

Case Study

Enterprise WLAN Solution

FS Upgrades Wi-Fi 6 Solution to Improve Hotel Guest Experience

To meet the growing demands of guests, FS Wireless WiFi Solutions helped a luxury hotel upgrade its WiFi network using the latest Wi-Fi 6 and 6E technologies. The upgrade was designed to provide faster and more reliable internet connections throughout the hotel.

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Country

 United States

Industry

 Hotel

Network Type

 Wireless LAN

Solutions

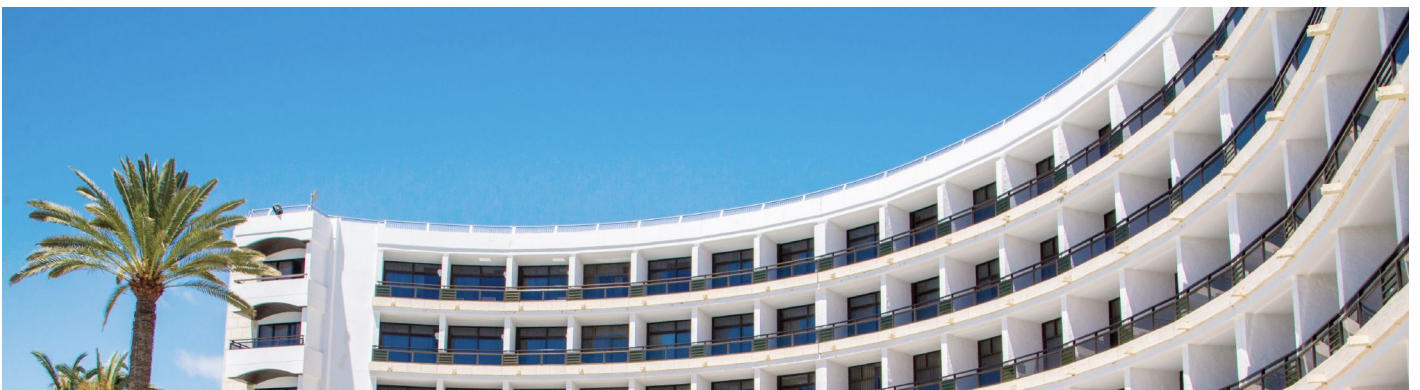
 Enterprise WLAN

Highlights

- Scenario-based deployment and optimized AP density effectively guarantee the terminal usage needs in specific scenarios and achieve stable and comprehensive WiFi coverage.
- The AC-224AP network controller greatly simplifies the management of LAN and WLAN with its interface management and monitoring capabilities.
- WiFi 6E also supports 6GHz based on 2.4GHz and 5GHz, providing an additional 160MHz channel, which can significantly alleviate channel congestion, reduce latency and improve overall network performance.
- Convenient Portal authentication of FS Aware enables users to quickly access the Internet, and the page can be customized according to the hotel's own needs.
- FS provides customized network design and fast-response technical support based on the hotel's needs and layout.

Key Stats

- Wi-Fi 6 & 6E access points serve an average of more than 1,000 guests daily and are evenly distributed to extend Wi-Fi coverage with no dead spots.
- One controller can centrally manage all APs, with unified configuration and real-time monitoring.
- 24-port high-performance core switch with 10/25/40Gb multi-speed to meet the connection and network expansion needs of various devices.
- All-in-one dual security gateway supports functions such as flow control, load balancing, and behavior auditing to ensure security and stability.



Overview

With 300 rooms and 14 meeting rooms, the hotel is strategically located in the city's bustling central business district and is easily accessible. With a 24-hour front desk, a cozy bar and restaurant, a small gym, and fully equipped meeting rooms, the hotel offers comprehensive amenities. Open year-round, the hotel is a popular choice for tourists and conference attendees, attracting those who want to immerse themselves in the local culture and explore the city's many attractions.

In order to meet the growing needs of the thriving business community, the hotel decided to upgrade its existing network infrastructure. The main goal was to enhance the traditional network by providing higher-speed wireless Internet access, while prioritizing network security and convenient network management. These improvements are designed to increase customer satisfaction and foster brand loyalty, recognizing the importance of providing guests with seamless connectivity and a reliable digital experience.

Challenges

The number of access points deployed on each floor of the hotel is limited. The hotel's outdated wireless network was incapable of meeting the demands of many customers. The network was plagued with persistent issues, such as dropped connections, dead zones, and insufficient capacity.

The hotel is in a period of rapid development, and the original network infrastructure obviously cannot meet the needs of a larger scale and more guests. Seamless Wi-Fi connectivity with increased bandwidth for a growing number of users.

In addition to the need for high-speed network access in the guest rooms, there are also smart devices such as voice control systems and IP

cameras in the hotel. The new network deployment needs to take into account all terminal devices in various areas.

Network security is a key factor that the hotel attaches great importance to, but the original network system lacks comprehensive security protection measures. To prevent major security issues such as information leakage, the hotel network must be upgraded immediately.

Since the hotel does not have professional IT personnel, when there is a problem with the network infrastructure, the technicians have to go to the site to manually reset, upgrade or replace the AP, which is very time-consuming.

Solutions

To help hotels upgrade their wireless networks smoothly, FS needs to fully understand the situation from the network entrance, design the structure from the top of the network, and carefully deploy equipment in each area.

Considering network security, FS implemented the multi-service security gateway SG-5110 at the network entry point. This gateway features traffic control, load balancing, and behavior auditing functions, which prevent malicious attacks, network intrusions, and data breaches, ensuring the security and privacy of the network and user data.

For this network upgrade, a high-performance S5860-20SQ core switch with diverse interface speeds was deployed in the control room. This switch provides efficient and stable network connections, ensuring rapid data transmission and management across floors. It supports large-scale device connections, meeting the needs for multiple device access and network expansion.

The solution also includes a S5860-24MG-U access switch deployed in the hotel office to connect computers, printers, servers, and NAS devices. This access switch offers additional ports for office equipment and connects to the core switch via high-speed links, ensuring fast and stable network connections that meet the performance and reliability requirements of the office environment.

To expand wireless coverage, the number and locations of APs were determined based on floor area and usage density. A total of 100 APs were deployed, including WiFi 6 and WiFi 6E APs indoors and AP-T567 outdoors. This ensures even coverage and stable signal strength. Additionally, channel interference and overlap between APs were considered to avoid spectrum interference, providing more reliable Wi-Fi connections. To enable administrators to manage all APs with unified policies and improve network manageability and efficiency, a wireless controller was used. It monitors network performance, performs fault diagnostics, and allows for remote updates.

Based on the customer's cabling cost and management convenience, S3410-24TS-P PoE switches were used to provide sufficient port density. A single switch can supply power and network connections to multiple APs, reducing the number of devices and saving space. The VSU technology in these switches increases port density, preparing the hotel network for future expansion.

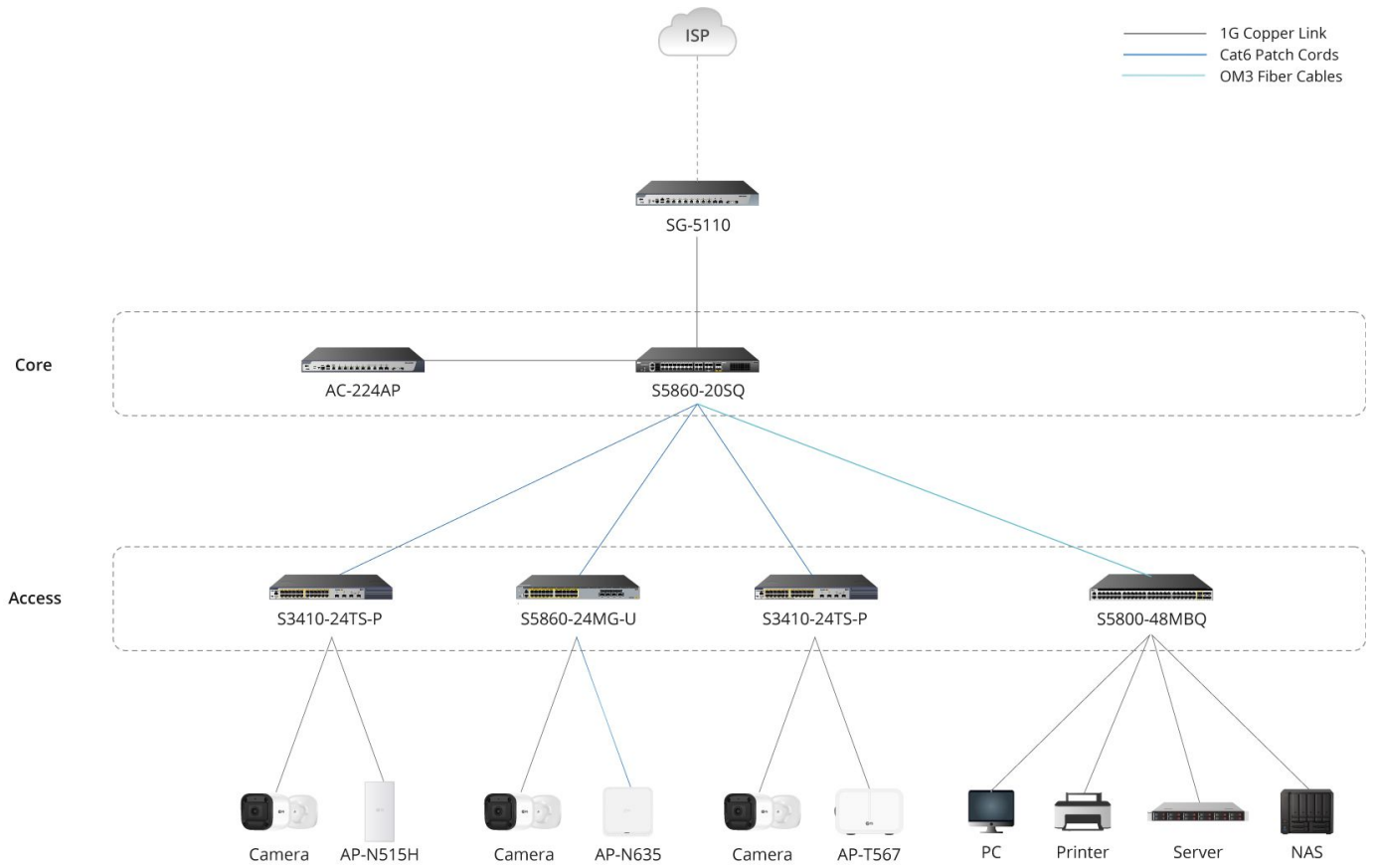
Through this network upgrade, the FS network solution not only enhances the performance and security of the hotel's Wi-Fi but also lays a solid foundation for future network expansion.

Results

Hotel management is very pleased with their newly implemented solution, and returning guests report an improved internet experience. The FS hotel wifi solution provides the reliable, high-performance wireless network that the hotel and its guests need. The hotel now has a strong, stable guest wireless network and no longer receives complaints and negative reviews from guests about their technology experience. The hotel has more visibility and control over its geographically dispersed network than ever before.

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