



Success Story

Zyxel Nebula Solution Satisfies Indian School's Academic Needs to Nurture Future Leaders



Education



Shri Ram
Millennium
School



India



Zyxel
Nebula
Solution

Overview

Challenges

- Build a new wireless network infrastructure to provide stable connectivity
- Offer robust wireless service across a large facility comprised of multiple rooms, buildings and levels
- Manage the complete network and set up centrally
- Reduce dead spots that can weaken wireless signals in multi-room buildings

Results

- Robust and stable wireless network infrastructure
- School staff and students enjoyed fast, seamless internet services on campus
- Central management of connected devices is a breeze
- Delivered scalable and futureproof solution for future expansion

Solution

- Zyxel Nebula Solution

Summary

Shri Ram Millennium School, located in the heart of Delhi NCR, wanted to establish a new and stable network infrastructure that was robust and future-proof to provide the necessary level of wireless service while meeting the needs of staff and students across a large facility comprising of multiple rooms, buildings and levels. They were also in search of a technology with which they can manage the complete network from a central location. After careful review, Zyxel's Nebula solution was selected because it could satisfy all the needs of Shri Ram Millenium School. After Zyxel's products were deployed, the Shri Ram Millennium School expressed happiness and satisfaction, enjoying a hassle-free networking environment.

Background

Shri Ram Millenium School is one of the most prestigious schools in Noida, Delhi NCR, aiming to create future leaders while providing a state-of-the-art campus to its students. The school firmly follows the old adage "Vidya Dadaati Vinayam" which means "from knowledge comes humility." The school keeps providing a complete range of

supportive services and facilities for students to achieve success in their academic lives. Students have an increasing requirement for high-performance and reliable network connections for their academic needs.

Challenges

Internet and network connectivity play an essential part for modern educational institutions. However, the school suffered from unstable wireless connectivity and could not control or manage its network systems scattered throughout the campus effectively. The school wanted to establish a new, robust network infrastructure to provide wireless network service to school staff and students. Additionally, the large size of the campus and a large number of classrooms made it challenging to provide a fast and reliable wireless network. Large, multi-room buildings are often plagued by dead spots that can weaken wireless signals. The school was also looking for a technology that could manage the complete network and setup centrally. Last but not least, the network infrastructure needed to be futureproof to meet the needs for future expansion.



Solutions and Benefits

The school contacted Zyxel's partner RSC Technologies. After a careful review, Zyxel's Nebula solution was selected because of its cloud networking management and high performance. Zyxel experts conducted a comprehensive analysis for the institution's information security and in-house internet sharing needs before designing and setting up networks for the school.

The core of the network is composed of **GS1900-24HP 24-Port GbE Smart Managed PoE Switch** and **GS1900-8HP 8-Port GbE Smart Managed PoE Switch** which simplify communications for complex networks. The GS1900-8HP and GS1900-24HP Gigabit Smart PoE switches provide power to the APs and can set power feeding priorities on different ports to optimize use of power. This helps increase the number of devices connected and delivers a better return on investment for the school.

At the extremities of the network are Zyxel **NAP102 802.11ac Dual-Radio Nebula Cloud Managed Access Point** and **NAP203 802.11ac Dual-Radio, Dual-Optimized Antenna 3x3 Nebula Cloud Managed Access Point** units. These Zyxel Nebula access points can be centrally managed via the

Nebula Control Center, an intelligent cloud networking management platform. The APs incorporate advanced technologies such as Dynamic Channel Selection (DCS), Load Balancing, and Smart Client Steering, ensuring stable and fast wireless connectivity in multi-room buildings throughout the campus. Featuring zero-touch deployment, the APs auto-configure themselves after installation, and then automatically connect to the Nebula cloud. The Nebula solution makes it easy to monitor and diagnose the APs anytime and anywhere. Even non-IT professionals can handle these easily.

Shri Ram Millennium School owners and users are more than satisfied with the stable networking access and simplified deployment from Zyxel Nebula solution. The solution also makes it a breeze for the campus to have internet, voice, surveillance, wireless and gate system solution over the same fiber backhaul. They plan to work with Zyxel to further extend the network infrastructure to provide internet service to other sites of the campus, like the club, gyms, and garden.

Products Used

NAP102 • 802.11ac Dual-Radio Nebula Cloud Managed Access Point



- Cloud-managed, dual-radio 2x2 MIMO 802.11ac access point
- Supports combined data rates of up to 1.2 Gbps
- Self-configuration and zero-touch deployment
- Enterprise-class security and RF optimization
- Dynamic channel selection, load balancing, and smart client steering

NAP203 • 802.11ac Dual-Radio, Dual-Optimized Antenna 3x3 Nebula Cloud Managed Access Point



- Cloud-managed dual-radio 3x3 MIMO 802.11ac AP
- Supports combined data rates of up to 1.75 Gbps
- Dual-optimized antenna allows pattern optimization adapting to wall- or ceiling-mount installations
- Self-configuration and zero-touch deployment
- Enterprise-class security and RF optimization
- Dynamic channel selection, load balancing, and smart client steering
- Ultra-slim, 32-mm-thick ID design blends into any modern décor

Nebula Control Center (NCC)



- Responsive web design and intuitive user interface
- Multi-tenant and multi-site views
- First time setup wizard
- Role-based administrative privileges
- Real-time, historical monitoring and reporting
- Site-based auto and smart configuration tools
- Misconfiguration protection to prevent NCC disconnections
- Rich, site-wide management tools (dashboard, map, and floor plan)

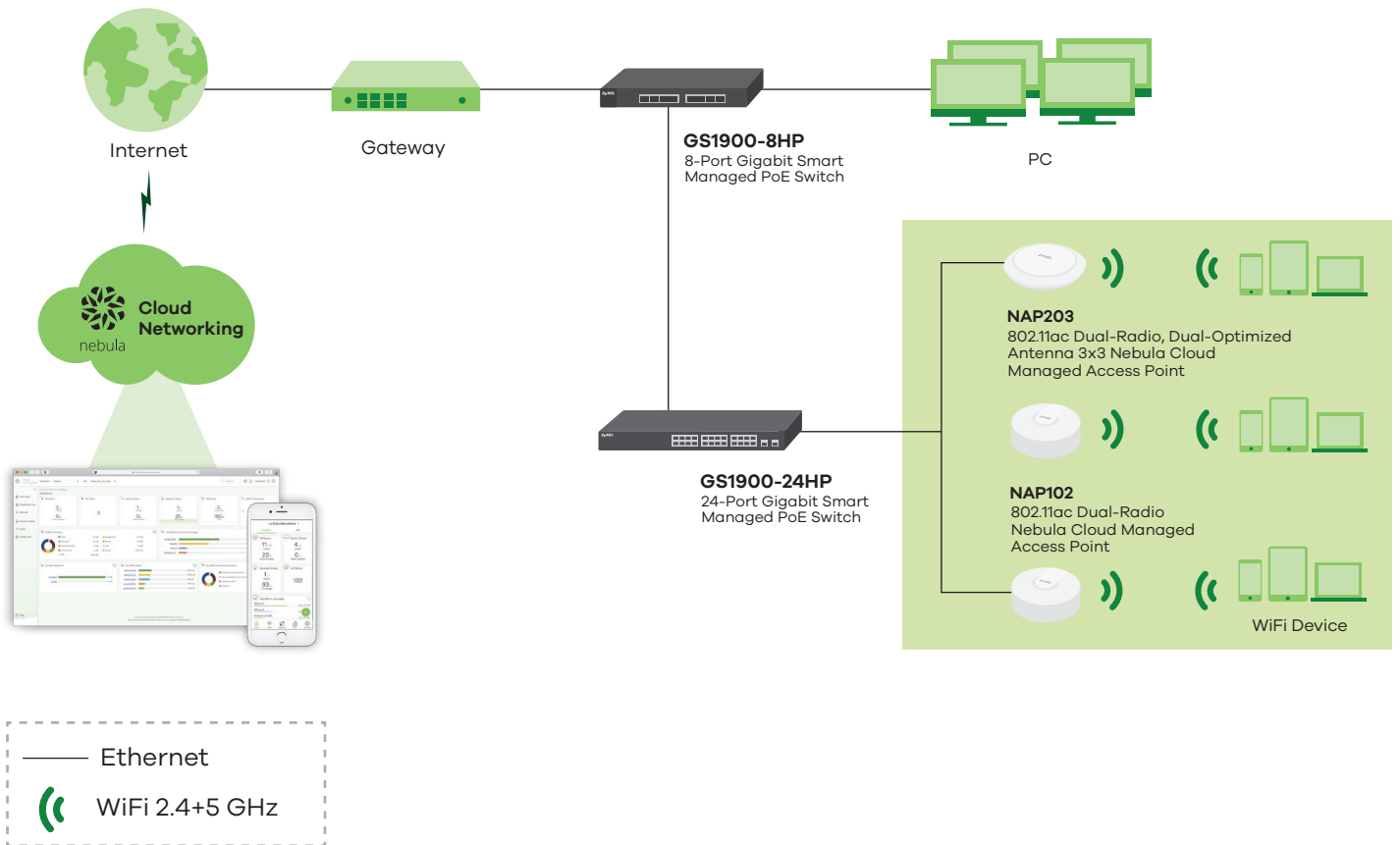
Products Used

GS1900-8HP/24HP • 8/24-Port Gigabit Smart Managed PoE Switch



- Gigabit connectivity
- High-power PoE support IEEE 802.3at
- Easy browser-based switch management
- Quick and easy setup wizard
- Advanced network error prevention features (loop protection, dual images, storm control, and DoS, SSL)

Diagram



About Zyxel

Focused on innovation and customer-centricity, Zyxel has been connecting people to the Internet for over 30 years. Our ability to adapt and innovate with networking technology places us at the forefront of creating connectivity for telcos and service providers, business and home users. Zyxel is building the networks of tomorrow, unlocking potential, and meeting the needs of the modern workplace — powering people at work, life, and play. Zyxel, Your Networking Ally.

Copyright © 2019 Zyxel and/or its affiliates. All rights reserved. Zyxel, the Zyxel logo are registered trademarks of Zyxel and/or its affiliates. All other brands, product names, or trademarks mentioned are the property of their respective owners. All specifications are subject to change without notice.