Success Story

Polish Resort Enjoys Seamless, Secure, and Easy-to-Manage Network with Zyxel Wireless Solution

INDUSTRY
Hospitality

CUSTOMER
Świętokrzyska Polana Complex

COUNTRY
Poland

SOLUCIÓN
Zyxel Wireless Solution

Overview

Challenges

- Needed to ensure high-capacity wireless network throughout four hotels in the complex
- The network had to function seamlessly across diverse facilities, from cottages to wellness treatment areas
- The project had to be implemented within a limited budget

Solution

- Zyxel Wireless Solution

Results

- Superior quality wireless network coverage throughout the entire campus of the resort
- Secure access through VPN tunnels to enable remote work
- Option to scale up on the architecture in the future as and when budgets allow

"The network works flawlessly. It is fully manageable, and the configuration was very simple, which made it very efficient. We truly appreciate the effectiveness of security measures, which allow full control of network traffic even with a significantly high load from the users. The greatest advantage is the possibility of remote work via VPN tunnels."

Piotr Kleszcz,
Inspector of Personal Data Protection,
Świętokrzyska Polana Complex

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Background

Świętokrzyska Polana Complex in south-central Poland is a popular holiday resort to relax along with wellness treatments, offering a variety of activities in leisure, training, rehabilitation, and catering. With an extensive infrastructure and excellent location in the heart of the Świętokrzyskie Mountains, it is famous for its aquariums, miniature park, sprawling land, a water amusement park as well as its traditional rehabilitation and relaxing treatments with modern equipment and facilities. Visitors can see aquatic animals from around the world in its huge aquarium, discover secrets of the most important buildings in the region, explore the history of the places visited, or just have fun with friends or family.

Challenges

The resort is spread across 50,000 sqm with 16 buildings, including the hotel, rehabilitation facilities, and holiday cottages. Zyxel's equipment was installed in four hotel buildings with a total of 40 rooms. The hotel didn't' have a wired Ethernet network and the available WiFi network could not provide good WiFi coverage. The key challenge was to ensure a high-capacity wireless network throughout the compound and, at the same time, ensure maximum data security. The investor's limited budget was also a challenge, because of which the focus was on a solution that would enable the network to be implemented gradually, with the possibility of adding more devices later to the previously created infrastructure.

Solutions and Benefits

The **ZyWALL USG310 Unified Security Gateway** was used as the edge device, while the MGS-3712 switch was selected as the fiber optic distribution device. The cable distribution is carried out by a total of 13 24-port switches of the **GS1920-24HP 24-Port Gigabit Smart Managed PoE Switches.** Additionally, the switches connected to four **GS1900-10HP 8-port GbE Smart Managed PoE Switches with GbE Uplink**, which supports two SFP ports enabling easy long-distance deployments. The complex's back-bone network uses fiber-optic technology because of a long-distance connection of nodes and the need for galvanic separation of individual segments. To save on the installation cost and avoid interruptions, the GS1920-24HP and GS1900-10HP switches were connected in a ring topology using single-mode SFP working on one fiber via WDM technology.

The complex used Zyxel smart managed switches to distribute traffic and create VLANS for applications like IP PBX telephony, heating control, utility metering to mea-sure energy consumption. Besides, the switches were also used to power PoE devices like access points. Moreover, the compact dimensions and passive cooling design made it ideal to fit in the 10" rack cabinets.

The wireless network is composed of 9 **NWA5123-AC 802.11ac Dual-Radio Unified Access Points,** 14 **NWA5121-NI 802.11n Unified Access Points**, 4 **WAC6502D-E 802.11ac Dual Radio External Antenna 2x2 Access Points** enabling high-speed and seamless connectivity of wireless devices running on 2.4GHz and 5GHz. The APs are controlled by the **NXC2500 Wireless LAN Controller**, which allows the company to control the whole WLAN network centrally. The **Zyxel Wireless Optimizer (ZWO)** was adopted for the planning of the location of access points. ZWO is an easy-to-use tool for AP planning, coverage detection, and wireless health management. The ZWO builds coverage maps by utilizing RF signals and information gathered from deployed APs and the NXC2500 WLAN controller requiring neither costly on-site survey tools nor additional sensors or location servers.

Aleksander Styś, VAR Account Manager at Zyxel Communications, said, "Deploying Zyxel's devices for the entire network allowed for full, seamless integration. The USG310 gateway is used to protect the local network against external threats. The switches and access points have been configured to cope with high loads and provide a reliable signal throughout the complex without dead spots."

After the installation, Zyxel's network coverage was successfully delivered throughout the Świętokrzyska Polana, including the corridor, waiting areas, food outlets, training centers, conference, and hotel rooms. The APs can provide smooth connectivity in the high-density environment, even for a very large number of users, like during training sessions when up to 600 participants who simultaneously use the internet. Moreover, the whole network was fully protected by the USG310 security gateway, which features comprehensive network protection with firewall, Anti-Virus, Anti-Spam, Content Filtering 2.0, IDP, and Application Patrol, and ensures compliance with data protection laws. Additionally, the local network was based entirely on Zyxel's products, which allowed for its easy expansion and full use of the capabilities of individual devices. This ensures easy expansion without hassle.

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Products Used

ZyWALL USG310 • Unified Security Gateway

- Unified Security Gateway Firewall for small- and medium-sized businesses
- Complete network protection with firewall, Anti-Virus, Anti-Spam, Content Filtering 2.0, IDP, and Application Patrol
- Unified security policy
- Cloud Helper makes firmware upgrades a breeze
- Device HA Pro ensures smart handover
- Hotspot management supported

NWA5123-AC • 802.11ac Dual-Radio Unified Access Point

- Ceiling- and wall-mountable design with optimized RF performance
- 2-in-1 standalone/managed AP design
- CAPWAP management supported
- Enterprise-class 2x2 802.11ac AP supports combined data rates of up to 1,200 Mbps
- Simple, speedy deployment with APFlex™ and Zyxel One Network utilities

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

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Products Used

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

GS1920-24HP • 24-Port Gigabit Smart Managed PoE Switch

- Easy-to-manage, rich L2 features with user-friendly, browser-based management GUI
- Supports PoE+ standard to offer 30 W per port and a high PoE power budget of 375 W
- Smart fan design ensures silent operation in both desktop and rack-mounted environments
- Supports ZON Utility and Smart Connect to simplify network management and maintenance

GS1900-10HP • 8-port GbE Smart Managed PoE Switch with GbE Uplink

- Easy browser-based switch management
- Quick and easy setup wizard
- Fanless design
- Green Ethernet IEEE 802.3az support and intelligent Zyxel green features
- High-power PoE support IEEE 802.3at
- Zyxel One Network is supported

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Products Used

MGS-3712F • 8-port GbE L2 Switch with Four GbE Uplink Ports

- 8 GbE SFP open slots + 4 Combo Gigabit ports (RJ-45/SFP open slots)
- 24 Gbps non-blocking switching fabric; 17.8 Mpps forwarding rate
- 16K MAC address table; 8 802.1p priority queues per port
- Multilayer-aware (L2/L3/L4) ACL for security protection

About Zyxel Networks

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 business and home users.
We're 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.