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Success Story

Turkish Business School Closes Deal on New Network Infrastructure

INDUSTRY — Education

CUSTOMER — TEVİTÖL Schools

REGION — Turkey

SOLUTIONS — Wired & Wireless Solution

Overview

Challenges

- Large number of classrooms and buildings on campus can weaken wireless signals
- Network must be secure to protect users and sensitive data
- Students and faculty need dependable network connectivity
- Network must offer peak performance under periods of heavy usage

Solutions

- Unified Security Gateway
- 24/48-port Gigabit L3 Switch with 10GbE Uplink
- 8/24/48-port Gigabit L2 PoE Switch
- 802.11ac Dual Radio External Antenna Outdoor Access Point
- 802.11ac Dual-Radio Unified Access Point

Benefits

- Rapid deployment and trouble-free communication and support thanks to easy installation features
- Quick connection despite high level of access requests
- Stable and fast Internet access
- Network security

"Our school is an educational institution that aims to provide good educational opportunities to highly skilled students with financial difficulties. We require seamless Internet access for this purpose. We would like to thank Zyxel, and their business partner, PM Group, who have supported us in this project."

Mustafa Meral
IT Manager, TEVİTÖL Schools

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Background

TEVİTÖL Schools was established by the famous entrepreneur and businessman Sezai Türkeş in 1990 to honor the memory of his wife, İnanç Türkeş. The school continues to give hope to many young individuals pursuing a career in business. Management of the school, which provides educational opportunities to a limited number of highly skilled students with financial difficulties, was taken over by the Turkish Educational Foundation on July 10, 2002. The 416-acre facility prepares hundreds of students for successful careers, and now offers services under the name Turkish Educational Foundation Private İnanç Türkeş High School or TEVİTÖL.

Challenges

Today's students demand a fast, stable, and secure network connectivity. Modern education is linked to the digital world and institutions must keep pace with changing technology. School networks need to provide uniform and dependable service under demanding conditions. TEVİTÖL's new wired and wireless network infrastructure was established using Zyxel solutions designed overcome challenges such as the school's large area, numerous classrooms and facilities, and the heavy traffic loads generated by faculty and students.

One primary concern was size and scope of the campus. Multiple classrooms, buildings, and other facilities can create barriers to wireless signals, resulting in dead spots and dropped connections. Performance was another issue. With students and staff connecting and transferring data at peak times, bottlenecks could slow data speeds and affect critical online tasks. The company worked closely with PM Group, a business partner of Zyxel, to overcome these hurdles.

Solutions and Benefits

Experienced Zyxel professionals designed an expansive project to enhance the information security of the institution while meeting the internal communication requirements of the school. PM Group deployed 2 XGS4700 series gigabit Layer 3 switches and 30 GS2210 series gigabit Layer 2 managed switches at the campus. In addition, the institution was equipped with a state-of-the-art solution, including a NXC5500 wireless LAN controller, a USG1900 unified security gateway and 802.11ac Dual Radio access points. 12 WAC6553D-E 802.11ac Dual-Radio outdoor access points and 150 NWA5123-AC 802.11ac Dual-Radio access points provided wireless connectivity, tripling the performance of the school's legacy communication infrastructure.

The ultra-high speeds offered by WAC6500 series provides clear, powerful signals in locations where interference is typically high, such as school classrooms, laboratories, libraries, and lecture halls. The best possible network coverage and performance was achieved, while maintaining a safe and secure learning environment.

"PM Group has been involved as one of Zyxel's Zypartners for many years," said PM Group general manager Mahir Nugay. "We have conducted many successful projects together thus far. We are very proud to support such a valuable institution with this special project. We will also accomplish similar types of projects by working together with Zyxel in the future."

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Products Used

USG1900 • Unified Security Gateway

- High-performance, high-value Next Generation Firewall (NGFW) for medium and large-sized businesses and campuses
- Anti-malware protection with firewall, anti-virus, anti- spam, Content Filtering 2.0, IDP, Application Patrol and SSL inspection
- Robust SSL, IPSec and L2TP over IPSec VPN connectivity and VPN high availability (HA)
- Unified security policy
- Cloud helper provides friendly firmware upgrade.
- Device HA Pro ensures smart handover
- Hotspot management is supported

NXC5500 • Wireless LAN Controller

- Centralized WLAN management and auto provisioning
- Manages up to 1024 APs with granular access control
- ZyMesh simplifies complex, inconvenient cabling WiFi Deployments
- Comprehensive features for WLAN performance optimization and always-on WiFi connectivity
- Wireless LAN performance optimization via dynamic channel selection and load balancing
- Guest authentication by QR code
- Zyxel One Network is supported

XGS4700 Series • 24/48-port Gigabit L3 Switch with 10GbE Uplink

- IPv4/IPv6 Routing
- L3 advanced routing protocols, OSPF, DVMRP, VRRP and ECMP
- Optional modular 10 Gigabit Ethernet support
- Multilayer-aware (L2/L3/L4) ACL for security protection and traffic optimization
- Guest VLAN
- IGMP Snooping v1, v2, v3, MVR
- sFlow, CPU protection
- RSTP, MSTP, MRSTP, VRRP
- Removable fan and power modules

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GS2210-8HP/24HP/48HP • 8/24/48-port Gigabit L2 PoE Switch

- Fully managed Layer 2 switching solution
- GbE RJ-45 and GbE SFP connectivity
- Complies with IEEE 802.3af PoE and 802.3at PoE Plus with high 375 W (24/48HP) and 180 W (8HP) power budget
- L2 multicast, IGMP snooping, MVR and voice VLAN for convergence
- Enhanced network protection with IP source guard, DHCP snooping, ARP inspection, CPU protection
- L2, L3 and L4 filtering, MAC freeze, port isolation, guest VLAN for improved isolation and access control
- Future-proofed with IPv6 support
- Supports ZON Utility and Smart Connect for easier, more efficient setup and management

WAC6553D-E • 802.11ac Dual Radio External Antenna 3x3 Outdoor Access Point

- Dual-band 2.4GHz and 5GHz 802.11ac Wave 1 Wireless Access Point
- Designed with IP66-rated weather protection which is deal for harsh outdoor environments
- Advanced IEEE 802.11ac delivers up to 1.75 Gbps combined data rates
- Industry-leading receive sensitivity as low as -102 dBm
- APFlex™, and DCS streamline deployment
- Zyxel One Network is supported

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

- Ceiling- and wall-mount 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 1200 Mbps
- APFlex™ and Zyxel One Network utilities make deployment simple and fast

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.