ZyXEL

Success Story

ZyXEL Upgrades Belgian School with Wireless Network Solution

Overview

Customer Name
Sint-Janscollege (Heiveld Campus)

Customer Industry
Education

Challenges
• One Internet connection serving three buildings
• Protect students from inappropriate content and restrict unwanted applications

Solutions
• Unified Security Gateway
• 24-port Gigabit Web Managed Switch
• Business WLAN Access Point

Benefits
• No System Abuse
• Continuity of service
• Guaranteed speed of Internet connection
• Future Proof solution

Background

The Sint-Janscollege is mainly an ASO school (General Secondary Education) with a limited range of technical school subjects (Socio-Technical Education in the first two years and Socio-Technical Sciences in the following two years). It endeavors to offer quality education and contribute to a more well-rounded level of schooling. A balance is required within the school between transferring knowledge, creating a positive learning attitude, acquiring skills, nurturing creativity, exercising self-effectiveness,

and encouraging altruism.

To ensure all these requirements are met, the school makes sure that there is an exceptional educational environment that is conducive to learning, a methodical established classroom approach, and a suitable infrastructure, including an up-to-date wireless network that meets the needs of students and administrators now and going forward.

Challenges

The Sint-Janscollege (campus Heiveld) consists of one main building and two annexes. The main building is divided into classroom and administrative sections. The other two buildings are sports facilities and labs. The whole site will be equipped with one Internet connection (Telenet) but the network must also include sufficient control and security measures.

The students' Internet surfing behavior is monitored in order that the school's network is used primarily for the purpose of information and education only.

This means the webmaster must be able to see what is happening on the network and who is doing what. Also access of other parties to the Internet must be restricted.

In addition, a control system must be available to regulate entry to the sports building and facilities. Restricted access to this area is a must. An additional problem is that the multi-purpose hall is often rented out to third parties, one example being the local basketball team, who uses the facilities regularly.

In case of any accident in the sports building, quick reaction is essential. Therefore an Internet telephone line is needed to enable swift contact to the admin department in case of an emergency.

Another important additional element is the bandwidth of the Internet connection. This needs to be structured so that students and the administrative department always have priority.

Solutions and Benefits

The ZyXEL Unified Security Gateway, located on the first floor of the main building at Sint-Janscollege, is the key player in this case. Unlike a normal firewall, the Unified Security Gateway makes sure every packet that enters the network is initially subjected to a thorough check before it is sent to the network switches.

The next requirement consists of two web smart switches, which are the best financial choice for the school given their limited resources. All the school's network traffic is distributed across the three buildings from the pair of switches. In the main building, wireless Internet will be offered in the classrooms, internally, through a few wireless access points. This

business- and enterprise-class model is also a wireless controller capable of managing other access points. It is also equipped with the fast wireless N-protocol and VLAN support.

The Internet network features one web smart switch to the sports building through a fiberglass cable in order to shorten the distance. Apart from Internet access VoIP support will also be very useful. A direct Internet connection is possible in this way through an Internet telephone line between the sports facilities and the administrative department for emergency calls. The labs will also be equipped with Internet through a second web smart switch from the main building.

Suggested Products

USG 210
Unified Security Gateway

- High-performance, high-value Next Generation Firewall (NGFW) for small and medium-sized businesses
- Anti-malware protection with firewall, anti-virus, anti-spam, content filtering, IDP, next-generation application intelligence and SSL inspection
- Robust SSL, IPSec and L2TP over IPSec VPN connectivity and VPN high availability (HA)
- Built-in WLAN controller for centralized AP management and effortless WLAN scalability of up to 18 APs
- Comprehensive mobile broadband USB modem compatibility and multi-WAN load-balancing, failover and fall back support
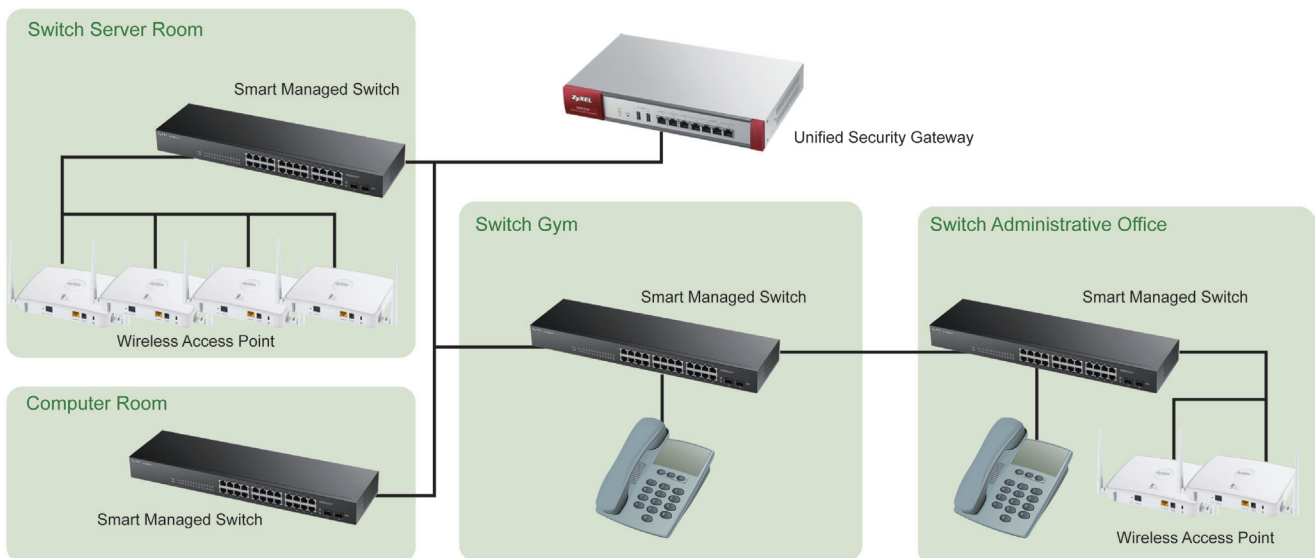

GS-1900-24
24-port GbE Smart Managed Switch

- 10/100/1000 Mbps GbE ports
- Easy browser-based switch management
- Quick and easy set up wizard
- Advanced network error prevention features (loop protection, dual images, storm control, DoS and SSL)
- Fanless design
- Green Ethernet IEEE 802.3az support and intelligent ZyXEL green features

NWA3160-N
802.11n Unified Pro AP

- Higher bandwidth and superior performance with 802.11n
- 3-in-1 hybrid AP WLAN including AP controller mode, managed AP mode and standalone AP mode
- Brand new centralized graphic management interface for up to 24 WLAN APs
- Backup redundancy supported to provide reliable connection services
- Secured tunnels for communication between controller and managed AP to prevent leaking of configurations
- Enterprise-class AP functionalities with comprehensive configuration interfaces.
- Built with Low Smoke, Zero Halogen (LSOH) materials for plenum rating for UL 2043 support

Diagram

Switch Server Room
Smart Managed Switch
Wireless Access Point

Unified Security Gateway

Switch Gym
Smart Managed Switch

Switch Administrative Office
Smart Managed Switch
Wireless Access Point

Computer Room
Smart Managed Switch

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 gone through transformations in the fast-paced networking industry. Delivering cutting-edge communications innovations to more than 400,000 businesses and more than 100 million consumers throughout the world, today ZyXEL is one of the few companies in the world capable of offering complete networking solutions for Telcos, small to medium-sized businesses, and digital home users for a wide range of deployment scenarios. Telco solutions include Central Office Equipment, Customer Premise Equipment, Wired and Wireless Access Network Devices, and Carrier Switches. SMB and Enterprise solutions include Unified Security Gateways, LAN Switches, WLAN, and IP Telephony. Digital Home solutions include Network Connectivity Devices and Multimedia Solutions.

The company has 1000 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 35 subsidiaries and sales offices and two research and development centers worldwide. For more information, visit the company's Website, http://www.zyxel.com.