ZyXEL

Success Story

Czech Hospital Protects Confidential Patient Data with ZyXEL Security Solution

"Hospitals are often targets of hackers, and that is why the ultimate security of sensitive medical information for our patients is essential to us. The ZyXEL Unified Security Gateway has become the integral part of our network security; the integration thereof helped our IT section save time by more than 50 percent.

Thanks to the regular update of a virus database, the equipment had run for more than six months without any outside intervention and virus damage."

Miroslav Vích
Computer Network Administrator,
Karlovy Vary Hospital

Overview

Customer Name
Karlovy Vary Hospital

Customer Industry
Health Care

Challenges
- Upgrade hospital's outdated network infrastructure
- Increase security to protect sensitive medical data
- Provide faster data transfer rates and Internet connectivity
- Prevent unauthorized use of network
- Provide exceptional price-to-performance ratio

Solutions
- Unified Security Gateway

Benefits
- Efficient and cost-effective solution
- Save time for administrators
- Regular updates of anti-virus, anti-spam, IDP database
- Update of the website list for content filtering
- Firewall uses the ZyNOS operating system, which has never been hacked
- Firewall and IPSec awarded the prestigious ICSA Labs certification.

Background

The Karlovy Vary Hospital (Nemocnice Karlovy Vary) in Karlovy Vary, Czech Republic, is among the most important companies in the Karlovy Vary region. Its yearly turnaround is comparable to that of top economic entities in the area. Before mid-1990s, the hospital was in a poor technical state, thus complex repair work was started in 1996 in order to bring the hospital up to Western European standards. At the same time, the investments in digital equipment and computer network upgrades were applied. By the end of the last year, after an analysis of the current IT equipment, the hospital decided to upgrade its Internet connectivity and computer network security.

The hospital processes huge amounts of sensitive data concerning the medical history of its patients. The volume of such data amounted to three terabytes at the end of the last year, increasing monthly by 40–50 GB. Sensitive data concerning the health of patients are a favorite target for hackers, which is why the hospital decided to search for an option to provide it with a more efficient security system to protect confidential information and safely transfer such data within the hospital computer network. By the end of 2014, the hospital counted approximately 150 employees who accessed the Internet through the network. Lastly, the hospital wished to provide its population of about 400 patients with the access to Internet as well.
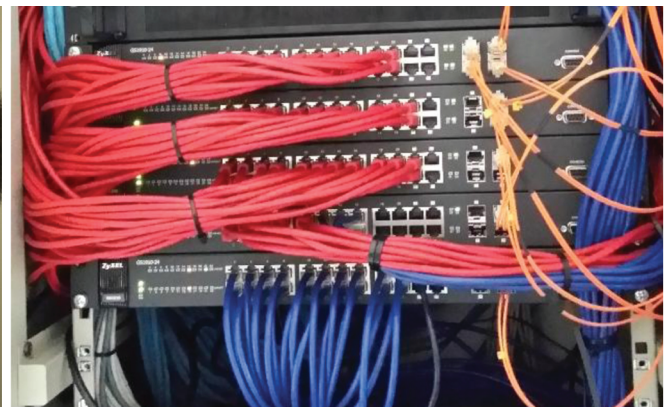
Challenges

A reliable and secure data network within the hospital that offers thorough protection from attack for sensitive data and fast Internet connectivity are essential to an efficient hospital operation. The hospital's management decided to replace the obsolete 512 Kbps Internet connection, which failed to provide sufficiently fast data transfer rates, protect from outside attacks and allow for efficient management (e.g. avoid reception of spam, prevention of streaming applications). Hospital management decided to implement this investment partly using European structural funds via a project called "Enlarging the ability to use Internet by the general public and patients." Along with the implementation of a high-speed Internet (4Mbps), the main purpose of the investment was to secure the network using a new firewall and installing a new central switch.

Solutions and Benefits

By the end of the last year, a tender procedure took place to select a project services provider that would replace the obsolete 512 Kbps Internet connection with a faster 4 Mbps connection, including the hardware needed for such an upgrade (firewall and switch). The winner of the tender was Contactel, Ltd., the local telecommunication operator. The technical and hardware implementation was processed by Office Systems Inc., who provides IT services for computers and cable installation. They also provide external service and care for computers, including consultancy.

The service was planned as a long-term affiliation to provide network service and consulting.

Upon discussion with the hospital administrator and management, Office Systems Inc. — a distributor of ZyXEL equipment in the region of Karlovy Vary — suggested the installation of the efficient ZyXEL Unified Security Gateway, a Hewlett Packard server and other active components of the network as a part of the new data infrastructure. The firewall was implemented in the current distribution for communication between the central hospital unit and the terminal device. The installation required no special limitation on hospital operations.

The ZyXEL Unified Security Gateway is able to deliver accurate, zero-hour spam outbreak protection and prevent all DoS and DDoS attacks. Another powerful tool is the IDP system. It relies on a signature database of attacks, which can be edited manually. The integrated anti-virus software ensures high efficiency when detecting viruses. The device has effective controls and content filters, enabling users to block sites according to categories, whether they are pages with undesirable content, Internet radio, online games or streaming applications, which take up a large amount of bandwidth and slow data transfer rates. All the above features (anti-virus, anti-spam, IDP and content filtering) are connected to the Internet database, which ensures all services are updated simultaneously.

"The categorization is very advanced. Before, I had to detect and disable access to sites with undesirable content myself, but now I can custom categorization with high accuracy," says network administrator Miroslav Vích.

In the future, as Internet usage in the Karlovy Vary Hospital increases, it will be necessary to obtain a more powerful server to fully take advantage of all the options the ZyXEL Unified Security Gateway has to offer. The Karlovy Vary Hospital plans to gradually implement a Wi-Fi network, which would enable patients to connect to Internet as well.

Office Systems Inc. chose ZyXEL equipment particularly for the quality and technical approach it offers the client. All the clients' expectations have been satisfied thanks to top-notch features and system performance. This is one of the reasons why hospital management plans to use ZyXEL equipment in subsequent projects. ZyXEL not only provides superior-quality equipment, but also offers flawless technical support and competitive prices.

Suggested Product

USG110
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

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.