



Empowering Rural Disadvantaged Children's Education with Nebula

Overview

The Boyo Social Welfare Foundation aims to minimize inherent inequalities by closing the educational resource gap, and ensuring that children in rural or economically disadvantaged areas have access to essential learning opportunities. However, these ambitions were previously hindered by an inadequate wireless network that lagged and was slow when students used Chromebooks.

The foundation needed a network overhaul to ensure stable connectivity. Additionally, it required cross-branch network management and a more efficient solution for time-consuming network troubleshooting. With Zyxel Networks' Nebula solution in place, the foundation has significantly enhanced network performance, providing smooth connectivity for multiple users and ensuring reliable access to learning resources for children. The IT staff also benefit from simplified and convenient network management, allowing them to quickly identify and resolve issues from anywhere using their smartphones.

Challenges

The foundation encountered significant challenges due to a shortage of teachers in rural areas, compounded by the pandemic. As a result, they had to offer more online courses. However, they quickly discovered that their wireless access points struggled to accommodate the simultaneous demand of more than six classes at once. With students primarily relying on tablets or Chromebooks that depended on wireless internet, connectivity issues became common. It was especially problematic when six to eight students in the same classroom attempted to join online lessons, resulting in frequent lag and disconnections.

Solutions

Ten NWA50AX WiFi 6 access points provide fast speeds even in congested or high-density environments, expanding the range of the existing wireless network and increasing capacity for IoT deployments.

Customer

Boyo Social Welfare Foundation

Industry

Non-profit organization

Location

Hsinchu, Taiwan

Customer Background

Established in 2002, the Boyo Social Welfare Foundation focuses on closing the education resource gap, especially by providing free after-school tutoring for disadvantaged children in rural areas. By providing educational resources, developing community talent, and leveraging social support, it helps children gain opportunities, empowering them to break the cycle of poverty and build a brighter, self-reliant future while fulfilling its vision of 'bringing hope home through knowledge.'



Unreliable internet frequently interrupted our classes, requiring us to reset devices or call for remote assistance. Thanks to Zyxel Networks' help, we now have a more stable network environment, which allows us to offer a better learning experience and serve as a stronger support system for these children."

Yuheng Li, Director

Zhudong Branch, Boyo Social Welfare Foundation

Installed on the ceiling, these access points ensure broad coverage while minimizing interference. The GS2220 Series switch offers a rich Layer 2 feature set and advanced traffic control capabilities, ensuring high bandwidth and speed for stable network connectivity. The switch delivers both connectivity and power to the access points, guaranteeing uninterrupted service.

With Nebula, managing the local network has become incredibly convenient. Previously, to manage WiFi at other centers, the foundation's IT staff had to use a VPN to access the local network for adjustments. If a device malfunctioned, they relied on local staff to restart it, and updating access point equipment required connecting to each one individually to make the necessary adjustments. Zyxel Networks' Nebula Cloud Management platform has allowed the foundation to remotely manage network equipment at various locations across Taiwan. This has significantly reduced maintenance time and costs, improving operational efficiency within the foundation.

Product List



- NWA50AX WiFi 6 Access Point



- GS2220-50HP L2+ Managed PoE Switch



- NSG300 Nebula Cloud Managed Security Gateway

Results

Since adopting Zyxel's solutions, the IT staff can now manage all Zyxel products through Nebula, easily monitoring devices with abnormal traffic and configuring settings directly from their smartphones. The new network has streamlined network management while eliminating concerns at the Zhudong Center about lag caused by too many students connecting to a single access point.

- Convenient cross-site remote network management eliminates the need for VPN access, enhancing operational efficiency
- Simplified and efficient device monitoring from a smartphone
- Smooth learning experiences with minimized lag issues

