



Success Story

Unstoppable Wireless Access in Europa-Park Hotels, Germany

“That’s exactly what we need. Unobtrusive access points that the guests can’t see or that blend harmoniously into the environment, while at the same time providing stable, high-performance wireless network access.”

Steffen Waldmann
Hotel Bell Rock, Germany

Overview

Customer Name

Hotels El Andaluz, Castillo Alcazar, Santa Isabel, Colosseo, Bell Rock, the Camp Resort and Circus Rolando in Europa-Park, Germany

Customer Industry

Hospitality

Challenges

- Overcome different legacy situations and conditions of each hotel site
- Protect the IT system from data hacking and unexpected attacks

- Provide convenient Internet access to guests while securing the hotel network
- Implement the network infrastructure in a short time frame

Solutions

- XGS-4728F, XGS-4528F, IES-1248-51A, P-660HN-F1Z, ES-2024PWR, GS-4012F, NWA3160-V2, NWA1100, NWA3560-N, NWA3160-N, NWA1121-NI, NWA1300-NJ and USG2000

Challenges

The original networks in Europa-Park were unstable, and they sometimes just crashed, and the vendor supports were unable to meet the demands from a smooth-running hotel operation. Another challenge is that each hotel in Europa-Park has its own legacy and condition. Hospitality solution has to perform the balancing act of providing full-coverage integration of the access points inside the buildings without ruining the look and feel of the respective hotel as they were all designed with a specific theme. To improve Internet access services, installations have to be customized according to different conditions, and trainings for in-house technicians and pre-sale services are essentials to the success.

Background

Europa-Park, located in Rust, is the largest theme park in Germany and the second most popular theme park resort in Europe. Europa-Park has very high capacity rollercoasters and attractions, meaning the park can accommodate up to approximately 50,000 guests per day and has seven hotels within the park.

Four years ago hotel guests rarely asked about wireless Internet access, whereas today’s guests increasingly travel with three or more WiFi-capable mobile devices so that they may want to use Internet with their devices simultaneously during their stay and for which they expect a permanently available wireless LAN network. The electronic devices such as tablets, smartphones and e-readers require high-speed Internet access that is not only stable but also offers complete, deadspot-free coverage.

Solutions and Benefits

As the core of installations and central network access control, the ZyXEL USG2000 was chosen for its comprehensive security protection and the fibre optic links to individual hotel (El Andaluz, Castillo Alcazar, Santa Isabel, Colosseo and Bell Rock as well as the Camp Resort and guesthouse Circus Rolando). Two ZyXEL XGS-4728F core switches were chosen as the redundant solution. For network access, ADSL2+ and Ethernet broadband technology were both employed. A DSLAM IES-1248-51A was deployed to convert fibre optic transmission into ADSL signals and was connected to P-660HN-F1Z to provide Internet via DSL, while L2 GbE Switches, GS-4012F (Please refer to XGS-4528F for the replacement) and ES-2024PWR (Please refer to ES3500-24HP for the replacement), are selected to provide Ethernet network access. The ES-2024PWR is also the power source for the connected access points so that access points do not need external power sources and this significantly streamlines the network infrastructure.

For monitoring the entire network in such a large scale of deployment, Europa-Park uses ZyXEL's ENC monitoring and configuration software that enables administrators to see the status at a glance and ensure everything is working smoothly. Although more than 1000 IT components are installed, they are all indicated clearly in the building plans.

Upon the successful implementation of this project, ZyXEL equipment including three fibre optic switches (two XGS4728F and one XGS-4528F), 3 DSLAMs (IES-1248-51A) with the accompanying 144 P-660HN-F1Z modems, more than 100 switches (ES-2024PWR, GS-4012F), over 100 fibre-optic modules and over 700 access points (NWA3160-V2, NWA1100, NWA3560-N, NWA3160-N, NWA1121-NI and NWA1300-NJ) has been installed in the 7 hotel complexes. Internet connections are significantly improved after the installations, and the number of guest inquiries to the staff after the installation has dropped to virtually zero.

Products Used



XGS-4728F 24-port GbE L3 Switch with 10GbE Uplink

- Unique 24 dual-personality Gigabit ports
- L3 Advanced Routing Protocols, OSPF and RIP
- Policy-based QoS optimizes multi-service quality
- Multicast DVMRP & IGMP support
- Multilayer-aware (L2/L3/L4) ACL for security protection and traffic optimization
- Port security and enhanced 802.1x port authentication
- High redundancy and resilience architecture with RSTP, VRRP and port trunking
- ZyXEL iStacking™ technology (up to 24 switches)
- SNMP and RMON support
- Optional backup power support



XGS-4528F 24-port GbE 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 and VRRP



IES-1248-51A **ADSL2+ 48-port Temperature Hardened** **IP DSLAM**

- 19" and 23" Rack-mountable
- Force cooling by FAN
- Temperature hardening
- Built-in splitter
- Hot-swappable fan module



ES-2024PWR **24-port FE L2 PoE Switch**

- Covered by Limited Lifetime Warranty
- 8.8 Gbps non-blocking switch fabric
- 802.1x for access authentication
- 4 IEEE 802.1p hardware priority queues
- SPQ and WRR queuing algorithms
- Intrusion lock, MAC freeze, MAC filtering and static MAC forwarding
- IGMP Snooping v1, v2, v3
- ZyXEL iStacking™ technology, one IP management for 24 devices
- IEEE 802.3af Power over Ethernet
- Easy web GUI for intelligent PoE power management



ES3500-24HP **24-port FE L2 Switch with GbE Uplink**

- 6 K MAC address table
- Policy-based QoS optimizes multi-service quality
- IGMP snooping v1, v2, v3, MVR
- Multilayer (L2/L3/L4) ACL suite for security protection
- High redundancy and resilient architecture with RSTP and port trunking
- IPv6 management support
- IEEE 802.3at PoE Plus standard
- Enhanced energy efficiency with PoE consumption mode



GS-4012F **12-port GbE L3 Switch**

- L3 advanced routing protocols, OSPF and RIP
- Policy-based QoS optimizes multi-service quality
- Multicast DVMRP & IGMP support
- Multilayer-aware (L2/L3/L4) ACL for security protection and traffic optimization
- Port security and enhanced 802.1x port authentication
- High redundancy and resilience architecture with RSTP, VRRP and Port trunking
- ZyXEL iStacking™ Technology (up to 24 switches)
- SNMP and RMON support
- Optional backup power support



NWA3000-N Series (NWA3160-V2, NWA3560-N and NWA3160-N) 802.11 a/b/g/n Unified Pro AP

- Higher bandwidth and superior performance with 802.11n
- 3-in-1 hybrid AP WLAN including AP controller mode, managed AP mode and standalone AP mode
- Brand new centralized graphic management interface for up to 24 WLAN APs
- Backup redundancy supported to provide reliable connection services
- Secured tunnels for communication between controller and managed AP to prevent leaking of configurations
- Enterprise-class AP functionalities with comprehensive configuration interfaces
- Built with Low Smoke, Zero Halogen (LSOH) materials for plenum rating for UL 2043 support



NWA1100 802.11 b/g/n Business Access Point

- Easy deployment via multiple operating modes and IEEE 802.3af PoE support
- Multiple 4 SSIDs benefit different service levels
- Certified WPA/WPA2 support for strict network protection
- Comprehensive management solutions that effortlessly merge into the existing network administration system
- Environmental friendly through IEEE 802.11az Energy Efficient Ethernet and WMM Power Saving features



NWA1121-NI 802.11n Ceiling Mount PoE Access Point

- Compact ceiling-mount design
- Plenum rated with LOSH material
- Coverage-enhancing 11n functions including Low Density Parity Check (LDPC), Maximum Likelihood Demodulation (MLD)
- Supports up to 8 SSIDs



NWA1300-NJ 802.11 b/g/n In-wall PoE Access Point

- Embedded SISO antenna
- Configurable Low TX power provides suitable coverage and prevents wireless interference
- Central WLAN management with ENC software
- IEEE 802.3af PoE supports easy installation for administrators
- RJ-11 phone line pass-through



USG2000 Unified Security Gateway

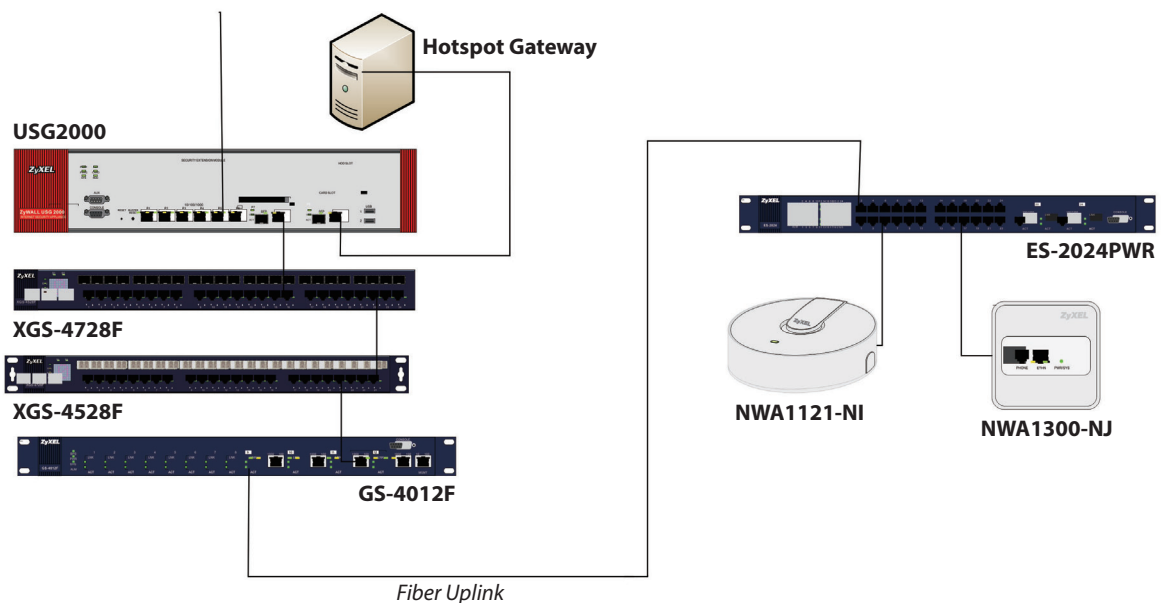
- Robust security without sacrificing performance
- Comprehensive support to IPv6
- Robust hybrid VPN (IPSec/SSL/2TP)
- Zero-configuration remote access with EASY VPN
- Supports L2TP VPN on mobile devices (iPhone and Android phones)
- ICSA Firewall, IPSec certification
- Content filter stops malware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



P-660HN-F1Z 802.11n Wireless ADSL2+ 4-port Gateway

- 2.4 GHz 11n (2x2) for superior performance and coverage
- standard-based WPS for easy, secure WLAN deployments
- Wireless scheduler and on/off button for energy-saving and wireless management
- Advanced QoS to ensure service quality of triple-play
- User friendly design with multilingual GUI support

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 modem manufacturers, ZyXEL has undergone many transformations in the fast-paced networking industry. Today, ZyXEL is one of the few companies in the world capable of offering complete networking solutions of Telco, SME/Enterprise, and Digital Home for a wide range of deployment scenarios. Telco solutions include wired and wireless access network equipments, networking customer premises equipments, and Carrier Switches. SME and Enterprise solutions include Unified Security Gateway, LAN Switches and WLAN. Digital Home solutions include network connectivity devices and multimedia solutions.

The company has 3200 employees and distributors in 70 countries, reaching more than 150 regional markets. The ZyXEL Communications Corp. includes 33 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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