



Ensuring Uninterrupted Operations and Premium Hotel Guest Experience

Overview

As hotel guest demands have evolved, the Lifestyle Hotel in Seoul needed to enhance its wireless infrastructure and security. Working with LG U+ and Zyxel Networks, the new network was designed for stability and security across the entire system, from internet connectivity to WiFi AP deployment. High Availability (HA) was implemented in a dual-device redundancy design to ensure uninterrupted service even during equipment failure. For wireless coverage, WAX610D, WAX510D, and WAX300H APs were deployed according to each area's size and purpose, establishing a high-speed network throughout the hotel. In addition, the Nebula solution enables centralized, secure cloud-based management of the entire hotel network.

Challenges

As guest expectations evolved, the hotel required a high-quality wireless environment that could support smooth streaming services, business applications, and seamless connectivity across the property. The network also supports mission-critical hotel services such as check-in/check-out systems, CCTV, smart TVs, IP phones, and in-room WiFi, making uninterrupted operation essential. Different hotel spaces required different wireless performance levels. High-density public areas needed to support large numbers of simultaneous users, while guest rooms required stable and cost-efficient connectivity. Heavy simultaneous usage also increased broadcast traffic, creating potential performance and security challenges. In addition, the hotel sought simplified management with real-time monitoring and rapid troubleshooting.

Solutions

The new network was designed with a High Availability (HA) architecture across critical infrastructure, including internet lines, firewalls, and backbone switches. Dual USG FLEX 700H firewalls and XGS4600-32F backbone switches were deployed in a redundant configuration with cross-link topology to eliminate single points of failure. If a hardware or line issue is detected, the system automatically switches to backup equipment within seconds, maintaining continuous connectivity for hotel services and guest networks.

Customer

Lifestyle Hotel in Gangnam

Industry

Hospitality

Location

Seoul, South Korea

Partner

LG U+

Customer Background

The newly-built lifestyle hotel is located in the center of Gangnam's business district with approximately 330 rooms across 27 floors. It attracts a diverse clientele ranging from domestic and international tourists to business travelers, thanks to its location adjacent to COEX and the City Air Terminal.



Public areas such as the lobby, banquet halls, and restaurants were equipped with WAX610D WiFi 6 APs featuring 4x4 MU-MIMO technology to support high-density traffic and simultaneous device connections during peak periods and events. WAX510D APs, installed in corridors and elevator halls, provided seamless roaming throughout the property. Each guest room was equipped with a WAX300H wall-plate AP that blends with the room interior while delivering stable wireless connectivity. Its integrated wired ports also enable direct connections to smart TVs and IP phones without requiring separate switches, helping reduce deployment complexity and maintenance requirements. To improve security and traffic efficiency, the hotel network was segmented by using floor-based VLAN architecture. Separate broadcast domains help reduce unnecessary traffic propagation and minimize the impact of network issues. Guest WiFi isolation was adopted to restrict communication between guest devices and internal hotel systems. Nebula provides real-time visibility into the connected devices, network status, traffic usage, and wireless performance through an intuitive dashboard. In addition, the operational data, including reports and logs are securely stored in the cloud for ongoing management. The Live Tool offers detailed device insights for simplified monitoring and troubleshooting, while QR code-based WiFi access allows guests to connect quickly without manually entering passwords.

Product List



- WAX610D WiFi 6 Access Point
- WAX510D WiFi 6 Access Point
- WAX300H WiFi 6 Access Point



- XGS4600-32F L3 Aggregation Fiber Switch
- GS1920-24HPv2 Smart Managed PoE Switch



- USG FLEX 700H Firewall

Results

The hotel has modernized its network infrastructure, improving guest experience, security, and operational resilience. The new system supports hotel operations and seamless guest services across the property. Critical hotel and guest data is protected through advanced threat detection and real-time monitoring, while redundant network architecture ensures uninterrupted operations. Centralized cloud management also reduces IT overhead and enables efficient troubleshooting and network maintenance.

- 24/7 uninterrupted hotel operations and guest services through High Availability (HA) network design
- Tailored WiFi 6 AP deployment optimized for guest rooms and high-density public spaces
- Seamless roaming and optimized wireless performance across the entire hotel
- Enhanced security and traffic efficiency through floor-based VLAN segmentation and guest WiFi isolation
- Simplified remote monitoring and centralized management with the Nebula cloud platform

