



Success Story

Swiss Ski Resort Upgrades Network Backbone with ZyXEL Solution

Overview

Customer Name

Aletsch Arena

Customer Industry

Recreation/Tourism

Challenges

- Update network backbone covering large geographic region
- Replace existing ATM backbone with Ethernet
- Create scalable solution to handle up to 10GB

- Unify network connecting a variety of entities and services
- Solution must be secure and future-proofed

Solutions

- L3 Managed stackable Gigabit Ethernet Switch
- L2+ Managed Gigabit Ethernet Switch

Benefits

- Each area covered by new network is self-sufficient
- Flexible and expandable architecture
- Increased stability and security
- Heightened performance across all services
- Streamlined management with ZON utility

Background

The excursion and holiday destination of Aletsch Arena in the Swiss canton of Valais has much to offer to winter sports enthusiasts. Hidden from the eyes of its visitors, an extensive telecommunication network connects the various skiing and hiking areas. The network was originally established for operation of the Aletsch-Riederalp Railways, Bettmeralp Railways and cable cars of Fiesch-Eggishorn. Over the years, a single, extensive network providing multiple services

has arisen out of these three networks. Entities now serviced by this network include the three railways and multiple tourism operations, as well as the client-specific service infrastructures of individual areas, such as train-control systems, information systems, IP cameras, weather stations, SKIDATA terminals, phones, snowmaking equipment, shared servers, and more.

Challenges

As the area's telecom networks grew over time, they could no longer meet the increased demands of the various entities that relied on them. The technical focal point for the SKIDATA system for the three areas, as well as the ATM network, was obsolete and no longer scalable or adaptable to the demands of new services. In addition, spare parts were no longer available for outdated network equipment. The

operators were faced with the challenge of integrating all existing systems into a single, new unit. The existing IT resources had to be used in the most efficient manner possible. After the revision and re-planning of the network architecture, it was decided to integrate them in a first phase before the ski season.

Solutions and Benefits

The rail operators addressed all their issues to Brig-based IT partner OCOM AG — a certified ZyXEL Premium Solution partner. It quickly became clear that, given the complexity of the task, local ZyXEL representative Studerus AG should be involved to offer support in the form of project management teams. Thus, manufacturers, partners, and customers sat down to clarify the needs and feasibility of the first round of the project and develop a proposal for planning and implementation.

The main issues in the preparation of the solution were the IP address

plan, the VLAN, and the replacement of ATM backbone with Ethernet, which was connected to the existing hardware and would be used in the new backbone. The backbone would be based on a pair of ZyXEL switches: the XGS-4728F 24-port GbE L3 switch with 10 GbE uplink and the XGS3700 GbE L2+ switch. The new backbone was planned so that subsequent scaling to 10GB was possible. Furthermore, the routing concept was designed so that each region was self-sufficient and expandable. The new routing structure allows maximum flexibility during the expansion of the network by the operators without sacrificing the stability or security of the services already running.

Next Step

Following the successful implementation of the backbone structure, the access switch infrastructure will be tackled in subsequent phases. The replacement process will be carried out gradually. The aim is to

bring about the desired level of security, stability and performance consistent with the front-end of the network. In this way, the Aletsch Arena can meet any future challenges.

Product Used



XGS-4728F L3 Managed stackable Gigabit Ethernet Switch

- 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

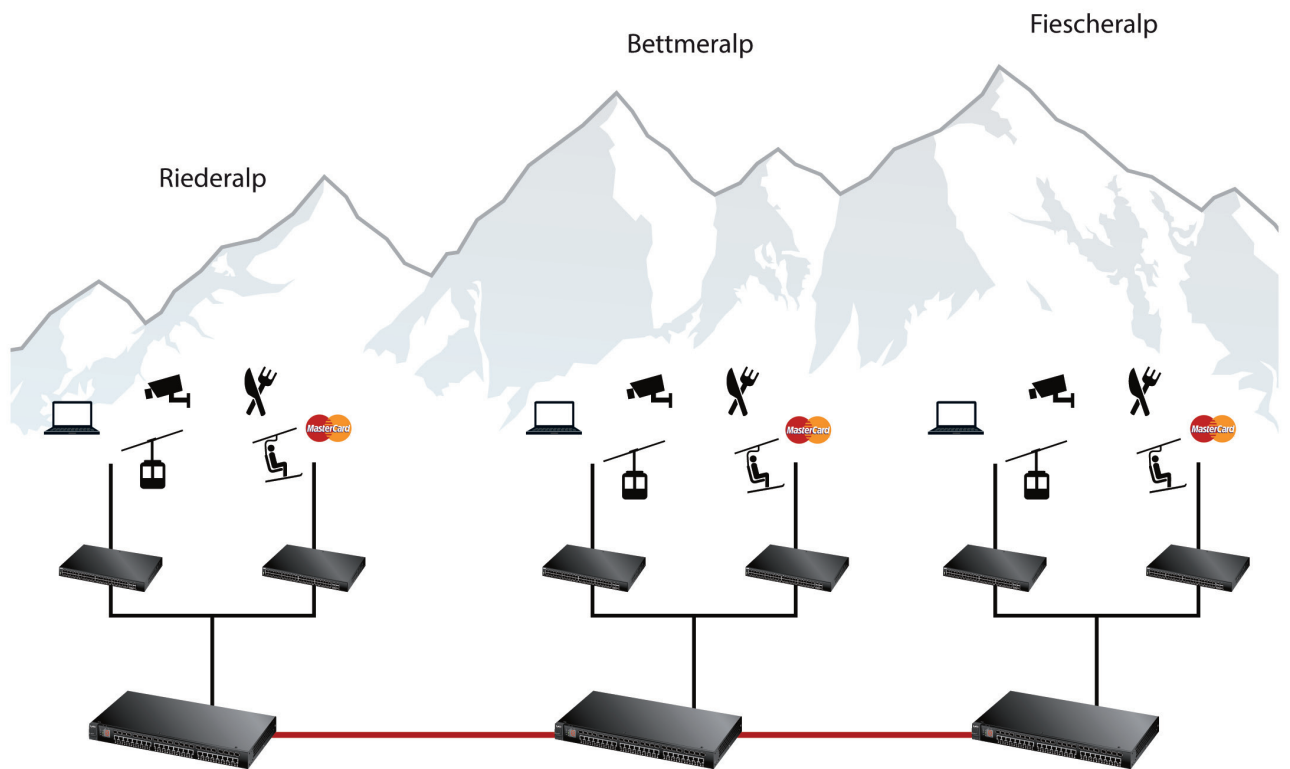


XGS3700 Series 24/48-port GbE L2+ Switch

- Full Layer 2 feature set with Layer 3 features including static routing, policy-based routing, VRRP and ECMP support
- Four (4) 1GbE SFP or 10GbE SFP+ uplink flexibility
- 24 or 48 ports of Gigabit Ethernet desktop connectivity
- Hot-swappable power supply and fan modules
- Internal redundant power supply design
- Provides up to 30 W per port with IEEE 802.3at PoE Plus compliance
- High PoE power budget up to 1000 W



Diagram



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 modern 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>.

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