



# Implementing Advanced Networking Solutions in Multiple Educational Institutions

## Overview

A prominent group of over 15 educational institutions in Uttar Pradesh, India, had primary objectives to establish robust and scalable networking infrastructure across all school labs, ensure secure internet access and protect against cyber threats, provide a consistent and reliable network experience for students and staff, and streamline network management and maintenance. A local vendor recommended a comprehensive solution from Zyxel Networks, featuring GS1920-24v2 and GS2220-28 switches, in conjunction with the ATP500 firewall. The devices were centrally managed via the Nebula cloud networking solution, which enables efficient and simplified network deployment and management while delivering high-performance networks to the schools.

## Challenges

The project faced challenges such as coordinating the simultaneous setup across multiple locations and ensuring that the new technology was seamlessly integrated with the educational workflows. Managing logistics and installation timelines to prevent disruption to the school schedules required detailed planning. Additionally, ensuring all staff were adequately trained to utilize the advanced networking equipment effectively was critical to the project's success.

## Solutions

The implementation process was carried out in several phases. It began with a thorough assessment of each school's infrastructure, which helped tailor the networking solutions to meet specific needs. The solution includes GS1920-24v2 switches, chosen for their advanced features such as enhanced PoE capabilities, which are ideal for supporting a variety of network devices including IP cameras and WiFi access points.

### Customer

Educational Institute

### Industry

Education

### Location

UP, India

## Customer Background

A distinguished consortium of over 15 educational institutions in Uttar Pradesh, India, was established, with one in each division, exclusively benefiting the children of laborers. They embarked on an ambitious project to modernize their school laboratories with cutting-edge networking infrastructure.



GS2220-28 switches offered high-performance Layer 2+ capabilities, providing robust network management and increased bandwidth to support high-density environments. Both switches are strategically installed in the school labs, ensuring optimal placement for coverage and performance.

The ATP500 firewall was selected to ensure comprehensive security for the school networks, offering real-time threat intelligence and multi-layered protection. The ATP500 firewalls were configured to provide robust security and efficiently manage internet traffic. Post-installation, the network was subjected to rigorous testing to ensure all components were functioning correctly, with necessary adjustments made to optimize performance. Finally, staff members received comprehensive training on the new system to ensure smooth operation and effective management of the network.



Zyxel Networks' Nebula cloud networking solution offers an effortless, centralized approach to network deployments and management with high security and scalability, providing complete control over Nebula devices and users. The products were managed via Nebula, which provides high visibility into network activities and quickly identifies issues.

## Results

The implementation of Zyxel's cutting-edge technology resulted in a transformative shift in the connectivity landscape of schools. With the new infrastructure in place, the schools experienced high-speed, reliable internet connectivity that enabled students and teachers to access online resources without interruptions, significantly enriching the learning environment. The advanced security features of the ATP500 firewall ensured the safety of sensitive data and maintained the integrity of the school's network. The scalable networking solutions allowed for effortless expansion of the infrastructure as needed. Moreover, centralized network management simplified administration and maintenance, reducing downtime and operational costs. As a result, schools are now well-equipped to embrace the challenges and opportunities of digital learning, fostering a more connected and secure educational environment.

- Comprehensive network protection from cyberattacks
- Advanced PoE capabilities for IP cameras and access points
- High-performance Layer 2+ capabilities for robust network management

## Product List

-  • GS1920-24v2 Smart Managed Switch
-  • GS2220-28 L2+ Managed Switch

-  • ATP500 ATP Firewall

