

Leading Global Retailer Improves Resiliency and Asset Management With Edge Computing Solution



A Vertiv Case Study



The retail industry has seen its share of volatility in recent years. As consumer tastes change, retail storefront operations and online purchasing networks merge and work in tandem to optimize the customer experience. Pandemic-driven restrictions are also causing retailers to rethink the way consumers purchase goods in their stores. Those retailers who constantly innovate and digitize seem to be thriving while those who remain mired in traditional approaches are either struggling or losing their businesses entirely.

One large global retailer that designs and sells ready-to-assemble furniture, kitchen appliances, and home accessories has managed to grow, despite all of these marketplace challenges. The company continues to generate billions of dollars in annual sales through hundreds of storefronts and an extensive online e-commerce network. With billions of website visits and millions of in-person store visits each year, the retailer's ability to maintain IT system uptime has emerged as a critical success factor.

Challenge

Shifting IT Processing Power Closer to the End Customer

As new technologies such as in-store kiosks and augmented reality displays have multiplied in recent years, the retailer's technology team was searching for innovative ways to offload its use of centralized and cloud data centers for managing hundreds of remote "brick and mortar" storefronts. Additionally, stores continued to generate higher volumes of local, customer-related data, requiring the company to implement a more distributed data processing model for supporting the stores. Heavy use of centralized and cloud data centers to support these stores was deemed too costly. Accelerating network traffic fees and technical bandwidth limits were causing latency issues that could potentially impact in-store customer transactions.

In order to bolster its in-store edge computing environment, the retail team turned to longtime technology partner and Vertiv partner, Hewlett Packard Enterprise (HPE).

Already embracing technology to elevate the customer experience, this retailer looked to its trusted partners for innovative, critical digital infrastructure tailored to meet the increasing data processing requirements of its in-store network edge — a solution that enabled improved system reliability and asset management while offsetting the company's rising data center support costs.

Solution

Demystifying New Edge Computing Management Challenges

As the retailer's IT team collaborated with HPE experts, it became apparent that the retailer wanted to address three important business requirements: lower support costs, easier manageability and maximum uptime.

Based on those requirements, the HPE team engaged Vertiv for its domain expertise prior to proposing two servers in one small rack for each of the retailer's stores. Within those racks, the team configured two key components: a Vertiv-manufactured and HPE-labeled serial console (a control switch to enable remote management of IT devices) and the Vertiv™ Avocent® DSView™ management software.

In helping HPE and the retailer's IT team to craft a solution, Vertiv offered the technical knowledge required for rapid and comprehensive beta testing. With teams of engineers working together, three new features requested by the retailer's IT team were issued and tested within a period of 72 hours. The purpose of validating and rolling out these new features was to allow the retailer's IT team to manage its remote edge computing systems.

Results

The configured solution would enable the retailer's IT team to achieve all three of its key objectives. In fact, once the systems began rolling out to stores, the team immediately realized several advantages:

Increased System Resiliency

The retailer's IT departments rely on traditional, terrestrial internet networks to remotely communicate from the company's central data centers to the system in each of its stores. In the event of a catastrophic network outage, the serial console, working with a rack-based 4G cellular mobile solution, enables a backup method of system access. The retailer's IT team is still able to remotely access its edge racks and servers and can access the necessary network interface needed to reboot routers and switches, manage storage, and fulfill other important systems management duties. This added layer of redundancy provides built-in resiliency by drastically minimizing instances of unanticipated downtime in the stores.

Reduced Support Costs

When a customer purchases an HPE server, it comes with a standard three-year warranty. However, if uplifted warranty services such as a five-year HPE Foundation or Proactive Care is purchased on the server, those warranty services are also extended to the physical infrastructure components configured with that server. HPE power distribution units, uninterruptible power supplies, and serial consoles connected to an HPE server inherit the same uplifted service at no additional cost.

This was the unique selling point that allowed HPE to rise above the competition when submitting its proposal. The retailer avoided the time and expense of having to negotiate multiple separate extended warranties for the additional equipment in the rack. The IT team only has to interface with one resource, HPE, for any maintenance issues surrounding any of these new edge computing servers across the globe.

Simplified Management

When HPE packaged the Avocent DSView management software into its solution, it was for the purpose of simple remote management of the serial consoles. The software allows the retailer's IT team to perform centralized management for thousands of its connected HPE edge computing systems. Therefore, systems administrators can reboot serial consoles from any location, as well as dispatch hundreds of firmware and driver updates simultaneously with the simple push of a button. The retailer's IT team can assign management responsibilities to designated groups, regionally. For example, it can choose to manage the serial consoles by country or store size groupings.

Tailored Solution via Collaboration

Today, as the HPE edge computing systems — developed collaboratively by Vertiv, HPE and the retailer — continue to roll out across the retailer's network of stores, the regional IT teams can rest assured they have the tools in place to maximize storefront uptime.

See how [HPE edge computing solutions](#) and [Vertiv edge solutions](#) support your retail modernization project.

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