



Making Construction Smarter with a Simplified, Centralized Cloud Solution

Overview

Shingda, a leading construction company managing multiple facilities and remote sites, turned to Zyxel Networks to bring simplicity and control to its growing network demands. By rolling out the Nebula cloud networking solution across all sites, the team laid the foundation for centralized, seamless management. GS1920 series switches delivered stable wired connectivity and VLAN segmentation to support daily operations. For wireless access, a tailored mix of WiFi APs was deployed, ensuring strong, consistent coverage where needed. To protect communication between sites, firewalls were set up using a hub-and-spoke VPN architecture. These VPN connections not only secured access to organizational resources but also supported off-site backups. With all devices under one cloud-managed platform, network administration remains unified, even across distributed locations, enhancing visibility, control, security, and efficiency.

Customer

Shingda Construction Pte Ltd

Industry

Construction

Location

Singapore

Partner

Go Nimbus

Challenges

The construction company needed a network solution that could simplify management across multiple locations. Before the upgrade, managing different sites required switching between separate device interfaces, causing inefficiencies and delays in troubleshooting and configuration. Network documentation was done manually, often relying on spreadsheets to track IP addresses and device credentials. Additionally, the lack of centralized visibility and control made it difficult to manage user access and enforce security policies consistently, putting overall network performance and security at risk.

Solutions

A total of twenty-six wireless APs were deployed across different floors and buildings to provide consistent WiFi coverage and seamless roaming. The AP models were selected based on usage density and deployment environments. For example, the WAX510D, built on a Qualcomm chipset and featuring a quad-core processor, leverages advanced technologies such as uplink OFDMA and MU-MIMO to deliver consistently smooth, high-speed performance in high-density environments.

Customer Background

Shingda is a civil engineering firm established in 1986, specializing in pipeline works. The company secures most of its projects through open tenders for government contracts. Over the years, Shingda has earned a strong reputation in the industry and has been recognized with excellent quality certifications, including the Singapore Quality Class (SQC)-STAR, and the Singapore Innovation Class, ISO 9000, ISO 14000, OHSAS 18000, and bizSAFE STAR.



With Zyxel Networks' equipment powering our network, we can quickly diagnose and resolve issues through a single, unified dashboard. There's no longer a need to toggle between multiple tabs for device configuration or troubleshooting."

Joshua Pek, Head of IT
Shingda Construction Pte Ltd

Solutions

The GS1920 series switches provide reliable wired connectivity and VLAN segmentation for different functions like office use and guest access. PoE models, such as the GS1920-8HPv2 and GS1920-24HPv2, simplify the deployment of powered devices like APs, IP cameras, and VoIP phones, reducing cabling and setup time.

The deployment of security devices uses a hub-and-spoke architecture, with the ATP800 as the central hub for firewall and VPN management. Branch devices like the ATP200, SCR 50AXE, and USG20-VPN connect securely, offering local security and ensuring a scalable, centrally managed network. The security features, like content filtering and application patrol, help enforce policies and reduce non-work-related usage.

The Nebula solution ensures a scalable, secure, and easily manageable network across all locations through its cloud network management platform. It offers automatic network topology visualization, 365-day logging, and centralized monitoring.

Results

With Zyxel Networks' solution, Shingda achieved a 60% increase in productivity for network management by eliminating manual Excel tracking and enabling single-login access for the entire network. Troubleshooting and configuration time was reduced by 70%, thanks to a centralized and intuitive interface. Wireless coverage improved significantly, providing smooth handoff between access points. Network management was streamlined, and user access can be centrally revoked and provisioned to enhance cybersecurity. The solution also improved reliability, enabling IT teams to maintain a stable, secure network with less effort.

- 60% boost in network management productivity, with no more spreadsheets for tracking IPs or credentials
- 70% faster troubleshooting and configuration, saving time and effort
- Centralized network security protection with unified login and streamlined user access control
- Reliable WiFi with better coverage and smooth connection transitions

Product List



- WAX510D WiFi 6 Access Point
- NWA1123ACv2/NWA1123ACv3 WiFi 5 Access Point
- NAP203 Nebula Cloud Managed Access Point



- GS1920-8HPv2/24HPv2/48v2 Smart Managed Switch



- SCR 50AXE WiFi 6E Security Router
- ATP800/ATP200 Firewall
- NSG300/NSG50 Nebula Cloud Managed Security Gateway
- USG20-VPN Firewall

