HPE PROLIANT DL360 GEN11 REVIEW: A POWERFUL LOW PROFILE RACK SERVER

HPE's ProLiant DL360 Gen11 has the muscle to handle a wide range of demanding workloads

SCORE ✪✪✪✪✪

IT Pro Verdict

Aimed at businesses seeking a rack-optimized powerhouse, HPE's ProLiant DL360 Gen11 targets a diverse range of workloads including databases, virtual desktop infrastructure (VDI), edge acceleration, exploratory data analysis (EDA), computer-aided design (CAD) and intelligent video analytics. Its slim-line 1U chassis sees a significant redesign over the five-year-old DL360 Gen10 and a sharp focus on thermal capacity allows it to support the latest 4th Gen Intel® Xeon® Scalable processors right up to Intel's top-dog 60-core Platinum 8490H
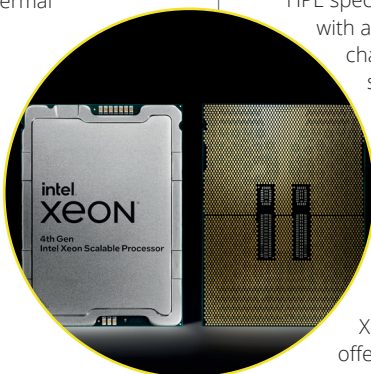
There's plenty more on the table as the server squeezes in 32 DIMM slots allowing it to support a maximum 8TB of HPE's DDR5 SmartMemory. Expansion potential looks good as along with support for up to three PCIe Gen 5 expansion slots, it also has room for two OCP 3 mezzanine cards.

Storage sees a shake-up as you can order chassis with a choice of LFF, SFF, NVMe U.3 SSDs and even have up to twenty E3.S EDSFF Gen5 NVMe SSDs in dual CPU configurations. A recently added bracket enablement kit brings GPU support into play too, with options to fit **different c**ards.

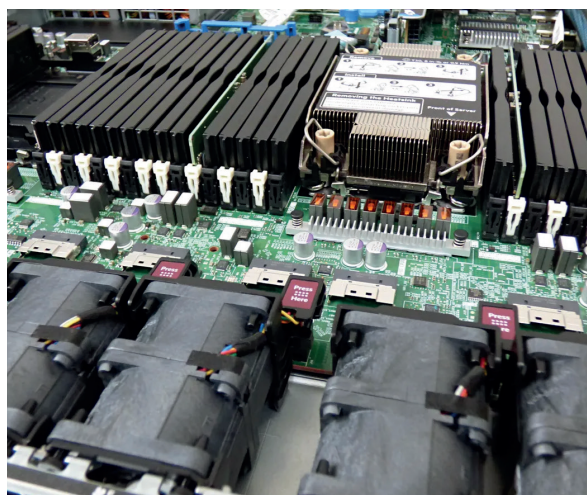## HPE ProLiant DL360 Gen11 review: Build and design

The server looks good value with prices starting at around £2,200. Designed to get you out of the starting blocks, the entry-level P60735-421 model sports a12-core 2GHz Xeon® Scalable Silver 4410Y processor, 32GB of DDR5 SmartMemory, four LFF drive bays and a single 800W hot-plug PSU.

HPE specced our review system with a CTO (configured to order) chassis furnished with the same Silver CPU and 64GB of DDR5 memory. From our experiences, the the Silver Xeon® Scalable processors are the sweet spot for general-purpose servers as the three models with 4th Gen Xeon® Scalable processors offer from ten to twenty cores and base speeds up to 2.7GHz while their maximum 165W TDP doesn't incur any chassis thermal restrictions.

The chassis is solidly built and removing the lid reveals a very tidy interior with the two CPU sockets positioned towards the

IT Pro Verdict

Pros
- Great internal design
- Good value
- Gen4 Xeon Scalable CPUs
- EDSFF support
- iLO6 management

Cons
- None

front of the motherboard and flanked on each side by banks of eight DIMM slots. Cable-related clutter is kept to an absolute minimum and all critical components are easily accessible for maintenance and upgrade maneuvers.

Cooling is handled by a bank of hot-plug fans behind the drive backplane and another advantage of the Silver Xeon® Scalable processors is they only require the standard kit of five fan modules so noise levels are pleasingly low. Specify CPUs with TDPs between 186W and 270W and you must move up to the seven-fan kit while HPE offers closed-loop and direct liquid cooling options for higher TDP CPUs.

HPE ProLiant DL360 Gen11 review: Management services

The DL360 Gen11 sports the latest iLO6 embedded controller which offers a wealth of remote management features and has a sharp focus on platform and supply chain security. Along with Secure Start and 'silicon root of trust' firmware fingerprinting, the iLO 6 SPDM (Security Protocol and Data Module) authenticates hardware components, flags up any 'hostile' devices, and uses policies to stop the boot process.

For general management, the iLO6 web interface is packed with status information on all the server's critical components. All ProLiant servers include a Standard license with an optional Advanced version enabling extra features such as real-time power and temperature metering, full OS remote control, and virtual media services.

We run HPE's OneView application on the lab's Hyper-V host which provides a central web console for all our HPE systems and options to monitor hypervisors, storage arrays, pools, and switches. We also run HPE's iLO Amplifier Pack on the same Hyper-V host which provides a separate web console for discovery, inventory, and compliance reporting forup to 10,000 Gen8, 9, 10, and 11 servers.

Our iLO Amplifier Pack app is also linked up with our HPE InfoSight cloud account so we can use its web portal to view details such as critical server health issues, general wellness, power status, and installed hardware. Last, but certainly not least, is HPE's GreenLake Compute Ops Management cloud service which presents a portal for viewing your entire infrastructure, managing server deployments, and automating system lifecycle compliance policies.

HPE ProLiant DL360 Gen11 review: Storage features

The DL360 Gen11 is available in four storage configurations with base models coming with four hot-swap front LFF drive bays. We have the eight SFF model on review which leaves room for HPE's optional media bay and dispensing with this frees up room for two more SFF bays.

The other alternative is HPE's 20-bay EDSFF option which presents the

devices in five banks of four across the front. Naturally, this requires a special backplane fitted but cabling is easy enough as the motherboard's eight embedded slim-SAS ports are neatly arranged across the front and as close as possible to the backplane.

HPE's TriMode backplanes bring SAS and NVMe device support into play and RAID options are plentiful with the standard embedded Intel VROC (Virtual RAID on CPU) supporting SATA drives plus stripes, mirrors, and RAID10/5 arrays in software. A wide choice of RAID cards is also available and our system was supplied with an MR216i-o Gen11 card nestling in the second OCP 3 slot.

HPE's NS204i-u Gen11 boot-optimized storage device is worth considering if you want to keep all your front drive bays free for data storage. Similar to Dell's BOSS-N1, it comes with two hot-plug 480GB M.2 NVMe SSDs, doesn't require a PCIe slot (although it does reduce the maximum slot count to two), and provides mirrored redundant storage for running an OS or hypervisor.

HPE ProLiant DL360 Gen11 review: Is it worth it?

HPE's ProLiant DL360 Gen11 is perfectly poised for rack-dense applications that need plenty of processing power. This 1U rack server is well-designed, it teams up great storage features with a

high expansion potential and the smart iLO6 controller unleashes a wealth of management and monitoring services.

HPE ProLiant DL360 Gen11 specifications

Chassis	1U rack
CPU	12-core 2GHz Intel Xeon Scalable Silver 4410Y (max 2)
Memory	64GB DDR5 SmartMemory (max 8TB with 2 CPUs)
Storage bays	8 x hot-swap SFF (max 10)
RAID	HPE MR216i-o Gen11 OCP 3
Storage included	2 x 480GB SFF SATA SSDs
Network	4 x Gigabit OCP 3
Expansion	3 x PCIe Gen 5, 2 x OCP 3 slots
Power	2 x 800W Platinum hot-plug PSUs
Management	HPE iLO6 Standard
Warranty	3Yr On-Site NBD