



Success Story

Zyxel Wireless Solution Delivers High-Performance, Integrated Wired and Wireless Network for Russian School Expansion



Education

INDUSTRY



Voronezh School

CUSTOMER



Russia

COUNTRY



Zyxel Wireless Solution

SOLUTION

Overview

Challenges

- Create LAN and wireless network for a new school building
- Integrate the new network infrastructure into the existing network of the old building
- Ensure device compatibility between the two network systems
- Implement the project during the construction of the building with a limited timeframe

Results

- High product compatibility with fully integrated network throughout the buildings
- Seamless wired and wireless connectivity on the campus
- Completed the project in an easy, fast and cost-effective way

Solution

- Zyxel Wireless Solution

Summary

Growing enrollment at a school can increase faculty workload and affect educational quality. One school in the Voronezh region of Russia recently faced these challenges. It acquired a new building to expand its campus and accommodate more students, thereby improving the learning environment. The new network infrastructure needed to support multi-site connectivity, including the new and existing buildings. After deploying Zyxel's solution, the school successfully completed the complex transformation at minimal cost. The expanded network infrastructure allowed several thousand schoolchildren to enjoy smooth connectivity and access the internet from anywhere on campus.

Background

The school in Russia's Voronezh region was steadily increasing student enrollment. To accommodate new students while reducing faculty workload and enhancing educational quality, the school sought to expand its campus by adding a new facility adjacent to the main school building. The Department of Education, Science and Youth Policy in Voronezh looked for a solution provider to

equip the building with a local, wireless network, as well as to integrate the new infrastructure into the main building's existing network. Facing several challenges, they turned to the system integrator Delk LLC to address these issues.

Challenges

The school wanted to create an effective, high-performance, integrated network throughout the campus. All the network equipment would be deployed in a new building. The network infrastructure for the school had to be able to support multi-site connectivity, covering laboratories, sports venues, assembly halls and, of course, numerous classrooms. The equipment also had to be connected and integrated with the main building's existing network. The primary task was to ensure everything functioned smoothly as a single system.

Prior to the expansion, the school had been equipped with active network and wireless equipment from various

manufacturers. Guaranteeing device compatibility with the existing system would be difficult. Moreover, implementation of network infrastructure and building construction, including finishing work, were conducted simultaneously. To complete the project in a short period was extremely challenging.

The school identified several selection criteria for the equipment, including simple setup, compatibility with equipment from other manufacturers, high reliability, and long warranty period.

Solutions and Benefits

After examining a few big brands, the school chose Zyxel's wireless solution for its exceptional performance at an affordable price. Most important of all, the solution was fully compatible with the existing systems, enabling the system integrator to efficiently and cost-effectively fulfill the complex task. Delk project manager Roman Gurenko said, "After a series of tests, Zyxel's solution was found to be fully compatible with the current devices and integrated perfectly into the existing system."

Delk completed the task by installing a firewall, switches, WLAN controller and access points to deliver high-performance LAN and wireless connectivity throughout the campus. The **ZyWALL 110 VPN Firewall** provides the core routing to centrally manage the multisite network. **NXC2500 Wireless LAN Controller** facilitated access point deployment and management, enabling easy system integration and

configuration, as well as centralized management of up to 64 APs. The **NWA5121-NI 802.11n Unified Access Points** were selected to handle WiFi duties and provide effortless conversion. Connections can be established between the controller and APs without changing the existing LAN infrastructure.

The entire project only required two technicians from the subcontracting company and was completed in four days. Equipment installer representative Vladimir Sakhnenko said that Zyxel's solution allows them to carry out the complex task with ease at minimal costs. Impressed by the simplicity of the setup and the quality of execution, he added, "We will continue to use Zyxel's solution for other projects in the future."

Products Used

ZyWALL 110 • VPN Firewall



- Robust hybrid VPN (IPSec/SSL/L2TP over IPSec)
- Facebook WiFi for intelligent social media authentication
- Auto-provisioned client-to-site IPSec setup with Easy VPN
- More secure VPN connections with SHA-2 cryptographic
- Device HA Pro dedicated heartbeat port ensures smart handover
- Hotspot management for authentication, access control, and billing
- Integrated AP controller as central management to provide flexible deployment options

GS1920v2 Series • 8/24/48-port GbE Smart Managed Switch



- Up and running in minutes — supports NebulaFlex Technology to shift between standalone and License Free Nebula cloud flexibly
- Smart fan and fanless designs offer silent operations in your office
- up to 28 Gigabit copper ports for 24-port models or up to 6 Gigabit fiber ports for 48-port models to futureproof the network for growth.
- PoE models provide 30W per port and a wide range of power budget options from 130W to 375W—ideal for denser PoE deployments
- The user-friendly PoE consumption indicator located on the front panel to provide real-time power utilization

NXC2500 • Wireless LAN Controller



- Auto provisioning and centralized management of up to 64 APs
- Zyxel Wireless Optimizer for easy planning, deployment, and maintenance
- Advanced ZyMesh technology for streamlined AP deployment and WLAN extension
- Enhanced RF management with auto healing
- Flexible traffic forwarding with tunnel and distributed modes
- Comprehensive guest network management and granular access control

NWA5121-NI • 802.11n Unified Access Point



- Ceiling- and wall-mountable design with optimized RF performance
- 2-in-1 standalone/managed AP design
- CAPWAP management supported
- Simple, speedy deployment with APFlex™ and Zyxel ONE Network utilities

About Zyxel

Focused on innovation and customer-centricity, Zyxel has been connecting people to the Internet for nearly 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.

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