SUCCESS STORY

METRO MARKETS

Metro Markets strengthens its operational management with advanced network infrastructure at its new logistics center.

Metro Markets

Metro Markets, the digital unit of the German group METRO AG, is one of the leading B2B e-commerce platforms specialized in the HORECA sector in Europe. Its digital-first model allows it to offer restaurants, bars, and professional channel businesses a wide catalog of non-food products, providing a fast, scalable, and customer-focused shopping experience.

In Spain, its operations are based at the logistics center in Azuqueca de Henares (Guadalajara), a facility of over 19,000 m² that serves as a central hub for national distribution. This state-of-the-art warehouse is key to ensuring delivery efficiency and operational support for its digital platform.

The challenge

A logistics environment that demands seamless connectivity

The Metro Markets logistics warehouse in Azuqueca de Henares, with over 19,000 m² dedicated to the management and distribution of non-food products, required a high-performance wireless network infrastructure to support its operational pace and growth capacity.

The physical environment, with large metal shelving typical of a high-density warehouse, posed a considerable technical challenge to ensure consistent, uninterrupted Wi-Fi coverage. Such structures cause signal attenuation and dead zones that hinder continuous connectivity, which is especially critical for daily staff operations, the use of barcode scanners, tablets, and real-time logistics systems.

In addition, the installation started from a scenario without prior structured cabling and with a network architecture that was not prepared to support the new requirements for speed, availability, and centralized management. A comprehensive, scalable, and long-term solution was needed, capable of integrating state-of-the-art technology without affecting daily operations.

"Instel understood our needs and designed a tailor-made project, combining technical expertise with precise execution. They took care of everything: from design and cabling to configuration and commissioning. Their work has been coordinated, flawless, and without interruptions to our operations."

Alejandro Lares, System Engineer at Metro Markets

The solution

High-performance network infrastructure with full coverage

Instel tackled this challenge with a cutting-edge technology strategy based on the integration of Wi-Fi 6 solutions, next-generation structured cabling, and high-performance switching hardware, ensuring a scalable infrastructure manageable from a centralized platform.

Technical Analysis and Wi-Fi Coverage Design

After a thorough study of the warehouse and signal simulations, Instel deployed 90 Aruba Wi-Fi 6 access points to overcome physical barriers and ensure complete, stable coverage with high simultaneous connection capacity. This planning ensures sufficient bandwidth for IoT devices, tablets, and real-time management systems.

Deployment of Cat-6A Structured Cabling and OM5 Fiber Optics

A structured cabling infrastructure was implemented using Commscope GigaSPEED Cat-6A cabling with tray and conduit installation, supporting high-speed, low-latency transmissions. The solution is prepared for future intelligent cable management thanks to the incorporation of Ipatch panels, which enable advanced network control.

For the main links between racks and switches, OM5 multimode fiber optic cables were installed, allowing connections of up to 100 Gbps, ensuring sustainable growth and readiness for future technological demands.

The solution

High-performance network infrastructure with full coverage

Switching Equipment and Centralized Management

Installation of managed HPE Aruba Networking switches, with PoE capability to power the access points, redundancy in power supplies, and advanced security and quality-of-service features. The entire Wi-Fi network is managed from Aruba Central, a cloud platform that provides real-time monitoring, proactive management, and automation to minimize response times and maximize availability.

Uninterruptible Power Systems

To protect operational continuity, Instel installed SOCOMEC UPS uninterruptible power systems, ensuring the integrity of critical systems during power outages and preventing interruptions that could affect the logistics chain.

"The network deployment in our Azuqueca warehouse has achieved complete Wi-Fi coverage, including complex areas where there was previously no stable signal. The implemented solution is robust and scalable, ensuring the capacity to meet future technological challenges."

Alejandro Lares, System Engineer at Metro Markets

Benefits

Corporation

- **Future-ready platform.** Solid technological infrastructure designed to support business growth and evolution.
- **Resource optimization.** Greater efficiency with less manual intervention and reduced technical dependency.
- **Minimization of operational risks.** Stable network that reduces failures and ensures business continuity.

IT Departament

- **Unified management.** Monitoring and control of the entire network from a single panel thanks to Aruba Central.
- **Scalable infrastructure.** Network ready to grow and integrate new technological solutions.
- **Advanced security.** Logical segmentation and full traffic visibility to reduce risks.
- **High availability.** Uninterruptible power systems protect critical network assets

Logistics operations

- **Comprehensive Wi-Fi coverage.** Reliable connectivity throughout the warehouse, overcoming physical obstacles such as metal shelving.
- **Optimized productivity.** Greater agility in picking, inventory, and traceability operations.
- **Constant connectivity.** Mobile devices and logistics systems operate without interruptions anywhere in the facility.

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