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Success Story

Research Hospital Cures its Security Woes with Switching Solution

INDUSTRY
Health care and Education

CUSTOMER
Health Hitit University Erol Olçok Education and Research Hospital

REGION
Turkey

SOLUTIONS
Switching Solution

Overview

Challenges

• Establish a highly efficient network infrastructure
• New network must support IP camera security system
• Provide connectivity to large number of outpatient clinics and patient rooms in the hospital building
• Provide seamless connectivity across multi-story, multi-block campus building

Benefits

• Overall network service was improved across all facilities
• Network can handle large volume of data
• Excellent local service from ZyPartner

Solutions

• Switching Solution

"Our new hospital building with 176 outpatient clinics and 800 beds offers the residents of Çorum the opportunity to access health care services both easily and quickly. Our hospital needed a perfect security infrastructure as we serve thousands of people each day. We preferred state-of-the-art Zyxel switching solution for the network infrastructure supporting the IP camera system. We would like to thank Zyxel for the successful implementation of this project."

Asst. Assc. Prof. Dr. Sinan Zehir
Hittite University

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Background

Located in Corum, Turkey, Health Hitit University Erol Olçok Education and Research Hospital was completed in 2017 on a 95,180 m² lot with an indoor area of 151,300 m² and has been accepting patients since March. The hospital has 430 patient rooms in total, consisting of 176 outpatient clinic rooms, 247 double rooms, 161 single rooms, and 22 suites. There are also 28 operating rooms, five delivery rooms, two angiography units, first and second-line pediatric intensive care rooms with 28 incubators and first, second and third-line intensive care rooms with a capacity of 90 beds, for a total capacity of 800 beds. The hospital has indoor and outdoor parking lots capable of hosting 1294 vehicles.

Challenges

The new building in Çorum has superior characteristics to the previous building. Because the hospital attracts more patients from nearby cities, the goal of the expansion was to reduce the number of referrals made from Çorum to other cities.

A key feature of the hospital, which will soon serve up to 10,000 of patients daily, is its security system, specifically the video surveillance system. The demand for heightened security came in direct response to the influx of patients from nearby cities. With the institution already operating at full capacity, management wanted to implement the latest technologies to protect staff, patients, and researchers.

The hospital wanted to ensure safe entry and exit points, aisles, outpatient clinic help desks, outdoor areas, and parking structures — both indoors and outdoors. A total of 550 security cameras would make up the IP camera system planned for installation. The high volume of data generated by these cameras would require a robust network structure to maintain effective and stable operation.

Solutions and Benefits

Zyxel supplied the hospital with a network solution capable of supplying the bandwidth, high efficiency, and fast data transfer rates necessary for such a large and comprehensive video surveillance system. The IP camera infrastructure was established using Zyxel's XGS4700 Series L3 switches, which offer 10G gigabit Ethernet uplink ports, as well as a Zyxel XGS2210-28HP gigabit L2 PoE switch. The entire project was implemented smoothly, and the completed solution was delivered on time and within budget.

"We have completed yet another successful project with Zyxel products in Erol Olçok Education and Research Hospital," said Utkan Türkmen, sales and marketing director of Biges Bilgisayar, a Zyxel local partner. "It meant a lot to us to be able to support an institution from the health care industry. We were able to seamlessly integrate the products into the hospital structure. The service quality throughout the hospital was improved with the installation of security cameras within and around the hospital."

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Products Used

XGS4700 Series • 24/48-port Gigabit L3 Switch with 10GbE Uplink

- IPv4/IPv6 Routing
- L3 advanced routing protocols, OSPF, DVMRP, VRRP and ECMP
- Optional modular 10 Gigabit Ethernet support
- Multilayer-aware (L2/L3/L4) ACL for security protection and traffic optimization
- Guest VLAN
- IGMP Snooping v1, v2, v3, MVR
- sFlow, CPU protection
- RSTP, MSTP, MRSTP, VRRP
- Removable fan and power modules

XGS2210-28HP • 24-port GbE L2 PoE Switch with 10GbE Uplink

- Gigabit connectivity, plus four (4) SFP+ ports to deal with high-bandwidth network with ease
- Physical stacking up to 2 units through 2 standard 10G SFP+ ports
- High power budget of 375 W
- VLAN communication through access switch by static routing feature for agile, reliable network operations
- Supports sFlow that analyzes client behavior to discover source of bandwidth abuse
- Enhanced network protection with IP source guard, DHCP snooping, ARP inspection, CPU protection

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.