



## Overview

### Customer Name

Bánki Donát High School and Technical College

### Customer Industry

Education

### Challenge

Upgrade to wireless network that is capable of handling large volumes of teachers accessing the newly introduced e-registry service and the Internet regardless of their position within the campus buildings.

### Solution

ES-3124PWR Switch and NWA-3166 Business WLAN N Access Points

### Benefit

With the latest N wireless technology solution users can now easily access the resources they need online, rather than waiting for a computer to become available or a web page to load.



## Bánki Donát High School and Technical College - 24h Wireless Access in College Buildings

### Bánki Donát High School and Technical College

The school celebrated its 50th anniversary in year 2000. In the past few years it has operated as a so called complex institution including high school and technical college. Today it is one of the most successful educational technical institute, an excellent and large training center for the automobile industry. The school is located in XIII. District, Budapest, on the Váci street surrounded by worldwide well known car companies and dealers. The current campus opened its gates in 1963 for the young generation who choose to be a professional automotive repair. During its operation the school aimed to be the best in vocational training and provided demanding theoretical and practical education and educational work on a high quality. As a result they became reliable partners for the automotive-related organizations, and the students were honored as professionals in many areas of the technical and economic life - often as leaders - representing their school.

### Challenge

Upgrade to wireless network that is capable of handling large volumes of teachers accessing the newly introduced e-registry service and the Internet regardless of their position within the campus buildings. The structure and special location of buildings presented difficulties. Thick walls, narrow sites and radio noise caused by surrounding networks requested carefully planned wireless network solution with optimal number of Access Points deployed. General requirements towards the offered and deployed solution included ease of use, advanced management features and scalability. Furthermore, the deployed solution had to handle the problem of alien APs and provide reserves for planned extension to the student, too. As the installation took place during school-time of the year an easy to deploy solution was needed with the least disturbance for students and teachers during installation. Certainly, the school needed an infrastructure where the wireless Internet experience doesn't depend on the place and the building the client is.

To suit these needs one of the preconditions was to use the latest N wireless technology also supporting Power Over Ethernet. The school has several buildings and they wanted to provide the same wireless Internet experience wherever a teacher is. ZyXEL reseller partner Cyber Systems Ltd. offered and deployed a centrally managed wireless network with WLAN controller using ZyXEL NWA-3000 series hybrid access points. Utilizing the hybrid access point solution a centrally managed wireless network was deployed that supports roaming functions - for cases when the client device is moving. Relying on to the automatic channel selection function the interference between close APs and nearby systems is also eliminated.



During installation new Cat6 UTP endpoints were created for Access Points, too. The deployed Wireless LAN Access Points 3000 Series meets the security and high availability demanded by enterprises as all communications between the hybrid AP and managed AP are performed in a secured tunnel.

## Solution

### Technology and Products used

- ES-3124PWR Switch to provide connectivity of existing network and Power for wireless Access Points deployed
- 23pcs of NWA-3166 Business WLAN access points to build Centrally managed Wireless network

### NWA-3166 Business WLAN

3-in-one Hybrid AP WLAN including AP Controller Mode, Managed AP Mode and Stand-alone AP Mode

- Centralized Management for Up to 24 WLAN Access Points
- Back-up Redundancy Supported to Provide Reliable Connection Service
- Secured Tunnels for Communication between Controller and Managed AP to Prevent Leaking of Configurations
- Enterprise-class Access Point Functionalities with Comprehensive Configuration Interfaces, Roaming
- Built with LSOH (Low Smoke Zero Halogen) Materials for Plenum Rating for UL 2043 Support



### ES-3124PWR Switch

- Multilayer-aware (L2/L3/L4) ACL for Security Protection and Traffic Optimization
- Policy-based QoS Optimizes Multi-service Quality
- VLAN Stacking (Q-in-Q) Support for Layer-2 VPN
- Remote Management via IEEE 802.3ah (OAM)
- IPTV Manipulated by MVR and IGMP Snooping v3
- Minimizes Channels Surfing Disturbance with Fast Leave
- ZyXEL iStacking™ Technology
- Backup Power System Support



### About ZyXEL Communications

ZyXEL Communications Corp., founded in 1989 and headquartered in Taiwan, is the leading provider of complete broadband access solutions. As one of the early modem manufacturers, ZyXEL has undergone many transformations in the fast-paced networking industry. Today, ZyXEL is one of the few companies in the world capable of offering complete networking solutions of Telco, SME/Enterprise, and Digital Home for a wide range of deployment scenarios. Telco solutions include wired and wireless access network equipments, networking customer premises equipments, and Carrier Switches. SME and Enterprise solutions include Unified Security Gateway, LAN Switches, WLAN, and IP telephony. Digital Home solutions include network connectivity devices and multimedia solutions.

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