HPE ProLiant DL580 Gen10 Server

ProLiant DL Servers

What's new

- Support for the new Intel Xeon Scalable Gold 6143 and Intel Xeon Scalable Platinum 8165 processors which support core boosting

- Support for up to 24 HPE 16 GB NVDIMMs

Overview

Looking for a highly scalable, workhorse server to address your database, storage, and graphics intensive applications? The HPE ProLiant DL580 Gen10 Server is a secure, highly expandable, 4P server with high-performance, scalability and availability in a 4U chassis. Supporting the Intel® Xeon® Scalable processors with up to a 28% [1] performance gain, the HPE ProLiant DL580 Gen10 Server delivers greater processing power than previous generations. This provides up to 6 TB of 2666 MT/s memory with up to 66% greater memory bandwidth [2], up to 16 PCIe 3.0 slots, plus the simplicity of automated management with HPE OneView and HPE iLO 5. HPE ProLiant DL580 Gen10 Server is

the ideal server for business-critical workloads and general 4P data-intensive applications where the right performance is paramount.

Features

Scalable Performance In An Expandable 4U Form Factor

The completely redesigned HPE ProLiant DL580 Gen10 Server provides 4P computing in an expandable 4U form factor and supports up to four Intel Xeon Platinum and Gold processors which provide up to 28% [1] more processor performance and 17% [3] more cores than the previous generation.

Up to 48 DIMM slots which support up to 6 TB for 2666 MT/s HPE DDR4 SmartMemory. HPE DDR4 SmartMemory improves workload performance and power efficiency while reducing data loss and downtime with enhanced error handling.

Choice of HPE FlexibleLOM Adapters offers a range of networking speeds (1GbE to 25GbE) and fabrics so you can adapt and grow to changing business needs.

HPE Innovation with Intelligent System Tuning enhances workload performance using customized profiles to tune internal resources; improves workloads such as high frequency trading with jitter smoothing and provides added performance with core boosting SKUs.

Remarkable Expandability and Availability For Multiple Workloads

HPE ProLiant DL580 Gen10 Server has a flexible processor tray allowing it to scale up from one to four processors as needed, saving on upfront costs and the flexible drive cage design supports up to 48 Small Form Factor (SFF) SAS/SATA drives and a maximum of 20 NVMe drives.

Supports up to 16 PCIe 3.0 expansion slots including up to four full length/full height graphics processing units (GPUs), as well as networking cards or storage controllers offering increased expandability.

Up to four, 96% efficient HPE 800W or 1600W [4] Flex Slot Power Supplies which enable higher power redundancy with 2+2 configurations and flexible voltage ranges.

Secure and Reliable

HPE iLO 5 enables the world's most secure industry standard servers with HPE Silicon Root of Trust technology to protect your servers from attacks, detect potential intrusion and recover your essential server firmware securely.

Millions of lines of firmware code run before server operating system boots and with Runtime Firmware Validation; enabled by HPE iLO Advanced Premium Security Edition, the server firmware is checked every 24 hours verifying validity and credibility of essential system firmware.

Secure Recovery allows server firmware to roll back to the last known good state or factory settings after detection of compromised code.

Additional security options are available with, Trusted Platform Module (TPM), to prevent unauthorized access to the server and safely stores artifacts used to authenticate the server platforms while the Intrusion Detection Kit logs and alerts when the server hood is removed.

Agile Infrastructure Management for Accelerating IT Service Delivery

HPE ProLiant DL580 Gen10 Server combined with the HPE OneView software provides infrastructure management for automation simplicity across servers, storage and networking.

A suite of embedded and downloadable tools is available for server lifecycle management including Unified Extensible Firmware Interface (UEFI), Intelligent Provisioning; HPE iLO 5 to monitor and manage; HPE iLO Amplifier Pack, Smart Update Manager (SUM), and Service Pack for ProLiant (SPP).

Services from HPE Pointnext Services simplify all stages of the IT journey. Advisory and Transformation Services professionals understand customer challenges and design an better solution. Professional Services enables rapid deployment of solutions and Operational Services provides ongoing support.

HPE IT investment solutions help you transform to a digital business with IT economics that align to your business goals.

Technical specifications   HPE ProLiant DL580 Gen10 Server

Processor	Intel® Xeon® Scalable processors
Processor core available	28 or 26 or 24 or 22 or 20 or 18 or 16 or 14 or 12 or 10 or 8 or 6 or 4, per processor, depending on model
Processor cache	13.75 MB L3 or 16.50 MB L3 or 19.25 MB L3 or 22.00 MB L3 or 24.75 MB L3 or 27.50 MB L3 or 30.25 MB L3 or 33.00 MB L3 or 35.75 MB L3 or 38.50 MB L3, per processor, depending on model
Processor speed	3.6 GHz, maximum depending on processor
Power supply type	4 HPE Flexible Slot Power Supplies, maximum depending on model
Expansion slots	16 maximum, for detailed descriptions reference the QuickSpecs
Maximum memory	6.0 TB maximum
Memory slots	48 DIMM slots maximum
Memory type	HPE DDR4 SmartMemory
Included hard drives	none included
System fan features	12 (11+1) Hot plug redundant standard
Network controller	Optional FlexibleLOM
Storage controller	HPE Smart Array S100i or HPE Smart Array Controllers, depending on model
Minimum dimensions (W x D x H)	17.48 x 44.55 x 75.18 cm
Weight	51.71 kg
Infrastructure management	HPE iLO Standard with Intelligent Provisioning (embedded) and HPE OneView Standard (requires download) are included Optional: HPE iLO Advanced, HPE iLO Advanced Premium Security Edition and HPE OneView Advanced (optional require licenses)
Warranty	3/3/3 - Server Warranty includes three years of parts, three years of labor, three years of onsite support coverage. Additional information regarding worldwide limited warranty and technical support is available at: http://h20564.www2.hpe.com/hpsc/wc/public/home. Additional HPE support and service coverage for your product can be purchased locally. For information on availability of service upgrades and the cost for these service upgrades, refer to the HPE website at http://www.hpe.com/support

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HPE Pointnext leverages our breadth and depth of technical expertise and innovation to help to accelerate digital transformation. A comprehensive portfolio that includes—Advisory, Professional, and Operational Services is designed to help you evolve and grow today and into the future.

Operational Services

- **HPE Flexible Capacity** is a new consumption model to manage on-demand capacity, combining the agility and economics of public cloud with the security and performance of on-premises IT.

- **HPE Datacenter Care** offers a tailored operational support solution built on core deliverables. It includes hardware and software support, a team of experts to help personalize deliverables and share best practices, as well as optional building blocks to address specific IT and business needs.

- **HPE Proactive Care** is an integrated set of hardware and software support including an enhanced call experience with start to finish case management helping resolve incidents quickly and keeping IT reliable and stable.

- **HPE Foundation Care** helps when there is a hardware or software problem offering several response levels dependent on IT and business requirements.

Advisory Services includes design, strategy, road map, and other services to help enable the digital transformation journey, tuned to IT and business needs. Advisory Services helps customers on their journey to Hybrid IT, Big Data, and the Intelligent Edge.

Professional Services helps integrate the new solution with project management, installation and startup, relocation services, and more. We help mitigate risk to the business so there is no interruption when new technology is being integrated in the existing IT environment.

[1] Intel measurements. Up to 28% performance increase of Intel Xeon Platinum versus previous generation E7-8800 v4 average performance based on generational gains on HPE servers comparing 4-socket Intel Xeon Platinum 8180 to E7-8890 v4 family processors. Any difference in system hardware or software design or configuration may affect actual performance. May 2017.

[2] Percentage compares Gen10 vs Gen9: Gen10 = 12 Channels x 2666 data rate x 8 bytes = 256 GB/sec. Gen9 = 8 channels x 2400 x 8 bytes = 154 GB/sec. 256/154 = 1.66 or Gen10 is 66% greater bandwidth, July 2017.

[3] Up to 17% performance increase of Intel Xeon Platinum versus previous generation comparing 4-socket Intel Xeon Platinum 8180 (28 cores) to E7-8890 v4 (24 cores). Calculation 28 cores/24 cores= 1.167 = 17%. August 2017.

[4] HPE 1600W Flex Slot Power supplies only support high line voltage (200V AC to 240V AC)