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Success Story

Lindner Hotels Tunes into the Latest TV Technologies with Zyxel Solution

INDUSTRY — Hospitality

CUSTOMER — Lindner Hotels

REGION — Germany

SOLUTIONS — Zyxel wireless solution

Overview

Challenges

- Create network to support IPTV system
- Solution must be able to efficiently handle large data volumes
- System must efficiently distribute programming to multiple rooms

Solutions

- 24-port Gigabit L3 Switch with 10 GbE Uplink
- 10G L2+ Managed Switch
- 24/48-port Gigabit L2+ Switch
- 24-port Gigabit L2 PoE Switch
- VPN Firewall

Benefits

- Efficient routing and handling of IPTV traffic
- Ability to manage and handle large volumes of data over a large facility
- Secure and stable connection to outside media channels
- Easy and flexible management of traffic from different applications

"We are extremely satisfied with the project implementation by Tascan Systems GmbH, and Zyxel products fully meet our expectations. They are working flawlessly and can be extended without any problems with rising demand."

Michael Eckert
Corporate IT manager, Lindner Hotels

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Background

The Lindner Congress Hotel in Düsseldorf's Seestern district is an attractive home away from home for business travelers, city travelers, and other tourists who organize their trips independently. The rooms are elegant, partly arranged in the style of a boat, and provide a pleasant ambience during a guest's stay. From a technological point of view, the hotel is at the cutting edge of technology and all rooms are fitted with the latest communication equipment. All 240 guest rooms offer WLAN connections as well as an Ethernet network connection offering higher bandwidth. Free Wi-Fi is available to all guests of the hotel.

Challenges

In order to upgrade its TV systems, the Lindner Hotel Group established a new set of guidelines and requirements for its in-house television system, including that TV programming would now be distributed over existing LAN connections.

Markus Evans from Tascan Systems recalled, "One of the greatest challenges in this project was the number of rooms, approximately 240, and thus the number of TVs, as well as the TV programs that had to be converted simultaneously. In addition, the new solutions were to shorten the switch-over time between individual TV programs in comparison to the existing system using a coax connection."

Solutions and Benefits

For the digitalization of TV and information systems, Tascan relies on switches from Zyxel. An XGS4728F 24-port GbE L3 Switch with 10GbE uplink was installed as the IGMP routing switch, along with XS3700-24, XGS3700, GS2210 switches. A ZyWALL 310 series firewall provides network security.

IPTV programming typically generates several gigabits of data and it takes a robust network to handle these large volumes of network traffic. For this reason, the Lindner Congress Hotel Düsseldorf focused on a 10-gigabit/sec Ethernet solution. The XGS4728F and XS3700-24 were used in combination inside the main network room of the hotel. In this way, the IGMP-routed 10-gigabit/sec connections can be provided on all floors to the switches and to the individual IPTVs. Zyxel's XGS4728F receives the stations to be distributed over bundled gigabit connections transmitted from the IPTV terminals and forwards them to the retrieving IPTVs. In large-scale IPTV implementations, the bandwidth is utilized in the most efficient way by the IGMP routing features of the XGS4728F, forwarding the multicast traffic only to the subscribers of the stream.

All Zyxel products used in this project have proven to be well-suited for business-critical applications. With highly developed control functions provided by the fully managed layer-2 and layer-3 switches, the hotel is able to maintain full control over the network and effectively manage data traffic from converging applications.

"In order to remain competitive, the conversion of additional enterprise locations to the new TV system has already been planned and will be implemented shortly. We always attach great importance to having modernized facilities in our houses and like to rely on experienced partners at our side." Said Michael Eckert, corporate IT manage at Lindner Hotels AG

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Products Used

ZyWALL 310 • VPN Firewall

- High-performance, high-value Next Generation Firewall (NGFW) for small and medium-sized businesses
- Complete network protection with firewall, anti-virus, anti-spam, content filtering, IDP, next-generation application intelligence and SSL inspectionRobust 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 34 APs

XGS4728F Series • 24-port GbE L3 Switch with 10 GbE 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

XS3700 Series • 24-port 10GbE L2+ Switch

- Flexible 10GbE connectivity with 12 SFP+ ports, 8 10G BASE-T ports and 4 SFP+ combo ports
- Layer-2 plus (L2+) feature set equipped with static , policy route and VRRP
- Hot-swappable power supply module
- No single-point of failure hardware and software design
- Future-proofed with IPv6 support
- Comprehensive security features to ensure network availability

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) 10GbE SFP+ uplink flexibility
- 24 or 48 ports of Gigabit Ethernet desktop connectivity
- Hot-swappable power supply module
- Internal redundant power supply design
- Provides up to 30 W per port with IEEE 802.3at PoE Plus compliance
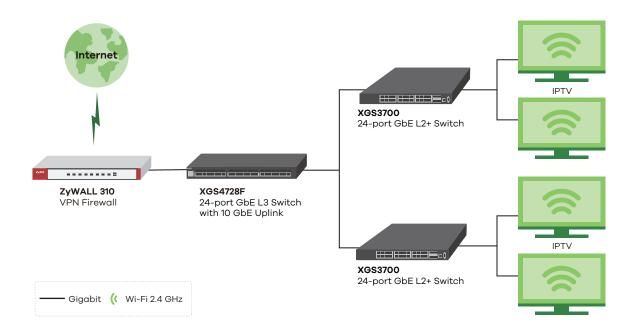- High PoE power budget up to 1000 W

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GS2210-24HP • 24-port GbE L2 PoE Switch

- Fully managed Layer 2 switching solution
- GbE RJ-45 and GbE SFP connectivity
- Complies with IEEE 802.3af PoE and 802.3at PoE Plus
- High 375 W power budget
- L2 multicast, IGMP snooping, MVR and voice VLAN for convergence
- Enhanced network protection with IP source guard, DHCP snooping, ARP inspection, CPU protection
- L2, L3 and L4 filtering, MAC freeze, port isolation, guest VLAN for improved isolation and access control
- Future-proofed with IPv6 support
- Supports ZON Utility and Smart Connect for easier, more efficient setup and management

Diagram

Internet

ZyWALL 310
VPN Firewall

XGS4728F
24-port GbE L3 Switch
with 10 GbE Uplink

XGS3700
24-port GbE L2+ Switch

IPTV

XGS3700
24-port GbE L2+ Switch

IPTV

—— Gigabit　　((Wi-Fi 2.4 GHz

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.