Solution brief

Delivering real-time insights for retail at the edge

HPE ProLiant DL145 Gen11 server

Creating integrated shopping experiences

The retail industry is undergoing a significant transformation driven by the need to integrate digital and physical shopping experiences. Retailers are increasingly leveraging technology to enhance customer engagement, streamline operations, and gain real-time insights into consumer behavior. This shift necessitates robust and flexible IT infrastructure capable of supporting diverse and dynamic retail environments.

Retailers face several challenges in today's competitive landscape:

Why edge computing matters

Edge computing brings computation and data storage closer to the location where it is needed, which is crucial for retail environments. This proximity reduces latency, enhances data security, and ensures faster processing of critical business applications. By minimizing reliance on centralized cloud infrastructure, edge computing enables real-time insights and actions, which are essential for modern retail operations. Edge computing can address several key priorities:

- **Data security and compliance:** Processing and storing sensitive information closer to its source helps reduce the risk of data breaches and ensures better compliance with data protection regulations.
- **Operational efficiency:** By processing data locally, edge computing reduces the reliance on cloud or centralized infrastructure, which in turn lowers latency and improves the speed of data-driven decisions.
- **Real-time inventory management:** Enabling real-time updates to inventory levels, ensuring that stock information is always accurate and up to date; this approach reduces the chances of stockouts or overstock situations.
- **Personalized customer interactions:** Processing data from various touchpoints, such as in-store sensors, cameras, and online activities, enables retailers to deliver personalized recommendations and promotions.
- **Support for emerging technologies:** Providing a robust infrastructure for deploying AI applications and IoT devices; for instance, AI can be used for vision-based asset protection, detecting fraudulent activities, and optimizing store layouts using video analytics.

Supporting core business apps and future AI workloads

Edge computing is well suited to support a wide range of business applications, including point-of-sale systems, inventory management, and customer analytics. Additionally, it provides the necessary infrastructure to support future AI workloads such as vision AI for asset protection and video analytics for fraud prevention. This capability ensures that retailers can stay ahead of technological advancements and continue to innovate.

Future-proofing business operations at the edge

By leveraging edge computing, retailers can drive innovation and maintain a competitive edge in a rapidly evolving market. With the right flexibility, retailers can quickly adapt to new technologies and market trends.

Introducing HPE ProLiant DL145 Gen11

Unleash real-time insights with edge compute. Innovate today and for the future.

HPE ProLiant DL145 Gen11 server with AMD EPYC™ 8004 Series processors is a compact, affordable, and powerful edge server designed to support critical business applications, virtualization, and AI workloads, making it ideal for diverse industry locations like retail.

— **Compact and resilient design:** The server is designed to fit seamlessly into various edge locations, including store cabinets, racks, or wall mounts — making it highly adaptable to the physical constraints of retail environments.

— **Powerful processing:** Equipped with AMD EPYC 8004 Series processors, the server offers a range of energy-efficient CPUs with eight to 64 cores. This provides robust performance for demanding retail applications, ensuring the server can handle high-performance computing tasks efficiently.

— **Advanced GPU acceleration support:** HPE ProLiant DL145 Gen11 server is AI-ready and supports up to three single-wide GPUs. This enables advanced analytics and machine learning capabilities, which can enhance customer experiences and operational efficiency through applications such as vision AI and video analytics.

— **Scalability:** The server supports up to 128 virtual machines (VMs) and 480 containers, allowing retailers to scale their IT infrastructure as their business grows, providing flexibility and future-proofing.

— **Ease of management:** Features such as low-touch provisioning and integrated management tools such as HPE Compute Ops Management and HPE iLO simplify deployment and ongoing management. This makes it easier to manage a distributed compute environment with global visibility from a unified console.

— **Environmental tolerance:** The server is designed to withstand shock and temperature variations, and it includes optional dust filters. This makes the HPE ProLiant DL145 Gen11 server suitable for diverse retail environments, ensuring reliable operation under various conditions.

— **Security:** The HPE ProLiant DL145 Gen11 offers multilevel security with AMD Infinity Guard, AMD Secure Processor, and silicon root of trust from HPE. These features ensure the protection of sensitive customer and business data, providing peace of mind for retailers.

Get started today

The HPE ProLiant DL145 Gen11 server is an ideal solution for retail businesses looking to enhance their edge computing capabilities. The server offers robust performance, security features, and ease of management, making it a valuable asset for modern retail environments. By leveraging the power of edge computing, retailers can address their top priorities and drive business success at the edge.

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