ZYXEL NETWORKS | KCF 인터내셔널

Ensuring Reliable WiFi and Robust Security in Korean General Hospital

Overview

In the newly built general hospital in Pyeongtaek, the introduction of a mobile EMR system required an upgrade of the WiFi network for smooth operations. Zyxel Networks' comprehensive network solution, featuring the security firewall, smart managed PoE switches, and wireless APs, all manageable via the cloud, was selected. This enables both hospital staff and visitors to enjoy uninterrupted WiFi connectivity throughout the premises and ensures strengthened cybersecurity protection for both the hospital staff and guest users.

Challenges

Throughout the hospital, network routers were installed, but managing them became a headache. The hospital struggled to respond promptly to network issues due to the complexity of handling multiple routers. The lack of segregation between business and guest networks posed significant security risks. Additionally, the limitation of around 250 IP addresses often led to WiFi disconnections during peak visitor times, leading to the issue of frequent interruptions while moving around the hospital.

The hospital relies on mobile EMR systems for various tasks such as patient rounds and treatment. Therefore, it urgently needed a reliable network solution to ensure the seamless operation of the mobile EMR system, maintain stable WiFi connectivity, and strengthen network security.

Solutions

The hospital's new wireless network architecture features the USG FLEX 700 firewall at the forefront, connecting to GS1920-8HPv2 Smart Managed PoE Switches. The switches power 28 WAX510D WiFi APs installed from the first to the seventh floors, ensuring seamless wireless connectivity.

Customer
General Hospital in Pyeongtaek

Industry
Healthcare

Location
Pyeongtaek, Korea

Partner
KCF International

Customer Background

The newly built general hospital in Pyeongtaek is a 7-story facility in Korea. It relies on mobile EMR systems for tasks like patient rounds and treatments, using tablet PCs and medical devices. The hospital also provides WiFi to patients and caregivers as they move around the hospital, including rooms, lobbies, and convenience areas.

The WiFi Quality of Service (QoS) ensures optimal WiFi speeds for different purposes. Moreover, segregating WiFi into business and guest networks with adjusted speeds ensures fair traffic distribution, particularly benefiting patients and caregivers on the guest network. This allows smooth streaming even with multiple users. Additionally, visitors can easily access WiFi via a QR code, which directs them to the hospital's webpage for news and announcements through an integrated advertising function.

Given the hospital's high visitor traffic, security remains paramount. The USG FLEX 700 firewall offers various UTM functions, including virus and malicious traffic blocking, to ensure a secure network environment. Segregation of business and guest networks into VLANs based on usage purposes further strengthened network security.

The devices can be managed via the Nebula cloud platform, which automatically configures equipment even in complex network configurations. This platform enables easy identification of equipment configuration, status, fault location, and troubleshooting.

Product List

- WAX510D WiFi 6 Access Point
- GS1920-8HPv2 Smart Managed PoE Switch
- USG FLEX 700 Firewall

Results

Configuration of tablet PCs and medical equipment to automatically connect to nearby access points via the cloud controller ensures uninterrupted workflow for medical staff, even while on the move. Patients and caregivers can also enjoy uninterrupted streaming services as they move around different areas of the hospital.

After the Nebula solution is implemented, the hospital's IT staff can remotely monitor equipment and network status in real-time, promptly addressing issues through email or smartphone app notifications in case of failures.

- Uninterrupted WiFi and high connectivity speed while moving around the hospital
- Strengthened network security by blocking harmful sites and separating the business networks from guest ones
- Easy-to-use network management that promptly fixes network issues