A GERMAN DISCOUNT RETAILER

A Vertiv Case Study

VERTIV™

STANDARDIZED, FLEXIBLE, ECOLOGICAL AND SUSTAINABLE: VERTIV IS EQUIPPING A DISCOUNT FOOD RETAILER'S DATA CENTERS, LOGISTICS CENTERS AND STORES WITH INTEGRATED RACKS AND PDUS[1] THROUGHOUT EUROPE

The background

For this discount retailer with a network of stores, information technology is absolutely essential for click & collect, digital signatures, location-based services, intelligent cash register systems and smooth merchandise logistics. In order to be able to make use of the key success factors of digitization, a high-performance, fail-safe IT- infrastructure, either in a data center, server room or edge computing environment in stores, is vital.

That's why this German discount retailer, with around 10,000 stores in more than 20 European countries, chose Vertiv as a worldwide partner to supply, set up, configure and handle overall project management of an IT infrastructure for business-critical processes.

The challenge
Standard IT infrastructure solutions and services available Europe-wide

Even in a discount retail environment, discerning customers require a consistent multi-channel strategy, the best possible service on the ground and trouble-free logistics. What's more, a failure of cash register, merchandise information or storage systems means lost sales. In the worst case, this could even result in data losses, which would have a negative impact on the company's image. For a discount food retailer with around 10,000 stores throughout Europe and an online-shop, the security and availability of IT infrastructures is a crucial success factor. That's why this German retailer was looking for a reliable solution and service partner, which could cover the entire European area with integrated standard solutions for data centers and edge computing. On the basis of a successful shared history, the chain opted for Vertiv, which was still Emerson Network Power at the time. The international company won the discount retailer over with its flexible, modern and energy-efficient racks and PDUs, as well as its Europe-wide support network. At the same time, the data center specialist was able to produce and configure the required number of racks to individual specifications in its own German factory.

The solution
Integrated server racks produced to the client's specifications

An overview of the solution

- Knürr DCM Racks
- Knürr DI-Strip PDUs
- Knürr DCL Rack Cooling Units

The requirements:

Security, energy-efficiency and performance for Europe-wide IT infrastructures, integrated standard solutions, international project management

The results and advantages:

- Individually configurable standard server racks
- Integrated cooling units and interfaces with the UPS solution
- Reliability at operating temperatures of up to 60° C
- ¼ less energy consumption with green PDUs
- Repairs and maintenance taking less time and at a lower cost
- Less space taken up by individually adaptable cable routing

1 Power Distribution Units

The data center, logistics centers and stores in Germany were gradually equipped with racks, PDUs and integrated room cooling units. Approximately 250 racks and 500 PDUs were installed in the data center, while 20 racks and 40 PDUs were installed in the warehouses. Depending on their size, stores themselves were equipped with between two and eight server racks. The advantage of the globally available racks: They are suitable for use in both large and small data centers, as well as for use as a "data center in a box" on the edge of the network in stores. The rack's technical configuration and/or ducting is produced to suit the client's specifications. The integration of active and passive components, such as temperature and moisture sensors, for example, as well as preparatory work for cable distribution and configuration takes place in Germany. The racks are then delivered to all sites, with compatible interfaces for the UPS system, to a uniform standard and with the same level of quality. The contract includes not only delivery and set-up of the integrated racks, but also overall project management within Europe. The discount retailer's data centers in Italy, Spain and Romania have already been equipped with racks and PDUs and further sites are planned.

International standards facilitate maintenance and repair – Remotely and on site

Management of data centers, as well as server rooms within logistics centers and stores is easily possible via remote management. All sites, including in Italy, Spain and Romania are monitored and controlled from the IT Headquarters in Germany. In the event of an unexpected network failure or issue, the relevant data center or IT Manager at headquarters has remote access to all devices, including servers, switches and intelligent power distributors, and is able to conduct troubleshooting from Germany.

The respective sites and other information is visible on a map-like display:

- What kind of devices are there in which locations?

- Where are these devices mounted in the rack?

- How are these devices cabled?

The standardized easy-to-use solutions, from a single source, save time, reduce the complexity of the IT infrastructure and thereby repair costs. Working with the components on site is the same everywhere – a great advantage for service engineers.

Green PDUs
Increased energy efficiency and lower costs

Compared with other providers solutions, the PDUs have one great advantage: Excellent reliability at operating temperatures of up to 60° C, as well as maximum energy efficiency. On average, the power distributors only use a quarter of the usual energy. Projected over ten years, with around 100 PDUs, this alone results in a saving of approximately 45,000 Euros. Thanks to this successful cooperation, another joint project is already at the planning stage: Container data centers. These systems combine infrastructures and IT systems in standard containers. Existing data centers can be expanded using container modules and new freestanding all-in-one data centers can be rapidly set up as required. In this case, racks, PDUs and cooling units are already included in the modules as standard. Thanks to this innovative concept, as well as energy-efficient and fail-safe operation of the entire IT infrastructure, nothing stands in the way of the successful discount retailer's further expansion in terms of IT.

"With this pan-European retail project, we were once again able to demonstrate that we are able to deliver technologically sophisticated and energy-efficient solutions with simultaneously reliable international service and support, on favorable terms."

Hans Obermillacher, Sales Director | Racks & Integrated Solutions | Europe, Middle East & Africa