interests, invite new friends or family to attend shows or participate in on-board events, find out about onboard activities, and view interactive three-dimensional ship maps.

Carnival is also using its Cisco Unified Wireless Network to increase revenues from photography. The ship's photographer can now upload photos to the server over the wireless network instead of repeatedly walking to the onboard photo-processing lab. With the time saved, photographers can take more pictures that guests purchase to remember their vacation.

Next Steps

Carnival Cruise Lines plans to increase the return on investment from its Cisco Unified Wireless Network by adding applications other than voice and Wi-Fi. One idea is pinpointing the location of valuable mobile assets with the Cisco Context-Aware Mobility solution. Wireless devices such as laptops emit a radio-frequency (RF) signal that the Cisco wireless network can detect. Other assets, such as defibrillators, luggage carts, engine parts, and high-value gift shop items can emit a signal if affixed with an RFID tag. The Cisco solution can display these items' locations on laptops, PCs, or the built-in display on Cisco Unified Wireless IP Phones.

PRODUCT LIST

SWITCHES AND ROUTERS

- Cisco Catalyst Switches 6500 and 3750
- Cisco Integrated Services Router 2821 and 2811 (voice gateways)

COLLABORATION

- Cisco Unified Communications Manager
- Cisco Unified Wireless IP Phones 7925G and 7921G

WIRELESS

- Cisco Aironet 1242AG Access Points
- Cisco Wireless Services Module (WiSM) for the Cisco Catalyst Switch
- Cisco 4400 Series Wireless LAN Controllers
- Cisco Wireless Control System

For More Information

To find out more about Cisco Unified Communications, visit:

<http://www.cisco.com/go/unifiedcommunications>.

To find out more about Cisco Unified Wireless Networks, visit:

<http://www.cisco.com/go/wireless>.

To join conversations and share best practices about collaboration, visit: <http://www.cisco.com/go/joinconversation>.



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