



Success Story

ZyXEL Creates Network To Help Swiss Facility Turn Waste into Energy

Overview

Customer Name

KEBAG Waste Management Inc.

Customer Industry

SMB

Challenges

- Create network for waste management control system
- Must be reliable and secure
- Easy to maintain and manage

Solutions

- Managed Gigabit Switch
- Unified Security Gateway

Benefits

- Enhanced security
- One-Time Password protection
- Mobile user security with OTP mobile
- Connections extend across multiple buildings
- Secure remote connections now possible via VPN
- Advanced stability with backup switching
- Localized service through ZyXEL partner
- Robust connectivity and bandwidth for multiple management, data transfer and control tasks

Background

Every Swiss citizen produces an average of 700 kg of waste per year. More than half of it ends up in waste incineration plants. Since 1976, KEBAG's waste incineration plant at Emmenspitz has burned approximately 220,000 tons of

waste per year in four incinerators at between 800 and 1000 degrees. The waste is delivered via rail and truck. The energy produced by the combustion is used to generate electricity and provide hot water to the area.

Challenges

KEBAG required a new network to link and manage the control system for critical operations at its waste incineration plant. The system needed to be stable and

secure to handle all plant operations, while providing uninterrupted service for monitoring and operation of the incinerator controls, data collection, and safety features.



Solutions and Benefits

ZyXEL partner IT company Tschan Computer Science, based in the town of Walchwil in canton Zug, designs and deploys networks for complex control systems, such as those used at KEBAG in Zuchwil. This particular deployment would be based around the ZyXEL's GS2200-24 and GS2200-48 managed gigabit switches, as well as the company's ZyXEL USG 200 and USG 100 unified security gateways.

With the new network extending across several buildings, the entire incineration plant can be monitored, checked, and controlled from any building at the facility. The operator also can now access assistance like informative control fields, dynamic criteria texts, or notes. The control system additionally makes data from various measuring points available.

Employees also now have access to the control system from external locations via VPN connection, which is

managed by a ZyXEL USG 200 security gateway. To ensure full security, the ZyXEL One-Time Password solution (OTP) is used. Each user receives a hardware token that generates a six-digit one-time password. ZyWALL OTP Mobile is available, which allows a smartphone to become a safe OTP token. Furthermore, the traffic within the office network is regulated by a USG 100 security gateway.

To guarantee the permanent operational readiness of the seven servers, they are redundantly integrated into the network via a pair of ZyXEL GS2200-24/48 managed Layer-2 switches. This ensures that in the event of any switch failure, the server will still be operational and accessible. The devices are also provided with an Advance Replacement Warranty. If a switch should fail, it does not have to be sent in for repair, but instead would be replaced by ZyXEL value-added partner - Studerus AG beforehand.

Product Used



GS2200 Series 24/48-port GbE Layer 2 switch

- Comprehensive L2 switching features non-blocking switch fabric Dual-personality (RJ-45/SFP) GbE interfaces
- Port security and enhanced 802.1X port authentication
- MAC freeze and intrusion lock
- 8 IEEE 802.1p hardware priority queues
- WFQ, WRR and SPQ queuing algorithms
- IPv6 Ready Logo approved



USG 200/USG 100 Unified Security Gateway

- Robust security without sacrificing performance
- Comprehensive support to IPv6
- Robust hybrid VPN (IPSec/SSL/2TP)
- Zero-configuration remote access with EASY VPN
- Supports L2TP VPN on mobile devices (iPhone and Android phones)
- ICSA firewall, IPSec certification
- Content filter stops malware and Web threats
- Powerful email security
- Non-stop Internet access with multiple WAN and 3G backups

About ZyXEL Communications

Founded in 1989, with over a quarter-century of innovations, ZyXEL Communications Corp. is a world-class networking company providing comprehensive and reliable Internet solutions. Delivering cutting-edge communications innovations to more than 400,000 businesses and 100 million consumers worldwide, today ZyXEL is one of the few companies in the world capable of offering complete networking solutions on broadband access, commercial networking, and home connectivity for Telcos, business, and home users. With a strong local presence in 150 markets around the world, ZyXEL is the ideal partner to deliver tailor-made solutions to meet customers' local needs.

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