



Empowering Academic Excellence through Optimized School Networks

Overview

The boarding school, accommodating 330 students, enhances academic performance through classes and self-study during school breaks. With wireless connectivity being paramount for students' studies, Zyxel Networks built a network in lecture halls and public areas, key spaces for wireless device usage. From bustling lecture halls and public areas to tranquil study nooks, Zyxel's deployment of WAX610D WiFi 6 APs ensures seamless connectivity, enabling uninterrupted learning with roaming capabilities. Additionally, the implementation of the USG FLEX 700 firewall enhances network security, safeguarding against unauthorized access and limiting entry to non-educational sites. The adoption of the Nebula cloud networking solution offers centralized management of APs across multiple classrooms, streamlining network operations for enhanced efficiency.

Challenges

The school faced key network issues. Firstly, it had to block non-educational content on the student wireless network to build a focused study environment. Secondly, the existing network, composed of routers, could not provide consistent network speeds and presented management difficulties. Moreover, students required uninterrupted connectivity while moving between classrooms. Additionally, the school's diverse network needs, including spanning multiple classrooms for student networks and using business networks in teachers' offices, demanded comprehensive control and management of all network equipment.

Solutions

The USG FLEX 700 firewall was adopted to restrict access to unnecessary websites and apps through app patrol and content filtering features. This ensured that only essential lecture sites were accessible for study purposes, creating an environment conducive to student focus on academics.

Customer

Boarding school

Industry

Education

Location

Gyeonggi-do, Korea

Customer Background

The Korean boarding school offers lodging and academic support during school breaks. Students attend classes and self-study sessions, utilizing facilities like lecture halls and accommodations. Around 330 students use the wireless network for lectures and studies, while teachers rely on it for preparing classes and performing administrative tasks.



The WAX610D WiFi 6 APs replaced existing routers to address issues such as slow WiFi speeds and interruptions. These APs efficiently managed traffic even with multiple student connections in public spaces, ensuring stable wireless network usage and enhanced speed. With features like Dual 4x4+2x2 MIMO and OFDMA technology, these APs supported a maximum transmission speed of 2,975Mbps, allowing simultaneous data provision to users in areas shared by multiple students, thus reducing waiting time and optimizing user experience.

To meet the school's security requirements, detailed security settings such as blocking unnecessary websites and applications were implemented using the built-in managed service for the USG FLEX 700 firewall equipment and GS1920-24HPv2 L2 PoE switch. Besides, centralized management was essential, providing services such as daily reports on the wireless network's status and regular security updates. Nebula's cloud-managed service allows for immediate access to real-time status updates of the entire school's network equipment, the number of users connected to the wireless network, event notifications, etc., through the dashboard.

Product List



- WAX610D WiFi 6 Access Point



- GS1920-24HPv2 Smart Managed PoE Switch



- USG FLEX 700 Firewall

Results

After implementing the new network, the school improves stability and speed across classrooms, providing stable wireless network quality and uninterrupted WiFi access for students moving between spaces. The new system also simplifies network management by monitoring status and traffic usage for each classroom, ensuring reliability and cybersecurity protection.

- Enhanced network security and control to prevent unnecessary sites and apps that allow students to focus on the study
- Seamless WiFi access and uninterrupted connectivity throughout the campus
- Streamlined device management minimizes network downtime and ensures network reliability

