

REMOVING THE SILOED APPROACH INTO RETAIL OPERATIONAL TECHNOLOGY

CASE STUDY



Retailers face unique challenges when it comes to managing their operational technology (OT). Multiple systems—from HVAC and lighting to refrigeration and solar (PV) solutions—must work in harmony across hundreds of geographically dispersed locations. Yet too often, each technology stack is treated as a standalone system, driving up costs and complicating both management and security.

In this case study, we describe how one major retail chain addressed these challenges by implementing Tosibox—a solution that helped them break free from a siloed approach.

The Challenge: Multiple Gateways and High Costs

A prominent retail customer was struggling to manage a wide variety of OT assets:

- Controls
- HVAC
- PV
- Refrigeration
- Lighting
- Network

Initially, each vendor's technology would have required its own gateway or remote access device. That meant an average cost of \$1,000 per gateway—not counting the separate WAN/Internet connections. Given the retailer had to support several technologies at each site, the hardware bill was spiraling out of control.

The Challenge Overview

- 1. Complex Management:** With up to four gateways per site, the company found itself juggling configurations for hundreds of locations—over 600 sites.
- 2. Mounting Cybersecurity Risks:** Each additional gateway and its internet connection created more attack surfaces. Monitoring and updating all those endpoints required significant resources.
- 3. No Centralized View:** Different departments and service providers handled separate systems, producing data silos and operational blind spots.

Simplifying and Securing Retail OT

By deploying Tosibox as a unified remote access solution, the retailer replaced multiple gateways at each site with a single, secure gateway—reducing hardware costs by approximately **80%**.

Here's how:

1. One Secure Point of Access

Instead of maintaining separate hardware for HVAC, lighting, refrigeration, and more, Tosibox enabled the retailer to consolidate them into one secure device, saving roughly \$4,000 per site.

2. Streamlined User Management

Rather than granting separate logins and VPN configurations for each system, the retailer now uses a single management platform. Administrators can provision or revoke user access by role, ensuring, for example, that the lighting team only sees lighting systems, the HVAC team only sees HVAC controllers, and so on.

3. Reduced Cyber Risk

With fewer endpoints and a robust encryption framework, the risk of intrusion is drastically reduced. Tosibox's built-in security model ensures that only authenticated users access the network—and only the specific devices they need and have access to.

4. Substantial Cost Savings

Across 600 sites, eliminating multiple gateways saved the retailer roughly \$1.2 million in hardware alone, not to mention the operational and maintenance savings gained from centralized management.

Unlocking Cloud-Based Services at a Scale

After consolidating OT systems into a single secure gateway, the retailer turned its attention to cloud-based energy optimization. Under a traditional approach, connecting a third-party cloud solution would require up to 600 IPsec tunnels—a massive administrative burden that also increases overhead costs and network complexity. With Tosibox, the retailer established a single, secure connection to the cloud service. Every site can seamlessly relay data and receive optimization insights, all while enforcing strict access controls.

Instead of creating and managing hundreds of separate VPN tunnels, Tosibox gives the retailer:

- a **Unified, centralized interface** for monitoring and controlling energy usage across all 600 sites.
- **Protocol-Agnostic Integration** that supports any vendor's devices or control protocols, eliminating compatibility headaches.
- **Reduced Operational Costs** thanks to one central, convergent network rather than dozens of standalone configurations.

Where the retailer once had siloed OT networks, it now enjoys a convergent environment that enables analytics, AI-driven optimizations, and consistent user experiences. No matter the OEM or technology, Tosibox ties everything together under one robust, secure umbrella.

The company's new convergent approach yields significant savings in hardware and operational expenses, all while improving security and enabling next-level services like cloud-based energy optimization.

Benefits

- **Faster Issue Resolution:** Teams can diagnose and fix problems from a single dashboard.
- **Scalable Growth:** Adding new sites, assets, or services requires minimal infrastructure changes.
- **Stronger Security Posture:** Centralized access control, combined with Tosibox's secure connection management, reduces cyber risk.
- **Greater Business Agility:** The retailer can quickly implement new services such as third-party analytics or IoT expansions without wrestling with multiple IPsec tunnels or hardware gateways.