Hewlett Packard Enterprise | AMD

Solution brief

Achieve next-level security features, performance, and efficiency

HPE ProLiant Compute Gen12 with 5th Gen AMD EPYC processors—engineered for the hybrid world

Always on your mind?

In the fall of 2024, the HPE Business Transformers Community surveyed 700+ enterprises and small/medium businesses, gathering information from executives, data scientists, security officers, cloud architects, and developers. When asked about the challenges they face, nearly half of those surveyed said the following pain points were always on their minds:

- **Server vulnerabilities.** Need to ensure physical security in the on-premises data centers and at edge locations, as well as protect against access by unauthorized personnel and cyberattacks.
- **Lack of visibility and timely insights into server operations.** Need to better manage server lifecycle updates; gain a deeper understanding of compute utilization, costs, and energy use; and ensure seamless connectivity across diverse infrastructure in multicloud environments.
- **Enabling new use cases/workloads.** Must adapt and align current server resources to the desired use cases, including AI, edge, virtualization, and virtual desktop infrastructure (VDI).
- **Overcoming inefficiencies.** Need to boost efficiencies in performance, costs, energy use, staffing, and more.[1]

Most of the individuals surveyed believed their IT teams could address these issues if they had innovative IT solutions that enable transformation.

Designed to deliver the next-level security, performance, and efficiency that organizations need to drive innovation and support transformation company-wide, HPE ProLiant Compute Gen12 with 5th Gen AMD EPYC™ processors is the answer to today's top business challenges. With HPE ProLiant Gen12 systems powered by AMD technology, organizations can:

- **Defend against attacks with multilayer security features.** Count on the HPE iLO multilayer silicon root of trust to protect servers from manufacturing through end-of-life, while providing compliance readiness for future quantum-computing attacks. Trust AMD Infinity Guard,[2] built-in at the silicon level, offering advanced capabilities to help defend against internal and external threats and keep your data safe.

[1] This is a private online research community, facilitated by C Space and managed by HPE's Competitive, Customer and Market Intelligence (C2MI) team.

[2] GD-183A: AMD Infinity Guard features vary by EPYC™ Processor generations and/or series. Infinity Guard security features must be enabled by server OEMs and/or Cloud Service Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at amd.com/en/products/processors/server/epyc/infinity-guard.html.

- **Boost performance by up to 41% per watt (compared to HPE Gen10 systems).**[3] Get the higher performance required for new AI and edge workloads, as well as boost VDI efficiency, all while saving space and consuming less energy. Benefit from 2 DIMM slots per channel (2DPC), as well as support for up to 400 watts in HPE Gen11 systems and 500 watts in HPE Gen12 systems.
- **Increase IT productivity with new AI-driven insights.** Enable operators to react quickly and gain greater control—from forecasting energy costs to managing a global server footprint.

Figure 1. The HPE ProLiant Compute DL325 Gen12 with 5th Gen AMD EPYC processors

Supporting essential business applications

Delivering exceptional value, the 1U/1P HPE ProLiant Compute DL325 Gen12 with 5th Gen AMD EPYC processors is an excellent choice for running a variety of workloads, including:

- **Enterprise risk management (ERM)**, helping your security team identify and manage risks that could impact your organization.
- **Customer relationship management (CRM)**, enabling you to improve customer interactions to enhance loyalty and sustain long-term relationships.
- **Digital services**, including digital marketing, e-commerce, online education, online banking, and streaming media.

This affordable yet powerful server is delivered in a short-depth form factor, making it a smart choice for any location, including edge and near-edge sites.

Figure 2. HPE ProLiant Compute DL345 Gen12 with 5th Gen AMD EPYC processors

Powering demanding virtualization workloads

Offering large memory capacity and a scalable 2U chassis, HPE ProLiant Compute DL345 with 5th Gen AMD EPYC processors is the perfect choice for powering a wide range of data-intensive workloads, including:

- **VDI**, where desktop environments are hosted on a central server; each desktop image runs within a virtual machine (VM) and is delivered to endpoint devices (such as tablets or PCs) over a network; common use cases include secure access for remote workers and managing diverse user needs across call centers, healthcare organizations, and other highly regulated organizations.
- **Hybrid cloud**, where your on-premises private cloud runs in concert with the public cloud to support a wide range of use cases including digital transformation, disaster recovery, dev/test activities, edge computing, and (of course) AI.
- **End-to-end database management,** keeping your data organized and accessible to users through efficient storage and retrieval, supporting digital transformation, data migration, AI, analytics, and more.
- **Endpoint management**, helping ensure all devices connected to your network are secure and compliant with your organizational policies, while also simplifying device onboarding, managing remote work, and deploying and updating applications.
- **Lifecycle management**, for optimizing and prioritizing your organizational data, from acquisition to disposal.

This flexible server is ready to grow with your business, as your applications and workloads evolve.

[3] The performance per watt advantages are based on internal power and performance measurements on similar configured high energy efficient servers and compared against an estimated 86-core Gen12 system.

Exclusive HPE Gen12 advancements

Regardless of which AMD CPU-powered HPE ProLiant Gen12 model you choose, you will benefit from a server architected with exclusive technology advancements for:

Table 1. Exclusive technology advancements in HPE ProLiant Compute Gen12 systems

Security	Optimization	Automation
• **Secure enclave in HPE iLO 7** for multilayer protection • **Built-in AMD Infinity Guard**, for defending against internal and external threats • **Top-tier security features** that meet the requirements for FIPS 140-3 Level 3 • **Post-quantum-readiness** support for NIST and CNSA 2.0 • **Proactive security management** via HPE Compute Ops Management • **Trusted supply chain** at rack and server levels • **Secure decommissioning**, with on-site collection services available	• **Direct liquid cooling (DLC)** for AMD CPU-based 1- and 2-socket rack servers • **Automated, on-demand** carbon footprint reporting • **Ideal compute power / energy-saving design**, delivering optimal compute power for your workloads; enables easy cooling, reduced energy costs, and superior performance • **Ability to modernize your data center** with AMD; based on AMD reference systems, certain workloads can use up to 68% less power, with up to 87% fewer servers, and up to 67% lower 3-year TCO[4]	• **Next-generation HPE iLO 7** for an improved user experience with faster boot and response times • **Predictive AI insights** for forecasting future energy and carbon usage • **Threshold-based alerting** for critical energy and carbon limits • **Improved map-based visibility** via a unified global map view • **Multivendor management** integration with third-party toolsets

[4] AMD estimate, 9xx5TCO-002A, How your next data center pays for itself.

Learn more

Contact your HPE representative today to learn how your organization can benefit from next-level security, performance, and efficiency delivered by HPE ProLiant Compute Gen12 with 5th Gen AMD EPYC processors.

You can also visit HPE.com/us/en/solutions/AMD.html

Visit **HPE.com**

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