



Success Story

Wireless Network Breathes New Life into London Theater Landmark



Entertainment

INDUSTRY



CUSTOMER

Troxy



REGION

UK



SOLUTIONS

Zyxel
wireless
solution

Overview

Challenges

- Slow and unreliable Internet connectivity for clients, visitors, and employees
- Frequent network interruptions failed to meet the needs of customers or visitors
- No dedicated bandwidth allocated for production companies using the venue

Benefits

- Reliable, flexible, and dedicated 24/7 network connectivity
- Uninterrupted bandwidth to meet the needs of all users

Solutions

- VPN Firewall
- Gigabit Smart Managed Switch
- 802.11ac Dual Radio Smart Antenna 2x2 Access Point
- 802.11ac Dual Radio Unified Pro Access Point
- Wireless LAN Controller

Background

Troxy opened as a grand Art Deco cinema in 1933 with a screening of the suitably epic film classic King Kong. However, the history of this much-loved venue involves more than just the movies. In 1963 it was transformed into the London Opera Centre and served as a rehearsal space for full orchestras ahead of performances at the Royal Opera House. In the 1990s the building was repurposed to become a Mecca Bingo hall before being shuttered in 2005 after falling victim to the rapid rise of online gambling.

Current owners, Ashburn Estates, restored the Grade II-listed building to its original glory and reopened Troxy as a space for live events in 2006. With a capacity of around 3,000, it is now considered one of London's most versatile venues and hosts everything from live concerts to company conferences, indoor sporting events to weddings.



Challenges

As a listed building, there are tighter controls over what changes can be made to the building's interior and exterior. In particular, locations for wireless access points were limited, as were the opportunities to install the cabling to connect them.

In the past, there had been several attempts to build a wireless solution to remedy this problem. However, the hodgepodge of individual broadband lines and routers from a variety of vendors was not robust enough. The installations became unreliable, resulting in frequent outages. The in-venue team tried different options, notably deploying line-bonding tactics, which involved linking broadband lines together for faster connectivity.

As Troxy attracted increasingly high profile corporate and live events, it soon became apparent that this organic design was no longer fit for purpose. In 2015 a fiber line was installed and this needed to be accessible throughout the venue. The team also needed to be able to prioritize network bandwidth to ensure quality of service for event management staff and visitors.

As such, there were four use cases a new network installation would need to support:

Connectivity for corporate hire

Corporate clients renting the venue have specific Wi-Fi requirements. These differ depending on whether they are

hosting, for example, a conference, an awards night, or an exhibition.

Those hiring the venue would typically ask for access to Wi-Fi for email access or video streaming. However, with the growth in social media, clients increasingly want to enable the public to share live updates from the event to drive awareness online. These social posts are tracked and displayed in real-time on screens throughout the venue.

Connectivity for the general public

On average, an event at Troxy attracts around 2,000 attendees. As connected mobile devices become such an integral part of both our professional and personal lives, visitors increasingly expect access to free public Wi-Fi at events. This means enabling them to share images, videos, and content across social channels, as well as converse via online messenger apps such as WhatsApp and Snapchat.

Production

TV and production companies live-stream events held at Troxy several times a year. This requires dedicated bandwidth to ensure the signal is not impacted by the number of devices connected to the public Wi-Fi.

Internal teams

Offices were built on-site in 2015. Therefore a reliable, private Wi-Fi network was needed to support those employees.

Solutions and Benefits

Zyxel partner Connecting London Ltd, an IT services provider based in central London, advised Troxy on how to meet its network and connectivity requirements. Connecting London worked with the Zyxel pre-sales team to build an end-to-end solution, developed to support the capacity needs of the venue.

Zyxel's adaptive wireless technology, known as Smart Antenna, was used to maintain stable coverage for the high numbers of visitors in the main event area. In addition, various models of access points from the Zyxel range were used throughout the building to ensure each

area was covered. All access points are supported using Zyxel PoE (Power over Ethernet) switches and a core firewall, which provides a reliable network backbone to cope with the demands on security, network traffic, traffic management and seamless connectivity.

The access points are centrally controlled, allowing the straightforward configuration of either individual or access point groups. This approach provides the flexibility to adapt the configuration to suit all users within the venue, while also eliminating the inherent technical complexity.

Products Used

ZyWall 1100 • VPN Firewall



- Robust hybrid VPN (IPSec/SSL/L2TP over IPSec)
- High-performance SPI Firewall
- More secure VPN connections with SHA-2 cryptographic
- Auto-provisioned client-to-site IPsec setup with Easy VPN
- Cloud helper provides the friendly firmware upgrade to ensure its authenticity and reliability
- Device HA Pro dedicated heartbeat port ensures smart handover.
- Hotspot management for authentication ,access control and billing

WAC6503D-S • 802.11ac Dual Radio Unified Pro Access Point



- Zyxel smart antenna provides premium performance anywhere
- Advanced IEEE 802.11ac offers up to 1.75Gbps combined data rates
- Industry-leading Rx sensitivity as low as -102 dBm
- AP Flex™, Zyxel ONE Network utilities, DCS and tool-less bracket design streamline deployment
- Load balancing and client steering ensure optimal wireless experience
- ZyMESH easily extends reliable Wi-Fi network

WAC6103D-I • 802.11ac Dual Radio Dual-optimized Antenna 3x3 Access Point



- “Dual-optimized” antenna allows pattern optimization adapting to wall- or ceiling mount installation
- 3x3 802.11ac supports combined data rates of up to 1.75 Gbps
- Load balancing on both standalone and managed modes
- Dual image supports for reliable Wi-Fi connectivity
- ZyXel One Network for standalone AP management

NXC2500 • Wireless LAN Controller



- Centralized management for up to 64* APs
- ZyMesh mitigates complex, inconvenient cabling Wi-Fi deployments
- Client steering enhances efficiency of wireless spectrum utilization
- Auto healing maximizes Wi-Fi service availability
- Seamless integration with external AD, LDAP, RADIUS authentication
- Best investment protection with built-in RADIUS server

*Management of 64 APs is supported with firmware version V4.10 or above

GS1920 Switch Series • 24/48-port GbE Smart Managed Switch



- Smart managed switch with essential L2 features
- GbE RJ-45, GbE combo (RJ-45/SFP) and fixed GbE SFP connectivity
- Supports ZON Utility, ZyXel Smart Connect and iStacking facilitates easy network initialization and management
- Reliable network availability with Loop Guard, IPSG, and CPU protection
- IRADIUS, static MAC forwarding and 802.1x authentication-enhance network security
- Future-proofed with IPv6 support

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.

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