

Discount Supermarket Chain Upgrades IT to Improve the Customer Experience



A Vertiv Case Study



Background

This Germany-based supermarket group sells produce, meat, baked goods, and household products in its more than 11,000 stores around the world. Being able to keep stores stocked with the right items at the right time and in the right quantity is crucial to helping the supermarket chain keep its promise of affordable quality for customers.

This precise inventory management is essential as a shortage of items could mean losing customers and surplus stock can shrink profit margins. It's also critical for understanding customers' buying behaviors in order to create an elevated customer experience as real-time and historical data informs product specials or discounts. Collecting and using this data called for the retailer to add more and new digital applications, requiring additional IT infrastructure to keep it all running.

Already having a long-term relationship with Vertiv, this retailer knew ensuring system availability was paramount and that the breadth of the Vertiv portfolio could effectively and efficiently address power protection needs in all its IT spaces — from core data centers to its in-warehouse or in-store edge computing areas.

Challenge

Ensured availability for precise inventory management

Keeping shelves stocked and its supply chain running smoothly — a particular challenge during the global pandemic — requires a reliable and easy-to-manage IT infrastructure. In this case, it also required flexibility from the digital infrastructure provider seeing that, periodically, deployments had to be canceled or postponed necessitating storage of equipment.

The standardized rack solution from Vertiv allowed the retailer to upgrade its IT environment now while still having the ability to add new technologies later to meet future business needs, ensuring continued operational improvements that positively impact the customer experience and the retailer's market share.

The retailer wanted to upgrade its IT infrastructure in 9,000 of its older stores in 27 European countries to support digital applications such as a point-of-sale (POS) system, closed-circuit television and digital signage. Having more robust IT was needed, especially for a retailer that started with a no-frills in-store marketing approach to product merchandising.

As the business grows and evolves, new infrastructure will augment the retailer's human resources by enhancing and automating activities that would otherwise be time consuming for staff members. For example, the team now uses a digital application to show employees how and where on the floor to place products. These system changes essentially allow in-store personnel to work more efficiently and remain focused on customer service.

Timely, coordinated deployment amid pandemic

With each store having an average of two server racks, the upgrade project would require approximately 18,000 new racks to be deployed and installed over a three-year period starting in 2019. This deployment was combined with other in-store upgrades such as changing the POS system and its associated cabling, making the timing even more crucial.

The sheer scope of this deployment was a challenge, especially amid pandemic-related restrictions that in some cases differed by country or region. Not only did the Vertiv team members have to stay abreast of those differences, but they had to remain flexible regarding the timing of deliveries, installations and startups. Adding to the complexity were space constraints. Most of the stores lacked a dedicated space for new IT equipment. Additionally, these spaces had fluctuating temperatures, as well as dust and debris that can affect the performance of IT systems.

Solution

To address the upgrade project challenges, the retailer chose to customize a server rack that included Vertiv™ Geist™ metered and switched rack power distribution units (rPDUs) and a Vertiv™ Liebert® GXT5 uninterruptible power supply (UPS). It was designed with the retailer's space constraints in mind requiring variation in height with a wall-mounting option in some cases. The retailer also added high-quality valve-regulated lead-acid (VRLA) battery banks to create a UPS lifespan of up to 10 years, which is a common upgrade cycle for many retailers.

While the comfort cooling system of the warehouse-like computing spaces was enough to keep the equipment from overheating, the design of the new server racks supported the

retailer's approach to thermal management. Vents in the doors help keep air circulating and racks at an optimal temperature. The doors also have filters to catch airborne contaminants and keep the IT equipment clean enough to be covered by the supplier's warranty. These server racks meet the International Electrotechnical Commission's (IEC) IP54 standard, meaning that water droplets from a leaky roof won't get into the rack and stop it from working. In some stores in which the conditions of the edge computing space were particularly dynamic or volatile, the retailer also implemented Vertiv™ Environet™ Alert monitoring software, a solution they hope to centralize in the future for broader system visibility that helps ensure availability.

Results

Although the new infrastructure is still being rolled out to storefronts throughout Europe, the retailer has already seen some early benefits of the integrated solution.

By standardizing the infrastructure in its protective server rack, this retailer not only improved its cooling of IT equipment, but it realized time savings during deployment and installation. In fact, the included software only had to be configured on the first deployment which saved the retailer up to an hour on subsequent installations.

Adding environmental monitoring software has also created a more stable, available network by allowing the retailer's IT team to better manage energy consumption and optimize operation of their distributed network. It reduces the strain on internal resources by streamlining troubleshooting and maintenance.

The upgrade project is part of this retailer's digital transformation, which is ultimately aimed at improving customer service and its market share.

Key Benefits of Liebert® GXT5 UPS

- Compact and flexible rack/tower design with convenience of plug and play installation
- Very high efficiency for optimized energy management and lower heat dissipation driving energy and cost savings
- Unity power factor provides more active power enabling more connected loads, saving space and cost

Go online to learn more about how Vertiv edge solutions can address retail IT challenges.