



## Success Story

STEM School Makes the Grade with Wired and Wireless Infrastructure Solution from Zyxel



Education

INDUSTRY



CUSTOMER

Bahcesehir  
College  
in Erzurum



COUNTRY

Turkey



SOLUTIONS

Zyxel  
Nebula  
Solution

## Overview

### Challenges

- Replace entire school's network infrastructure
- Create separate networks for use by the staff and students
- Provide centralized management for active network devices
- Enable quick connection despite high bandwidth demand

### Benefits

- Quick installation and seamless communication support thanks to cloud software
- Provides stable and fast internet access
- New solution complies with Turkey's networking regulations
- Solution is scalable to meet future needs
- Solution proves simple centralized management via the cloud

### Solution

- Zyxel Nebula Solution

"We have been as Zyxel local partner for many years. We are very happy and proud to provide the technology infrastructure that Erzurum Bahçesehir college needs. This project, which we carried out with Zyxel's latest technology, is a clear example of our competence in the education field. In the coming period, we will carry out these and similar projects in different fields together with Zyxel."

Yener Balat  
General manager, Bilgisayarofisim

## Background

Founded in 1994, Bahcesehir College is a Turkish K-12 private school operating 42 kindergartens, 27 primary schools, and 16 high schools within its institutional framework. The enterprise aims to provide the highest quality contemporary education with a strong emphasis on science and technology. The school continues to grow and recently expanded its network to the Erzurum campus, which began to accept students for 2018-2019 academic year.

## Challenges

Internet and network connectivity are necessities for modern educational institutions. The school needed to establish a new network infrastructure that was robust and future-proof to provide the necessary level of wireless service while meeting the needs of staff and students across a large facility comprising multiple rooms, buildings and levels.

The school contacted Bilgisayarofisim, a local Zyxel partner. After carefully review, a comprehensive Zyxel wired and wireless network infrastructure was designed and deployed to satisfy the needs of Bahcesehir College's Erzurum campus.

## Solutions and Benefits

The size of the campus and the large number of classrooms made it challenging to provide a fast and stable wired and wireless network. Large, multi-room buildings are often plagued by dead spots that can weaken wireless signals. However, these problems were easily overcome through the quality of the products and services Zyxel offered.

Zyxel experts conducted a comprehensive analysis for the institution's information security and in-house internet sharing needs to establish wired networks using the latest technology and end-to-end network solutions. The core of the network are **GS1920 series 24 and 48-port gigabit smart managed PoE switches**, which simplify communications for complex networks. At the extremities of the network are Zyxel **NWA1123-AC series** access points. These hybrid APs can operate in standalone mode or be centrally managed via the **Nebula Control Center**, a cloud network management platform.

Bahçeşehir College Erzurum campus offers an exemplary educational environment with a total of 60 classrooms, a semi-Olympic swimming pool, a 450-seat conference hall, a STEM + A Center, coding and robotics laboratories, and 14 separate general laboratories.



"We are happy to have implemented another project for the education sector," said Zyxel channel manager Ömer Faruk Erünsal. "Zyxel's end-to-end network solutions bring significant advantages to our customers. The structure, which can be managed with physical controls from a single center with Nebula, ensures stable system operation. I would like to thank Zyxel's business partner, Bilgisayarofisim, for making the necessary analysis and determining the needs of the school in a short period of time and for completing it without any problems. I would also like to state that we are very happy that we are involved in such an important project."

Bahcesehir College in Erzurum's faculty and students can now access to the Internet without interruption. In addition, the school's network now complies with local laws and regulations thanks to the Zyxel solution.

## Products Used

### GS1920-24HP/48HP • 24/48-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

### NWA1123ACv2 • 802.11ac Dual-Radio Ceiling Mount PoE Access Point



- NebulaFlex™ gives you the flexibility to switch between standalone and license-free Nebula cloud management
- Nebula cloud management allows easy deployment, real-time configurations, and access to all your access points anytime
- 802.11ac 2x2 support for combined data rates of up to 1.2 Gbps
- Compact ceiling-mount design with optimized RF performance
- Robust build quality including solid-state capacitors to ensure long life and operational reliability

### Nebula Control Center (NCC)



- Responsive web design and intuitive user interface
- Multi-tenant and multi-site view
- Role-based administration privileges
- Real-time as well as historical monitoring and reporting
- Site-based auto and smart configuring tools
- Misconfiguration protection to prevent NCC disconnections
- Rich site-wide management tools (dashboard, map and floor plans, and topology)

## 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.

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