



Modernizing Inspection Operations for High-Volume Product Verification

Overview

In the Seoul Complex Logistics Center in Songpa-gu, a 2,700-pyeong inspection center supports Korea's largest C2C resale platform. Around 500 inspectors verify limited-edition sneakers and fashion items through detailed visual inspections to confirm authenticity and condition.

To support rapidly growing inspection workloads and an eightfold increase in wireless traffic, the inspection center upgraded to a high-performance WiFi 7 over 10G network infrastructure. With Zyxel Networks' solution, the center now enables stable, high-speed uploads for 500 inspectors across 70 inspection lines, while improving operational efficiency, network security, and centralized management through the Nebula secure cloud networking solution.

Challenges

Each product is photographed with a designated smartphone and uploaded to a cloud server to verify authenticity and condition, creating a reliable trading environment. When the system launched in April 2024, a 1Gbps wired network and WiFi 6 infrastructure supported around 200 inspectors uploading 3 to 4 photos per product.

By 2025, growing transaction volumes and expansion into technical and refurbished sectors increased the inspection team to around 500 people, with photo uploads rising to 10 images per product. Wireless traffic grew more than eightfold, causing transmission delays during peak periods and impacting inspection efficiency.

Solutions

To efficiently handle continuous high-volume photo uploads across 70 inspection lines, WBE660S WiFi 7 access points were deployed in inspection areas. With up to 22Gbps wireless capacity, a 10Gbps uplink, tri-band support, and 4x4 MU-MIMO, the WBE660S efficiently handles dense traffic.

Customer Name

Resale Platform Inspection & Logistics Center

Location

Seoul, South Korea

Industry

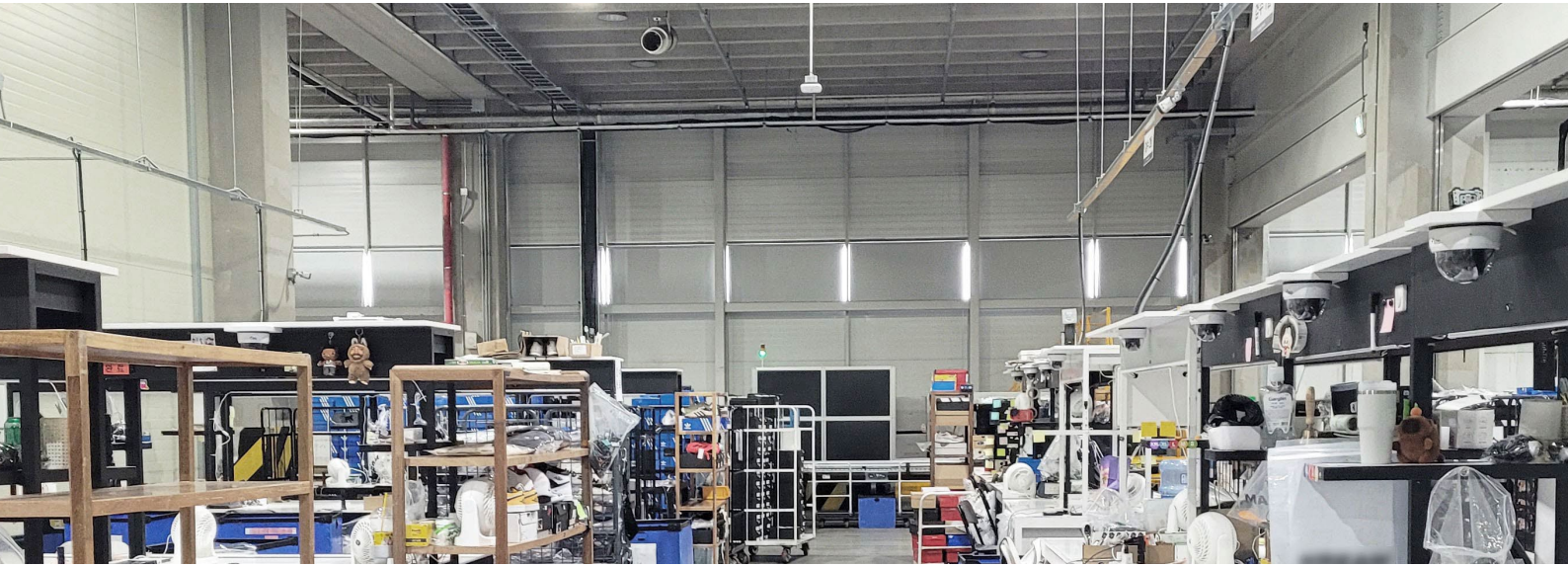
Logistics

Partner

Utopia Information Technology

Customer Background

Located in the Seoul Complex Logistics Center in Songpa-gu, the inspection center is a large-scale facility spanning approximately 2,700 pyeong. It verifies the authenticity of limited-edition sneakers and fashion items sold on Korea's largest C2C resale platform. Around 500 professional inspectors work on-site, individually confirming product authenticity and unused condition through visual inspection.



Solutions

The 6GHz band handles primary inspection traffic for lower interference and higher capacity, while non-6GHz devices connect via 5GHz to balance network usage.

On the wired side, the XS1930-12HP PoE switch is deployed to support 10Gbps on all ports and delivers up to 60W per port. The switch provides both connectivity and power for WiFi 7 access points without requiring additional adapters. Besides, the XGS4600-32F backbone switch ensures high-speed transmission from edge to core without bottlenecks.

The network is segmented into the inspection, logistics, and operations zones using separate SSIDs and VLANs to improve security and traffic control. Bandwidth policies are also applied to prioritize critical inspection traffic. To reduce unnecessary multicast traffic from 500 iPhones, multicast and broadcast traffic is limited at the AP level, while ACL policies on switches control Multicast DNS (mDNS) traffic by segment. This reduces unnecessary traffic and ensures highly stable performance for inspection tasks.

All devices are centrally managed through the Nebula cloud platform, enabling real-time monitoring, topology visualization, remote troubleshooting, and instant alerts to minimize downtime.

Product List



- WBE660S WiFi 7 Access Point
- WAX510D WiFi 6 Access Point



- XGS4600-32F L3 Aggregation Fiber Switch
- XS1930-12HP Lite-L3 Smart Managed Switch
- GS1920-24HPV2 Smart Managed PoE Switch



- Nebula Plus Pack License

Results

The new network successfully meets the inspection center's growing operational demands. With a WiFi 7 infrastructure built on a 10Gbps backbone, the center can support high-density wireless usage and large-scale image uploads without interruption. The upgraded environment also unifies existing and newly deployed equipment under a single cloud-managed platform, enabling more efficient operations, simplified management, and faster issue resolution.

- Stable connectivity for 500 staff across 70 inspection lines
- Smooth handling of 8x higher wireless traffic volumes
- Faster upload performance for high-volume inspection image transfer
- Reduced transmission bottlenecks with end-to-end 10Gbps architecture
- Improved network security through traffic segmentation and access control

