



Success Story

Turkish College Strengthens Communication Infrastructure with Zyxel Wireless Solution to Expand Students' Global Outlook



Education

INDUSTRY



CUSTOMER

Balıkesir
Bilnet College



COUNTRY

Turkey



SOLUTION

Zyxel
Wireless
Solution

Overview

Challenges

- Needed a strong and reliable network infrastructure capable of delivering e-learning powered by the latest technologies
- The connectivity had to support multiple users and devices at high speed with high capacity
- Ensure seamless coverage over vast expanses of indoor and outdoor areas of the campus

Results

- Continuous 24/7 connectivity and backup with separate networks for staff and visitors
- High-speed, high-capacity system for fast internet access of multiple users simultaneously
- Active network devices that are easy to install and manage, controlled by the cloud platform

Solution

- Zyxel Wireless Solution

"Academic education is offered to our students throughout the year in line with our Ministry of National Education's curriculum. Along with this, we act with a vision to raise world-class citizens, and we define our entire strategy from this perspective. For this, we want our students to benefit from the opportunities that the latest technologies offer. Strong communication infrastructure and uninterrupted internet access are among the main needs of the modern education system. We thank Zyxel and business partner Atasayar Teknoloji for their support."

Faruk Tatar
CEO, Balıkesir Bilnet College

Background

Balıkesir Bilnet College believe in thinking ahead using the educational strategies, technology, and methods from the lower to the higher education levels. The school consists of four parts—kindergarten, primary school, middle school, and high school. Balıkesir Campus is one of its branch schools equipped with a semi-Olympic swimming pool, conference room, STEM center, and a Robotic Laboratories for students to prepare for the future.

The school aims to raise young people as global citizens. The school encourages its students to adopt its global

vision and English education. To aid this, the school continuously invests in new technology to embrace digital learning and enhance the quality of education. For instance, smart boards have replaced chalkboards and 3D printers aid activities in science labs.

To continue its vision of delivering world-class education, Balıkesir Bilnet College needed a solid network infrastructure. This could help the school make use of new learning and teaching techniques in an interactive environment with fast internet and uninterrupted network experience.

Challenges

The network infrastructure, both wired and wireless, had to support a large number of classrooms and vast areas of the school campus. For uninterrupted, high-quality learning experience, this network had to be fast and high-capacity. This was a critical requirement to ensure

that the school could follow through its vision of creating world-class citizens. Meanwhile, for security as well as convenience reasons, the network access had to be separate for staff and guests while allowing several simultaneous logins.

Solutions and Benefits

Realizing that they needed the most robust network solutions in the market, the school chose Zyxel's **XGS4600-32F Gigabit Ethernet L3 Switch with 10G Uplink**. This high-end switch, designed for bandwidth-intensive applications and to handle the critical responsibilities of serving as the network backbone, enables fast and secure data transmission for the largest of businesses.

The XGS4600-32F core switch was designed explicitly for complex deployments in the hospitality and academic sectors. The switch was connected **GS1920-24v2 24-Port GbE Smart Managed Switches** and **NWA1123-AC PRO 802.11ac Dual Radio External Antenna 3x3 Outdoor Access Points**. These APs proved to be a key component in the entire installation that ensured seamless connectivity indoors and outdoors.

To provide the same high-quality WiFi anywhere on the campus, the school also decided to deploy NWA1123-AC PRO access points. The dual-radio, 802.11ac AP combines superb design with impressive speed to produce a seamless WiFi experience that satisfied the school management.

Zyxel **GS1920-24v2 24-Port GbE Smart Managed Switches** used in the project has the primary responsibility of directing the flow of network traffic. With NebulaFlex

technology, the switches allow flexible operation between traditional standalone and Nebula cloud management modes. **Nebula Control Center (NCC)** features a simple setup, real-time configuration, and numerous possibilities like constant access to all Nebula devices. The user-friendly web-based management interface makes it easy to manage network devices without using complex commands or IT network infrastructure.

Yasin Atasayar, Chairman of Atasayar Teknoloji, said, "By partnering with Zyxel Networks, we can provide 24/7 service with the latest technologies to the Balıkesir Bilnet College which aims to provide new ways of learning and enhance education quality. Zyxel Networks helped us to meet all the technological needs of the school. We're happy working with Zyxel and will continue to work together to implement similar digital transformation projects in the coming years."

The entire project was so fulfilling for Zyxel as it helped to support a noble cause of better education for the upcoming generation. Zyxel continues to test the limits of technology to improve its offerings further, and hence more schools would benefit from embracing these solutions for better teaching and learning.

Products Used

XGS4600-32F • 28-Port Gigabit L3 Managed Switch with 4 SFP+ Uplinks



- Four built-in 10G SFP+ uplinks enable congestion-free, smooth data delivery for high-bandwidth applications
- Dynamic routing protocols such as RIP and OSPF
- Provides high-bandwidth with true physical stacking of up to 4 units
- L2 and L3 stacking capability to fulfill larger network deployment needs
- High resiliency with redundant power supply units

NWA1123-AC PRO • 802.11ac Dual Radio External Antenna 3x3 Outdoor Access Point



- NebulaFlex Pro allows users to switch among standalone, on-premises controller managed or intuitive Nebula cloud managed modes as needed
- Dual-band 2.4-GHz and 5-GHz 802.11ac Wireless Access Point
- Designed with IP66-rated weather protection which is ideal 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 for streamlined deployment

GS1920-24v2 • 24-Port GbE Smart Managed Switch



- Up and running in minutes — supports NebulaFlex™ Technology to shift between standalone and License Free Nebula cloud flexibly
- Standalone: Easy management and setup with web-based GUI
- Nebula Cloud: Nebula allows simple deployment with agile network management
- Unique port combinations futureproof the network
- Fanless design offers silent operation in your office

Products Used

Nebula Control Center (NCC)



- Responsive web design and intuitive user interface
- Multi-tenant, multi-site view
- First time setup wizard
- Role-based administration privileges
- Real-time and historical monitoring/reporting
- Rich site-wide management tools
- Powerful organization-wide management tools
- Configuration changing alerts
- Misconfigure protection against disconnecting NCC
- Configure login auditing

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.

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