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Success Story

Zyxel Enables Students at Russian School to Access Online Materials Anywhere on Campus

INDUSTRY	CUSTOMER	COUNTRY	SOLUTIONS
Education	Tikhoretsky Railway School	Russia	Zyxel wired & wireless solution

Overview

Challenges

- Provide reliable local network access across entire campus
- Upgrade outdated network infrastructure to meet BYOD demands
- Secure access to the online library and educational materials from being illegally copied and distributed

Benefits

- Seamless signal coverage and connectivity
- Separate networks and access privilege for students, teachers, and guests
- Rapid deployment and trouble-free communication support thanks to easy installation features

Solution

- Zyxel wired and wireless solution

"We'd already had a positive experience with Zyxel, so when the team from [local system integrator] Paradigm suggested we utilize equipment from them, we simply checked the functionality of the proposed devices and the price then signed a contract."

Gennady Lisichenko,
Deputy informatization director,
Tikhoretsky Railway School

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Background

Russia is the largest country in the world, spanning a nearly inconceivable 17.1 million square kilometers. When you've got a country that size, an efficient transportation network is critical—and so is a highly skilled workforce to operate it.

Tikhoretsky Railway School has been helping build this workforce for almost a century. Russia's oldest educational institution in the field, it has been training specialists to construct and mange transport infrastructure since 1930.

Looking to modernize, the school recently launched an online library of educational materials. At its most basic level, the project required creating a secure system that students and teachers could access via their mobile devices. But when it came to the actual execution, it was far from simple.

Challenges

"After auditing our existing network equipment, it was clear that we needed to replace most of it with more modern technology," Gennady Lisichenko, the school's informatization deputy director, said. "Besides increased network capacity, we required a single, unified network that could be centrally monitored and configured." In addition, he said, students and staff needed to be able to access the network from anywhere on the campus.

The school laid out key criteria when soliciting tender bids for the project: affordability, reliability, easy deployment, convenient access point management, and local technical support.

Zyxel's hardware, software, and service ticked all those boxes, and local Zyxel partner Paradigma was chosen to devise and deploy the new infrastructure for the school, which had worked with Zyxel previously and been impressed.

Solutions and Benefits

The installation comprised three days, two specialists, and—Gennady said happily—no unexpected problems or difficulties.

The backbone of the network is the **NWA5121-NI**, with 18 of these unified access points located around the campus. Designed to provide reliable WLAN connectivity and eliminate coverage dead spots, the 802.11n AP is a cinch to install thanks to its ceiling- and wall-mountable hardware. It also supports Zyxel ONE Network Utility platform, through which users can easily configure and maintain their networks.

At the heart of the network are four **GS2210-8HP switches** and an **NXC2500 controller**, unifying and managing the APs and their traffic. The former were ideal for the school's network needs as the GS2210 series' combination of multiple L2, L3, and L4 filtering mechanisms—with such education-friendly features as MAC freeze, port isolation, and guest VLAN—means it offers significant security, flexibility, and control. Meanwhile, the all-in-one intelligent controller supports the management of up to 64 APs, enabling the school to quickly and inexpensively scale up its network in the years to come.

It was just what Gennady had hoped for. "Thanks to the use of modern access points, we've also managed to reduce the load on the network," he said. "Control and management of the system has become easier and we also now have the opportunity to develop and scale the school's network. I wholeheartedly recommend Zyxel to my colleagues."

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Products Used

GS2210-8HP • 8-Port Gigabit L2 PoE Switch

- High power budget of 180 W
- L2 multicast, IGMP snooping, MVR, and voice VLAN for convergence
- Enhanced network protection with IP source guard, DHCP snooping, ARP inspection, and CPU protection
- L2, L3, and L4 filtering, MAC freeze, port isolation, and guest VLAN for improved isolation and access control

NXC2500 • Wireless LAN Controller

- Auto provisioning and centralized management of up to 64* APs
- Zyxel Wireless Optimizer for easily planning, deployment, and maintenance
- Advanced ZyMesh technology for simplified 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

    *Management of 64 APs is supported with firmware version V4.10 and above

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 Communications

Focused on innovation and customer-centricity, Zyxel Communications 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.