Elevating Church Experience Through a Smarter Cloud-based Network

Overview

A church located in Goyang, Gyeonggi-do required a stable and convenient network environment to accommodate a large number of visitors and ensure smooth transmission of videos and photos related to church activities. The five-story building, which includes a main sanctuary for about 300 people, prayer rooms, classrooms, a dining area and café, and administrative offices, has varied networking needs across different spaces. To meet the diverse networking requirements, Zyxel Networks provided a combination of wireless and wired solutions, ensuring reliable and seamless connectivity across all areas, and simplified management with the Nebula cloud networking solution.

Challenges

With varied networking requirements across different areas of the five-story building, the church needed a network capable of supporting numerous devices and diverse traffic while ensuring reliable coverage in both high-density gathering spaces and smaller rooms. A user-friendly WiFi solution was also essential to accommodate visitors and enable seamless sharing of videos and photos during church events. In addition, without a dedicated in-house IT team, the church required a solution that could simplify network management while providing fast, professional technical support when needed.

Solutions

To meet the church's diverse networking requirements, Zyxel Networks deployed WAX650S WiFi 6 access points in high-traffic areas, including the main sanctuary, dining area, café, and lobby, while WAX510D access points were installed in prayer rooms, classrooms, and administrative offices to provide reliable coverage throughout the facility. A unified WiFi SSID was implemented across the church, while Smart Steering automatically connects users to the strongest access point as they move between different areas of the building.

Customer
Korean Church

Industry
Religious Organization

Location
Goyang, Gyeonggi-do, South Korea

Customer Background

The church in Goyang is a five-story building featuring various spaces centered around a main sanctuary capable of accommodating around 300 people, including prayer rooms, a dining hall and café, classrooms, and headquarters offices.

The Quality of Service (QoS) was applied to prioritize essential services and prevent individual users from consuming excessive network resources. This ensures a reliable WiFi experience for visitors and staff throughout the day.

As church activities become increasingly digital, with photo and video sharing and live streaming generating significant network traffic, the church upgraded its infrastructure with a 10Gbps backbone to eliminate bottlenecks and support high-volume data transmission. A dedicated 10Gbps uplink between the media room in the basement and the server room on the fifth floor enables fast and efficient transfer of large media files, while 10Gbps PoE++ switches were deployed in high-density areas to support high-performance access points.

The Zyxel Nebula cloud networking solution provides real-time visibility into each device's status and detailed information, enabling remote monitoring without on-site access. Automatic Network Topology generates configuration diagrams for easy understanding of complex network environments. In addition, a dedicated mobile app enables remote monitoring and control. Real-time push and email alerts ensure quick detection and response to issues, minimizing downtime.

Product List

- WAX650S WiFi 6 Access Point
- WAX510D WiFi 6 Access Point

- XS3800-28 L3 Aggregation Switch
- XGS2210-28 L3 Access Switch
- XS1930-12HP Lite-L3 Smart Managed PoE Switch
- GS1920-8HPv2/24v2 Smart Managed Switch

- USG FLEX 700 Firewall

Results

The church achieved a stable, high-speed network environment that supports live broadcasts, seminars, online services, and internal connections. The cloud management platform allows remote monitoring, quick issue resolution, and provides an intuitive dashboard for easy device management.

- QoS ensures optimal WiFi performance for all users
- A single WiFi SSID and roaming functionality provide seamless wireless coverage while users are on the move
- A high-speed 10Gbps backbone supports efficient data handling
- Cloud management enhances network visibility and minimizes downtime caused by network failures