# Bringing Seamless WiFi and Network Management to City Education Office

## Overview

The school district office in the Philippines aimed to enhance digital learning by integrating new wireless networks across fifteen school sites. The project, executed in partnership with Converge ICT Solutions, faced challenges in managing simultaneous installations while ensuring minimal disruption to school operations. To address this, the Nebula cloud networking solution was deployed, simplifying network administration and real-time device monitoring. Key solutions included USG FLEX 700 firewalls for strong security, XS1930 series switches for high-speed connectivity, and two hundred and fifty WAX650S access points for seamless WiFi access. The project was completed in just two weeks, achieving full wireless coverage and also reducing troubleshooting time by 70% to 80%. With a stable and secure network, faculty, staff, and students now enjoy a more connected and efficient learning environment.

**Customer**
School District Department

**Industry**
Education

**Location**
The Philippines

**Partner**
Converge ICT Solutions Inc.

## Challenges

The project encountered challenges, mainly in managing simultaneous installations across multiple locations while integrating WiFi technology into smart classrooms. Careful planning and coordination were essential to ensure a seamless setup with minimal disruption to school operations.

## Solutions

For seamless wireless access, two hundred and fifty WAX650S access points were installed, offering customized captive portals, VLAN support, and multiple SSIDs to optimize user experience. To ensure a secure and well-structured network, the USG FLEX 700 firewalls were deployed, providing UTM security, DHCP services, VLAN management, and strict security policies to protect faculty and student data.

### Customer Background

The school district office in the Philippines oversees the delivery of basic education, striving to ensure broad access, promote equity, and enhance educational quality. As a learner-centered public institution, it is committed to continuous improvement, fostering a nurturing, safe, and welcoming environment for students. Its administrators and staff work collaboratively to enable effective and meaningful learning.

Six XS1930-12F fiber switches served as the core switches, providing high-speed backbone connectivity, while forty-five XS1930-12HP PoE switches powered network devices and supported VLAN management of active devices.

Network management became more efficient with the Nebula cloud management platform, which not only simplified the management of all fifteen schools but also enabled real-time monitoring of active devices. The **Central Device and Client Monitoring** feature provided detailed log and statistical data on a rolling 1-year basis, supporting proactive troubleshooting and system maintenance. The platform also introduced **Automatic Network Topology**, offering a visual and actionable map of the entire network, making it easier to identify and address connectivity issues. Additionally, the **Organization-wide Configuration Sync, Clone, and Template** allowed IT teams to deploy settings consistently across all schools, significantly reducing setup time and ensuring standardized policy enforcement.

## Product List

- WAX650S WiFi 6 Access Point

- XS1930-12F Lite-L3 Smart Managed Fiber Switch
- XS1930-12HP Lite-L3 Smart Managed PoE Switch

- USG FLEX 700 Firewall

## Results

With the Nebula solution, the project was completed across fifteen schools in just two weeks. This streamlined deployment significantly reduced the IT workload, cutting troubleshooting and configuration time by 70% to 80%. The new networks are transforming smart classrooms into more efficient and connected learning environments.

- Fast and smooth deployment, with all fifteen school sites fully operational in just two weeks
- Reduced troubleshooting and configuration time by 70 to 80%
- Seamless, wide-ranging wireless coverage delivering stronger connectivity for smart classrooms