CUSTOMER PROFILE

NAME:
Center for Agricultural Education
School Complex in Bydgoszcz
INDUSTRY: Education
USERS: Over 200 teachers and students
LOCATION: Bydgoszcz, Poland
YEAR OF PROJECT: 2018
IMPLEMENTATION PARTNER: NOWEX s.c.

Established in 1980, Center for Agricultural Education School Complex in Bydgoszcz is a school complex providing vocational training for: landscape architecture technicians, gardener technicians, farmer technicians, veterinary technicians and horse breeder technicians. The institution occupies a five-storey building, attanded by around 200 students. The school also offers its students the accommodation in single and double rooms in a dormitory, which belongs to the complex.

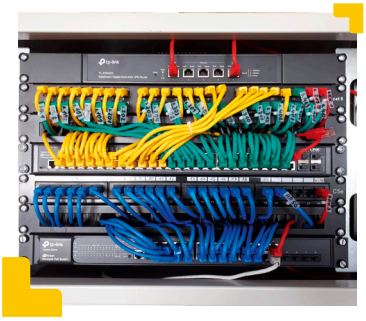
CHALLENGE

Constant Internet access in classrooms is essential in teachers' work and provides countless possibilities for using contemporary teaching methods. Teachers are eager to use materials shared both on the local network and online during the lessons. The institution also makes use of an electronic register. Since the school offers accomodation to students in a dormitory, it was very important to provide an Internet access in their rooms as well.

The School Complex has gained access to the optic fiber Internet with speeds amounting to 600/60Mbps. There was also a rudimental LAN infrastructure in the facility based on the TL-SL2452WEB Switch.

The aim of the implementation was to increase the network's capacity, expand the existing LAN infrastructure and to create WIFI infrastructure both at school and its dormitory. The challenge was to protect the sensitive data held by the administration and teachers against unauthorized access.

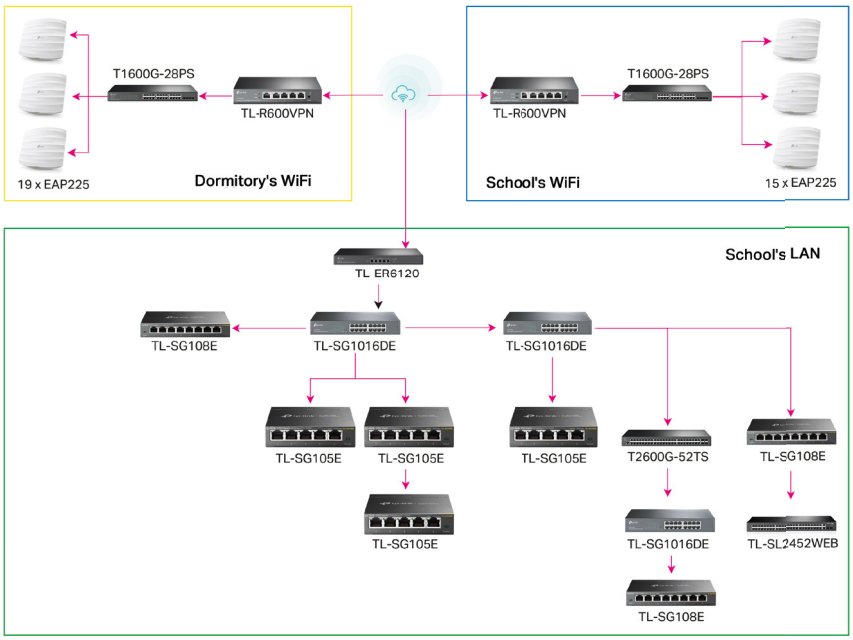
"It was necessary to completely separate the network accessed by students from the network used by teachers and the school administration and therefore we were looking for a solution that would allow us to establish many independent SSIDs and to bind them to VLAN. To further increase the network's security, we have decided to use additional routers for individual network segments", says Paweł Kozakiewicz from Nowex, the company responsible for the implementation. Another requirement for the networking infrastructure was the LACP support, necessary to increase the reliability of connections between the key elements of the LAN.



SOLUTION

It was decided that TP-Link's devices should be used for the implementation. As Paweł Kozakiewicz from Nowex said: "We opted for TP-Link's solutions because they met all our requirements while being budget-friendly. The high quality of pre-sales and after-sales support provided by the manufacturer was an added value. TP-Link's engineers have prepared, among others, a list of equipment and a detailed configuration of devices, they also stayed in touch with us during the process of implementation."

TP-Link TL-ER6120 Router was a gateway to the school's network. Computers located in the headmaster's office, secretary's office, administration area and the school's archive were connected together using TL-SG1016DE, TL-SG108E and TL-SG105E Easy Smart Switches to form the LAN network. A total of 10 devices were used. Equipped with gigabit Ethernet ports, the devices provide performance adequate for the school's link capacity, while the desktop casing made it easier to install the equipment in the office space.



To make WiFi available throughout the school and dormitory, 34 Omada EAP225 Wireless Acess Points were installed, centrally managed by a dedicated software, providing easy network configuration and settings monitoring. The possibility to create many SSIDs bound to VLAN has completely separated the network used by teachers from the network accessed by students, thus protecting sensitive data. PoE support provided by two T1600G-28PS Switches allowed for the quick installation of access points and significantly reduced the implementation costs.

RESULTS

Deployment of the WiFi network created new opportunities for all users of the facility. Teachers have much more freedom to use multimedia contents during classes. Students gained access to the Internet throughout the building, also in their dormitory rooms, which makes it much easier for them to do their homework. Despite the substantial increase in the network's users and making it available to students, sensitive data held by the school's administration is fully safe against the unauthorized access. "The connection is stable, electronic register is quick and lag-free, contents load smoothly throught the building. The network is ready to handle a large number of devices", summarizes the implementation Paweł Kozakiewicz from Nowex.