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Success Story

A Cutting-Edge Network for a 300-Year-Old Italian Building

INDUSTRY Museum

CUSTOMER Scuderie del Quirinale

COUNTRY Italy

SOLUTIONS Zyxel Nebula Solution

Overview

Challenges

- Deliver uniform wireless coverage across 3,000 square meters of floor space
- Provide separate but centrally managed networks for staff and public users
- Ensure secure and stable connections

Solutions

- Zyxel Nebula Solution

Benefits

- Reliable WiFi connectivity for up to 5,000 users
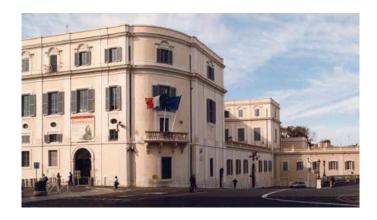- Centralized management interface enables rapid, seamless managing of entire network

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Background

Rome's Scuderie del Quirinale was built in 1723 and spent its first 200 years as a stable and carriage house for the nearby Quirinal Palace. It then spent a few inglorious decades as a parking lot before undergoing a painstaking restoration in the '90s. Finally, in 1999, it was reopened as a museum celebrating art from every part of the world and the past.

Challenges

The museum, wanting to modernize again, recently set its sights on new network infrastructure – and it didn't just mean better WiFi in its coffee shop. It needed infrastructure that was flexible yet secure and had the capacity to handle the various demands of everyone it housed, from staff to exhibitors to visitors.

Complicating matters were the large spaces involved: the Scuderie del Quirinale covers a total surface area of

3,000 square meters. In addition to its spacious exhibition areas on the second and third floors, it also has a reception area, bookstore, gift shop, and café

The job fell to IeT Spa, a partner of Zyxel for many years. Founded in 2006, it specializes in network solutions for companies ranging from manufacturers to big-name fashion brands, with valuable contacts in Europe, the United States, and China.

Solutions and Benefits

First, the museum laid out its vision for its network. Zyxel then immediately got to work with IeT and developed a 10-Gigabit network infrastructure housed in six network cabinets. Next, Zyxel Nebula Cloud Managed access points with smart antenna technology were strategically placed in what were determined to be optimal locations throughout the Scuderie del Quirinale. The end result: strong, uniform coverage for up to 5,000 users at a time.

Of course, not all of these users have the same demands; the most rapid speeds available may often be more necessary for those setting up an exhibition than for those coming to see it. That's why two networks were created: one private, for the museum's office staff, curators, and other behind-the-scenes users, and the other public. The versatile network infrastructure we installed means the fastest connection speeds can be

delivered to the most appropriate users at the most appropriate times.

But, for the Scuderie, that may not even be the best advantage of the new network. That distinction likely goes to one of the following.

First is the ease: the Nebula centralized management interface has made controlling and intervening in network services many times easier than it ever was before for the museum's administrator. In fact, since Nebula is cloud-based, the administrator doesn't even need to be on site to intervene if something goes wrong. Second is the security: rigorous protection measures were spliced into the network's DNA, namely a ZyWALL USG1900 firewall that's unified with those of other protected heritage sites.

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Products Used

ZyWALL USG1900 • Unified Security Gateway

- UTM Firewall for medium- and large-sized businesses and campuses
- Anti-malware protection with Anti-Virus, Anti-Spam, Content Filtering 2.0, IDP, and Application Protocol
- Patrol and SSL inspection
- Robust SSL, IPSec, and L2TP over IPSec VPN connectivity and VPN High Availability (HA)
- Unified security policy
- Device HA Pro ensures smart handover
- Hotspot management supported
- Facebook WiFi for intelligent social media authentication

NAP303 • 802.11ac Dual-radio Smart Antenna 3x3 Nebula Cloud Managed Access Point

- Cloud-managed dual-radio 3x3 MIMO 802.11ac AP
- Supports combined data rates of up to 1.75 Gbps
- Smart antenna provides breakthrough performance
- Self-configuration and zero-touch deployment
- Enterprise-class security and RF optimization
- Dynamic channel selection, load balancing, and smart client steering
- Industry-leading receiver sensitivity as low as -102 dBm
- Tool-less bracket design for streamlined installation

Nebula Control Center (NCC)

- Responsive web design and intuitive user interface
- Multi-tenant and multi-site view
- Role-based administration privileges
- Real-time as well as historical monitoring and reporting
- Site-based auto and smart configuring tools
- Misconfiguration protection to prevent NCC disconnections
- Rich site-wide management tools (dashboard, map and floor plans, and topology)

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XS3700-24 • 10G L2 Plus Managed Switch

- Flexible 10-GbE connectivity with 12 SFP+ ports, eight 10-G BASE-T ports, and four SFP+ combo ports
- Layer 2 Plus feature set equipped with static routing, policy-based routing, and VRRP
- No-single-point-of-failure hardware and software design
- Future-proofed with IPv6 support
- Comprehensive security features to ensure network availability

XGS3700-48 • L2+ Managed PoE Switch with 10G Uplink

- Full Layer 2 feature set with Layer 3 features including static routing, policy-based routing, VRRP, and ECMP support
- Four 1-GbE SPF or 10-GbE SFP+ uplink flexibility
- 24 or 48 ports of Gigabit Ethernet desktop connectivity
- Hot-swappable power supply
- Internal redundant power supply design
- High PoE power budget up to 1000 W
- Physical stacking of up to eight units and 384 Gigabit ports through two standard 10-G SFP+ ports

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.