

# HPE ProLiant Gen11 rack and tower servers

Compute engineered for your hybrid world



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## Compute for your hybrid world

Choice of compute matters. A new approach is needed to thrive in the age of insight, where organizations must accelerate data-first modernization.

Your data is your source of business value. Realizing that value, however, requires the right choice of compute—one that delivers a cloud operating experience built from the ground up with a fundamental foundation security approach.

HPE ProLiant Gen11 servers are secure, efficient, optimized, and engineered for hybrid environments. They support distributed approaches, moving compute out of centralized data centers and deploying it as a backbone throughout your operations—across multiple clouds, multiple data centers, and at the edge.

It's simple to operate, with location-agnostic, cloud-based compute management helping ensure visibility and consistency despite increasingly diverse compute locations and workloads. And with HPE GreenLake, you can achieve a cloud experience and the IT resources you need when and where you need them.

### Intuitive cloud operating experience

Simplify the way you control compute from edge to cloud with a cloud operating experience. Transform business operations and pivot your team from reactive to proactive with global visibility and insight through a unified console. Automate tasks for efficiency in deployment, instant scalability, and seamless, simplified support, and lifecycle management. The next-gen HPE ProLiant is engineered with a cloud experience, no matter if you choose a CAPEX purchase or consumption model.

### Trusted security by design

From silicon to software, from factory to cloud, and from generation to generation, HPE Core Compute is engineered with a fundamental security approach to defend against increasingly complex threats. Protect your infrastructure, workloads, and data from threats to hardware and risks from third-party software with a trusted edge-to-cloud security posture built on an HPE compute core hardened through a proven, zero trust approach to security.

### A complete compute solution

Choose HPE Rack and Power Infrastructure options to complete your foundation for a modern and optimized IT environment. Hewlett Packard Enterprise delivers the right value where it matters, with:

- Racks in a variety of height, width, and depth options
- Power distribution units (PDUs) ranging from enterprise to basic
- Various sizes of uninterruptible power supplies (UPSs)
- Kernel-based virtual machine solutions and other rack accessories



#### HPE ProLiant MicroServer family

Affordable, compact, yet powerful entry-level server



#### HPE ProLiant ML family

The ideal choice for remote or branch offices and growing businesses



#### HPE ProLiant DL family

Secure and versatile rack-optimized servers delivering performance, expansion, and manageability



#### HPE ProLiant RL family

The next-generation of compute from HPE for cloud-native applications

### Optimized performance for your workloads

Get the performance to accelerate any workload—from the data center to the edge—with compute engineered for your hybrid environment. Deploy seamlessly with an open architecture while achieving optimal performance for demanding applications requiring the most advanced graphics and data acceleration. Achieve efficiencies and performance economics to supercharge your apps and accelerate innovation everywhere your data lives.

**Intuitive:** The next-gen HPE ProLiant is engineered with a cloud experience, no matter if you choose a purchase or consumption model.

**Trusted:** From silicon to software, from factory to cloud, and from generation to generation, HPE ProLiant is engineered with a fundamental security approach to defend against increasingly complex threats through an uncompromising focus to constant security advancements that's built into our DNA.

**Optimized:** Get the performance you demand to accelerate any workload—from the data center to the edge—with HPE ProLiant compute that's engineered for your hybrid environment.

### Why choose HPE ProLiant rack and tower servers?

HPE is committed to innovation, quality, and an excellent customer experience. Our approach to excellence in our innovation and quality is instilled across the product lifecycle, from our customer-first approach to design, to our supplier selection, quality, and management, to our world-class manufacturing and rigorous product testing, to our global support services and network of channel partners.

With HPE ProLiant rack and tower servers, you can deliver a flexible software-defined approach that is built on a foundation of intelligence beginning with the server. HPE ProLiant is that intelligent compute foundation for hybrid cloud, delivering unmatched workload optimization, security, and automation, all available as a service for your hybrid cloud infrastructure.

Servers are available in following families of servers:

- HPE ProLiant MicroServer
- HPE ProLiant ML
- HPE ProLiant DL
- HPE ProLiant RL

While all the families are designed to handle multiple workloads, **each server is optimized for specific use cases.**

HPE SMB ProLiant Offers, developed specifically with our customers in mind, are competitively and aggressively priced, in stock, and meets most small businesses purchasing patterns. These HPE SMB ProLiant Offers are regionally available as HPE Smart Buy Express Offers (NA), Top Value Offers (EMEA), or Intelligent Buy Offers / Intelligent Buy Express Offers (APJ) for the HPE ProLiant MicroServer, ML, and DL servers. A key part of this portfolio of HPE SMB ProLiant Offers is HPE Small Business Solutions built for on-premises and for hybrid cloud use cases. To make server deployment easy and fast, we offer HPE Rapid Setup, a feature within HPE intelligent provisioning that makes every new server deployment a snap including setting up HW RAID at a click of a button. It is a simple, automated process for consistent system installation, setup, and configuration—**offering faster installs.** Through the HPE Rapid Setup path, customers can also learn about how to purchase Azure and Office 365 public cloud services from HPE Pointnext Services.

### HPE ProLiant rack servers

The HPE ProLiant DL family of servers are the most flexible, reliable, and performance-optimized HPE ProLiant rack servers—ever. HPE continues to provide industry-leading compute innovations. The HPE ProLiant Gen10 rack portfolio, with flexible choices and versatile design, along with improved energy efficiencies, ultimately lowers your TCO. Integrated with a simplified, but comprehensive management suite and industry-leading support, the HPE ProLiant Gen10 rack portfolio delivers a more reliable, fast, and secure infrastructure solution, helps increase IT staff productivity, and accelerates service delivery. In addition, the rack portfolio is performance-optimized for multi-application workloads to significantly increase the speed of IT operations and enable IT to respond to business needs of any size, faster.

The HPE ProLiant Gen11 rack portfolio delivers:

- 2x more I/O bandwidth with more room for data and graphics accelerators<sup>1</sup>
- 33% more high performance GPU density per server to power next-gen workloads<sup>2</sup>
- 50% more cores per CPU for improved workload consolidation<sup>3</sup>
- Up to 5x faster server firmware updates<sup>4</sup>
- Up to 2.76x higher compute-intensive integer throughput performance compared to HPE ProLiant DL380 Gen10
- Up to 3.37x higher compute-intensive floating point throughput performance compared to HPE ProLiant Gen10
- Up to 2.2x more users for OLTP compared to HPE ProLiant Gen10
- Up to 1.68x higher virtualization performance with 19% better price/performance

### HPE ProLiant tower servers

The HPE ProLiant ML family of servers delivers simple, efficient business value and is the ideal choice for remote or branch offices and growing businesses. Industry-leading compute innovations include simple management and storage tools, along with proven configurations that provide easy remote access and improved energy efficiencies to lower your TCO. Integrated with a simplified but comprehensive management suite and industry-leading support, the HPE ProLiant tower portfolio delivers more business value and helps increase IT staff productivity and expedite service delivery. In addition, the complete, rightsized tower portfolio includes financing options, IT infrastructure support options, and a channel network to significantly increase the speed of IT operations and enable IT to respond to business needs faster.

The HPE ProLiant tower portfolio delivers:

- 2x more I/O bandwidth with more room for data and graphics accelerators<sup>5</sup>
- 33% more high performance GPU density per server to power next-gen workloads<sup>6</sup>
- 50% more cores per CPU for improved workload consolidation<sup>7</sup>
- Up to 5x faster server firmware updates<sup>8</sup>
- World record energy efficiency with the HPE ProLiant ML350 Gen11<sup>9</sup>

<sup>1, 5</sup> Comparison of bandwidth of PCIe Gen5 vs. PCIe Gen4

<sup>2, 6</sup> Compare of upcoming expanded GPU support of HPE ProLiant Gen11 with Intel® Xeon® Scalable processor to previous generation (4 double-wide GPUs to 3 double-wide GPUs)

<sup>3, 7</sup> Compared to previous Intel Xeon Scalable processor

<sup>4, 8</sup> ["Overcoming Complex System Management for Remote Locations Through Simplicity and Automation," Upshot, 2022](#)

<sup>9</sup> ["HPE extends next-gen HPE ProLiant portfolio with world record-breaking energy efficiency," HPE blog, 2023](#)

## HPE ProLiant generational evolution

**Table 1.** HPE ProLiant DL3x5 feature innovations (AMD-based)

Specification	Gen10 Plus (Rome)	Gen10 Plus v2 (Milan)	Gen11 (Genoa and Bergamo)
<b>CPU</b>	2nd Gen AMD EPYC™ processors—up to 64C 280W	3rd Gen AMD EPYC processors—up to 64C 280W	<b>4th Gen AMD EPYC processors—up to 128C 400W</b>
<b>PCIe</b>	128x PCIe Gen4 lanes / socket	128x PCIe Gen4 lanes / socket	128x <b>PCIe Gen5</b> lanes / socket
<b>Memory channels</b>	8x DIMM channels / processor Support for 2 DIMMs / channel	8x DIMM channels / processor Support for 2 DIMMs / channel	<b>12x DIMM channels / processor Support for 1 DIMM / channel</b>
<b>Memory support</b>	DDR4, up to 3200 MT/s 16 GB to 256 GB	DDR4, up to 3200 MT/s 16 GB to 256 GB	<b>DDR5, up to 4800 MT/s 16 GB to 256 GB</b>
<b>SAS/SATA support</b>	SFF/LFF	SFF/LFF	SFF/LFF
<b>NVMe</b>	Gen4 speeds, x1, x2, and x4 connections, U.2 & U.3	Gen4 speeds, x1, x2, and x4 connections, U.2 & U.3	<b>Gen5 speeds, x1, x2, and x4 connections, U.3 &amp; EDSFF drives</b>
<b>EDSFF</b>	No support	No support	<b>Gen5; E3.S 1T drives</b>
<b>Power supplies</b>	Up to 1600W	Up to 1600W	Up to <b>2200W</b>
<b>Cooling</b>	Air cooling	Air cooling	Air or <b>liquid cooling (for high wattage processors)</b>
<b>Management</b>	HPE iLO 5	HPE iLO 5	<b>HPE iLO 6 and HPE GreenLake for Compute Ops Management</b>

**Table 2.** HPE ProLiant DL3x0 feature innovations (Intel®-based)

Specification	Gen10	Gen10 Plus	Gen11
<b>CPU</b>	Up to 28C	Up to 40C	<b>4th Generation Intel Xeon Scalable processors—up to 60C HBM support</b>
<b>PCIe</b>	48x PCIe Gen3 lanes / socket	64x PCIe Gen4 lanes / socket	<b>80x PCIe Gen5</b> lanes / socket
<b>Memory channels</b>	6x DIMM channels / socket Support for 2 DIMMs per channel	8x DIMM channels / socket Support for 2 DIMMs per channel	8x DIMM channels / socket Support for 2 DIMMs per channel
<b>Memory support</b>	DDR4, up to 2933 MT/s 8 GB to 128 GB	DDR4, up to 3200 MT/s 8 GB to 256 GB	<b>DDR5, up to 4800 MT/s 16 GB to 256 GB</b>
<b>SAS/SATA support</b>	SFF/LFF	SFF/LFF	SFF/LFF
<b>NVMe</b>	Gen3; x4 connections U.2 drives	Gen4; x1, x2, and x4 connections U.2 and U.3 drives	<b>Gen5; x1, x2, and x4 connections U.3 and EDSFF drives</b>
<b>EDSFF</b>	No support	No support	<b>Gen5; E3.S 1T and 2T drives</b>
<b>Power supplies</b>	Up to 1600W	Up to 1600W	<b>Up to 2200W</b>
<b>Cooling</b>	Air cooling	Air cooling; DIMM blanks	Air and hybrid cooling; DIMM blanks
<b>Management</b>	HPE iLO 5	HPE iLO 5	<b>HPE iLO 6 and HPE GreenLake for Compute Ops Management</b>

**Table 3.** HPE ProLiant ML3x0 feature innovations (Intel-based)

Specification	Gen10	Gen11
<b>CPU</b>	Up to 2 Intel Xeon Scalable processors, 1st and 2nd Generations incl. R series, 4–28 cores (Bronze/Silver/Gold/Platinum)	Up to 2 4th Generation Intel Xeon Scalable processors—up to 60C (Bronze/Silver/Gold/Platinum)
<b>PCIe</b>	PCIe Gen3 up to 8 slots	<b>PCIe Gen5 up to 10 slots, 2 OCP 3.0 slot</b>
<b>Memory channels</b>	6 channels per processor	<b>8 channels per processor</b>
<b>Memory support</b>	24x DDR4, up to 2933 MT/s (3 TB max.)	<b>32x DDR5, up to 4800 MT/s (8 TB max.)</b>
<b>Storage / controller</b>	Embedded SATA software RAID Choice of Gen10 HPE Smart Array Controller	<b>Embedded Intel VROC NVMe/SATA Gen11 controllers (PCIe and OROC)</b>
<b>NVMe</b>	Gen3; x1 connections U.2 drives; no EDSFF support	<b>Gen4 (NVMe) / Gen5 x1, x2, and x4 connections</b>
<b>EDSFF</b>	No EDSFF support	<b>U.3 and EDSFF drives</b>
<b>Power supplies</b>	4 x 1GbE embedded + standup (1/10/25/100GbE)	<b>OCP + standup (1/10/25/100GbE)</b>
<b>Cooling</b>	Up to 1600W	Up to <b>2200W</b>
<b>Management</b>	HPE iLO 5	<b>HPE iLO 6 and HPE GreenLake for Compute Ops Management</b>

## HPE Gen11 technology portfolio

HPE ProLiant servers feature user-inspired innovations to make IT simpler,<sup>10</sup> including:

### Intuitive cloud operating experience

The intelligence built into HPE ProLiant simplifies and automates management tasks, establishing a solid foundation for an open, hybrid cloud platform enabled by composability.

- **HPE GreenLake for Compute Ops Management:** Seamlessly monitor, manage, and gain visibility of your distributed compute environment. Unify compute management, simplify and automate tasks, and secure compute operations with an intuitive cloud operating experience that's simple to use and can be managed via a single console using HPE GreenLake for Compute Ops Management.
- **HPE OneView:** A foundational element in the software-defined infrastructure of hybrid cloud environments, HPE OneView offers an automated, template-driven approach for deploying, provisioning, updating, and integrating compute, storage, and networking infrastructure.
- **HPE InfoSight:** Building on the operational data of tens of thousands of servers, HPE InfoSight provides continual artificial intelligence (AI)-driven insight and oversight to server operations, predicting and preventing problems before IT operations are impacted.
- **HPE iLO 6:** Embedded in HPE ProLiant servers, HPE iLO 6 is a core intelligence that monitors server status while providing the means for reporting, ongoing management, service alerting and local or remote management to quickly identify and resolve issues. In short, securely configure, monitor, and update your HPE ProLiant Gen11 servers seamlessly, from anywhere.
- **HPE iLO RESTful API:** HPE iLO uses a fully Redfish-conformant RESTful application programming interface (API) to provide simple and secure management for today's cloud- and web-based infrastructures across a wide variety of operations and orchestration tools from HPE and others.

### Optimized performance for your workloads

The foundational intelligence of HPE ProLiant transforms IT with insights that optimize workload performance, placement, and efficiency, delivering better outcomes faster.

- **Workload matching:** A standard feature of HPE ProLiant, workload matching encapsulates decades of HPE performance engineering expertise into preconfigured, user-selectable profiles that automatically optimize hundreds of BIOS setting combinations to precisely match server resources to workload requirements. Workload matching helps eliminate the trial-and-error—and risk—of server tuning, delivering the performance and efficiency of a server ideally suited to its workload tasks.
- **Workload performance advisor:** Changes in business requirements and workload characteristics can require adjustments to server resources. Workload performance advisor complements workload matching, providing real-time operational feedback on server performance plus recommendations for fine-tuning BIOS settings to adjust and optimize for changing business needs.
- **HPE Right Mix Advisor:** Built on the experience of over a thousand hybrid cloud engagements, HPE Right Mix Advisor delivers data-driven guidance to quickly and confidently move workloads to the right mix of hybrid cloud platforms, helping to optimize performance for business-specific needs and reduce costs.

### Trusted security by design

From silicon to software, from factory to cloud, and from generation to generation, HPE ProLiant is engineered with a **fundamental** security approach to defend against increasingly complex threats through an **uncompromising** focus to deliver constant security advancements that's built into our DNA. **Protect** your infrastructure, workloads, and data from threats to hardware, and risks from third-party software, with a trusted edge-to-cloud security posture built on an HPE compute core hardened through a proven, zero trust approach to security. HPE ProLiant provides an enhanced holistic, 360-degree view to security that begins in the manufacturing supply chain and concludes with a safeguarded, end-of-life decommissioning.

- **Secure supply chain:** HPE ProLiant security begins with the corruption-free manufacture of the server, auditing the integrity of every component—hardware and firmware—providing an assurance that the server begins its lifecycle uncompromised.
- **Silicon root of trust:** It anchors the essential firmware of HPE ProLiant to an ASIC even before the server is built, creating an immutable fingerprint that must be exactly matched before the server will boot. This helps ensure malicious code is contained and healthy servers are protected.
- **Server configuration lock:** Secured by a customer-supplied password, server configuration lock creates a digital fingerprint of the server configuration, preventing it from booting should there be an unauthorized configuration change or tampering detected.
- **Security dashboard:** A single interface to display the overall server security status, the current configuration for the security state, and server configuration lock plus the status of numerous security features, the security dashboard also provides access to change security alerts and manage settings.
- **Production to CNSA security modes:** Equipped with HPE iLO, HPE ProLiant provides four security modes—production, high security, FIPS 140-2, and Commercial National Security Algorithm (CNSA) (the highest-level cryptographic algorithm available for commercial systems).
- **Server system restore:** Should a server be compromised, the fastest path to bring it back online and into normal operations again is with HPE server system restore, a feature of HPE iLO. Server system automated recovery includes restoration of validated firmware, facilitated recovery of the operating system, application, and data connections.
- **One button secure erase:** When it's time to retire or repurpose an HPE ProLiant server, one button secure erase speeds and simplifies the complete removal of passwords, configuration settings, and data, preventing inadvertent access to previously secured information.



## **Choose your rack or tower server**

HPE ProLiant rack and tower servers are available in a variety of platforms to support different compute needs and workloads. The following charts help you compare the offerings within the HPE ProLiant rack and tower families. These charts are organized according to server needs.

- HPE ProLiant MicroServer
- HPE ProLiant 10 series
- HPE ProLiant 100 series
- HPE ProLiant 300 series
- HPE ProLiant 500 series

## Rack servers

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



**HPE ProLiant DL320 Gen11**



**HPE ProLiant DL325 Gen11**



**HPE ProLiant DL345 Gen11**

	HPE ProLiant DL320 Gen11	HPE ProLiant DL325 Gen11	HPE ProLiant DL345 Gen11
	New edge-centric compute	Low-cost performance solution	Single-socket scalable solution
<b>Workloads</b>	Data mgmt.; data collection; cold storage; virtualization, edge AI, VDI	Software-defined compute; CDN; low-end VDI	Software-defined storage; video transcoding
<b>Number of processors</b>	1	1	1
<b>Processors supported</b>	4th Generation Intel Xeon Scalable processors 3400, 4400, 5400, 6400, and 8400 series	4th Generation AMD EPYC 9004 Series processors	4th Generation AMD EPYC 9004 Series processors
<b>Cores per processor</b>	8 to 32 core, depending on processor	16/24/32/48/64/84/96/112/128	16/24/32/48/64/84/96/112/128
<b>Maximum processor frequency/ cache</b>	3.7 GHz / 60 MB L3	4.4 GHz / 384 MB	4.4 GHz / 384 MB
<b>I/O expansion slots</b>	2 PCIe Gen5 and 1 OCP 3.0 PCIe Gen5	Up to 2x16 PCIe Gen5 Up to 2 OCP slots; both x8 default	Up to 6x16 PCIe Gen5 Up to 2 OCP slots; both x8 default
<b>Maximum memory/# slots/ speed</b>	2 TB / 16/4800 MT/s	3 TB / 12/4800 MT/s	3 TB / 12/4800 MT/s
<b>Maximum HPE Persistent Memory</b>	N/A	N/A	N/A
<b>Maximum HPE Persistent Memory NVDIMMs</b>	N/A	N/A	N/A
<b>Storage controller</b>	Embedded Intel VROC HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available	HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available	HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available
<b>Maximum storage drive bays</b>	Up to 4 LFF SAS/SATA HDDs or SSDs. Up to 8+2 SFF SAS/SATA HDDs or SATA/SAS/NVMe U.2 or U.3 SSDs, depending on model. Optional embedded 2 M.2 Boot SSD. Optional RAID 1 NVMe M.2 Boot device (internal or external accessible from rear wall with 2x NVMe M.2 incorporated).	Front drive count • Up to 4 LFF HDD/SSD; SAS/SATA • Up to 10 SFF HDD/SSD; SAS/SATA/NVMe • Up to 20 EDSFF E3.S 1T NVMe	Front drive count • Up to 12 LFF HDD/SSD; SAS/SATA • Up to 24 SFF HDD/SSD; SAS/SATA/NVMe • Up to 36 EDSFF E3.S 1T NVMe Mid-tray drive count • Up to 8 SFF SAS/SATA/NVMe or up to 4 LFF SAS/SATA Rear drive count • Up to 2 SFF SAS/SATA/NVMe or up to 4 LFF SAS/SATA
<b>Maximum internal storage</b>	76.8 TB	307.2 TB (20 x 15.36 TB)	552.96 TB (36 x 15.36 TB)
<b>Networking ports (embedded) / option</b>	2 x 1GbE	No embedded networking. Option of OCP3 networking plus PCIe network adapter	No embedded networking. Option of OCP3 networking plus PCIe network adapter



## Rack servers (continued)

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



**HPE ProLiant DL320 Gen11**



**HPE ProLiant DL325 Gen11**



**HPE ProLiant DL345 Gen11**

	<b>HPE ProLiant DL320 Gen11</b>	<b>HPE ProLiant DL325 Gen11</b>	<b>HPE ProLiant DL345 Gen11</b>
<b>VGA/serial/USB/SD ports</b>	1/0/4/1	VGA (rear) / 1 optional serial (rear) / 5 USB 3.0 (1 front, 2 internal, 1 rear) / 0	VGA (rear) / 1 optional serial (rear) / 5 USB 3.0 (1 front, 2 internal, 1 rear) / 0
<b>GPU support</b>	N/A	Up to 2 single-wide 75W or 2 double-wide 350W	Up to 4 single-wide 75W or 2 double-wide 350W
<b>Form factor/chassis depth</b>	Rack (1U)/24.21"	Rack (1U) / 25.57" (SFF), 27.91" (LFF & EDSFF), 32.23" (GPU)	Rack (2U) / 25.45" (SFF & EDSFF), 26.11" (LFF), 31.45" (GPU)
<b>Power and cooling</b>	Up to 2 Flex Slot, redundancy optional, 500W, 800W, up to 96% efficient (Titanium); hot plug fans with optional redundancy	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, 1600W or 2200W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans and closed-loop liquid cooling heat sink for high-wattage processors.	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, 1600W or 2200W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans
<b>Industry compliance</b>	ASHRAE A3 and A4	ASHRAE A3 and A4, lower idle power, ENERGY STAR®	ASHRAE A3 and A4, lower idle power, ENERGY STAR
<b>System ROM</b>	UEFI Legacy BIOS	UEFI Legacy BIOS	UEFI Legacy BIOS
<b>Management</b>	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced, HPE OneView Advanced	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, Active Health System, Active System Health Viewing, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced HPE OneView Advanced	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update, RESTful Interface Tool, HPE iLO Amplifier Pack, Active Health System, Active System Health Viewing, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced; HPE OneView Advanced
<b>Serviceability—easy install rails</b>	Standard	Standard	Standard
<b>Warranty—(years) (parts/labor/on-site)</b>	3/3/3	3/3/3	3/3/3

## Rack servers (continued)

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



**HPE ProLiant DL360 Gen11**



**HPE ProLiant DL365 Gen11**



**HPE ProLiant DL380 Gen11**

	<b>HPE ProLiant DL360 Gen11</b>	<b>HPE ProLiant DL365 Gen11</b>	<b>HPE ProLiant DL380 Gen11</b>
	The dense compute standard for multiworkload environments	Rack-optimized dense solution	The industry-leading server for multiworkload compute
<b>Workloads</b>	IT infrastructure: physical, virtual, containerized	VDI, EDA/CAD; general-purpose virtualization	Collaborative, CRM, data mgmt., analytics and AI, VDI, SCM, ERM, and content mgmt., containers
<b>Number of processors</b>	1 or 2	1 or 2	1 or 2
<b>Processors supported</b>	Intel Xeon Scalable processor 8400, 6400, 5400, 4400, 3400 series	4th Generation AMD EPYC 9004 Series processors	Intel Xeon Scalable processor 8400, 6400, 5400, 4400, 3400 series
<b>Cores per processor</b>	8/12/16/18/20/24/28/32/36/40/44/48/52/56/60	16/24/32/48/64/84/96/112/128	8/12/16/18/20/24/28/32/36/40/44/48/52/56/60
<b>Maximum processor frequency/ cache</b>	3.7 GHz / 112.5 MB	4.4 GHz / 384 MB	3.7 GHz / 112.5 MB
<b>I/O expansion slots</b>	Up to 3 PCIe 5.0, 1 x 16, 1 x 8, 1 FH/¾ L, 1 FH/HL length	Up to 2x16 PCIe Gen5 slots Up to 2 OCP slots; both x8 default	Up to 8 PCIe 5.0
<b>Maximum memory / # slots / speed</b>	8 TB / 32/4800 MT/s	6 TB / 24/ 4800 MT/s	8 TB / 32/4800 MT/s
<b>Maximum HPE Persistent Memory</b>	N/A	N/A	N/A
<b>Maximum HPE Persistent Memory NVDIMMs</b>	N/A	N/A	N/A
<b>Storage controller</b>	Embedded Intel VROC HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available	HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available	Embedded Intel VROC HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available
<b>Maximum storage drive bays</b>	10 NVMe + 1 SFF or 8 + 2 + 1 SFF or 4 LFF + 1 SFF SAS/SATA HDD/SSD M.2 SATA/PCIe enabled, optional dual uFF M.2 enablement kits	Front drive count Up to 10 SFF HDD/SSD; SAS/SATA/NVMe Up to 20 EDSFF 3.5 1T	24 + 6 SFF SAS/SATA HDD/SSD or 12 + 4 + 3 LFF + 2 SFF SAS/SATA HDD/SSD or 20 NVMe PCIe SSD
<b>Maximum internal storage</b>	168+ TB	307.2 TB (20 x 15.36 TB)	462 TB
<b>Networking ports (embedded) / option</b>	No embedded networking. Option of OCP3 networking plus PCIe network adapter	No embedded networking. Option of OCP3 networking plus PCIe network adapter	No embedded networking. Option of OCP3 networking plus PCIe network adapter

## Rack servers (continued)

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



**HPE ProLiant DL360 Gen11**



**HPE ProLiant DL365 Gen11**



**HPE ProLiant DL380 Gen11**

	<b>HPE ProLiant DL360 Gen11</b>	<b>HPE ProLiant DL365 Gen11</b>	<b>HPE ProLiant DL380 Gen11</b>
<b>VGA/serial/USB/SD ports</b>	DisplayPort (front) VGA (rear) / 1 optional serial (rear) / 5 USB 3.0 (1 front, 2 internal, 1 rear); 1 USB 2.0 optional (front) / 1 SD port (internal)	VGA (rear) / 1 optional serial (rear) / 5 USB 3.0 (1 front, 2 internal, 1 rear) / 0	Display (UMB) VGA (optional) / 1/5 (2 optional) / 1
<b>GPU support</b>	Single-wide and active to 9.5" (2), up to 150W each	Up to 2 single-wide / 2 double-wide	Single-wide (8) / double-wide (3) and active/passive up to 10.5 cards
<b>Form factor / chassis depth</b>	Rack (1U) / 27.81" (SFF), 29.5" (LFF)	Rack (1U) / 25.57" (SFF), 27.91" (EDSFF), 32.23" (GPU)	Rack (2U) / 28.62" (SFF), 28.82" (LFF)
<b>Power and cooling</b>	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, or 1600W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, 1600W, or 2200W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, or 1600W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans
<b>Industry compliance</b>	ASHRAE A3 and A4, ENERGY STAR	ASHRAE A3 and A4, lower idle power, ENERGY STAR	ASHRAE A3 and A4, ENERGY STAR
<b>System ROM</b>	UEFI Legacy BIOS	UEFI Legacy BIOS	UEFI Legacy BIOS
<b>Management</b>	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack Optional: HPE InfoSight, HPE iLO Advanced, HPE OneView Advanced, HPE OneSphere, HPE GreenLake for Compute Ops Management	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, Active Health System, Active System Health Viewing, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced; HPE OneView Advanced	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced; HPE OneView Advanced, HPE OneSphere
<b>Serviceability—easy install rails</b>	Standard	Standard	Standard
<b>Warranty—(years) (parts/labor/on-site)</b>	3/3/3	3/3/3	3/3/3

## Rack servers (continued)

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



**HPE ProLiant DL380a Gen11**



**HPE ProLiant DL385 Gen11**

	<b>HPE ProLiant DL380a Gen11</b>	<b>HPE ProLiant DL385 Gen11</b>
	GPU-optimized solution	Accelerator-optimized solution
<b>Workloads</b>	AI Training & Inference, Content Analytics & Search, Mechanical CAD, Engineering Apps, and Network Infrastructure Software	AI/ML, HPE Telco, database analytics
<b>Number of processors</b>	2	1 or 2
<b>Processors supported</b>	4th Generation Intel Xeon Scalable processors	4th Generation AMD EPYC 9004 Series processors
<b>Cores per processor</b>	16/24/32/36/40/44/48/52/56	16/24/32/48/64/84/96/112/128
<b>Maximum processor frequency/ cache</b>	3.7 GHz/105 MB	4.4 GHz / 384 MB
<b>I/O expansion slots</b>	Up to 4x16 PCIe Gen5 slots Up to 2 OCP slots; both x16 default	Up to 8x16 PCIe Gen5 slots Up to 2 OCP slots; both x8 default
<b>Maximum memory / # slots / speed</b>	Up to 3 TB 24 DIMMs for DDR5 memory up to 4800 MT/s	6 TB/24/4800 MT/s
<b>Maximum HPE Persistent Memory</b>	N/A	N/A
<b>Maximum HPE Persistent Memory NVDIMMs</b>	N/A	N/A
<b>Storage controller</b>	HPE Gen11 Smart Array Controllers Tri-mode RAID controllers for NVMe drives PCIe and OROC form factors available	HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available
<b>Maximum storage drive bays</b>	Front Drive Count <ul style="list-style-type: none"> <li>• Up to 8 SFF NVMe</li> <li>• Up to 8 EDSFF E3.S</li> </ul>	Front drive count <ul style="list-style-type: none"> <li>• Up to 12 LFF HDD/SSD; SAS/SATA</li> <li>• Up to 24 SFF HDD/SSD; SAS/SATA/NVMe</li> <li>• Up to 36 EDSFF 3.S 1T NVMe</li> <li>• Up to 48 SFF HDD/SSD; SAS/SATA</li> </ul> Mid-tray drive count <ul style="list-style-type: none"> <li>• Up to 8 SFF SAS/SATA/NVMe or up to 4 LFF SAS/SATA</li> </ul> Rear drive count <ul style="list-style-type: none"> <li>• Up to 2 SFF SAS/SATA/NVMe or up to 4 LFF SAS/SATA</li> </ul>
<b>Maximum internal storage</b>	122.88 TB NVMe 61.44 TB EDSFF	737.28 TB (48 x 15.36 TB)
<b>Networking ports (embedded) / option</b>	N/A	No embedded networking. Option of OCP3 networking plus PCIe network adapter
<b>VGA/serial/USB/SD ports</b>	Front service port, 1 USB 3.0 Rear VGA and optional serial port, 2 USB 3.0 Internal USB 3.0	VGA (rear) / 1 optional serial (rear) / 5 USB 3.0 (1 front, 2 internal, 1 rear) / 0
<b>GPU support</b>	Up to 4 double-wide with the front GPU hybrid cage	Up to 8 single-wide 75W or 4 double-wide 350W
<b>Form factor / chassis depth</b>	2U 2P	Rack (2U)/ 25.45" (SFF & EDSFF), 26.11" (LFF), 31.45" (GPU)
<b>Power and cooling</b>	Up to 96% efficiency to 2200W	Up to 2 Flex Slot, redundancy optional, 800W, 1000W, 1600W, or 2200W; up to 96% efficient (Titanium); hot plug fans with full N+1 redundancy; optional high-performance fans
<b>Industry compliance</b>	ASHRAE A3 and A4, lower idle power, ENERGY STAR	ASHRAE A3 and A4, lower idle power, ENERGY STAR
<b>System ROM</b>	N/A	UEFI Legacy BIOS
<b>Management</b>	Converged: HPE OneView and HPE iLO Advanced Supported: HPE Insight Online with enhanced mobile application Embedded: HPE iLO 6, SUM, RESTful Interface Tool, UEFI	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, Active Health System, Active System Health Viewing, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced; HPE OneView Advanced
<b>Serviceability—easy install rails</b>	Standard	Standard
<b>Warranty—(years) (parts/labor/ on-site)</b>	3/3/3	3/3/3

## Tower servers

Are you continuing to need traditional IT for diverse workloads? Consider these HPE ProLiant 300 series servers.



### HPE ProLiant ML350 Gen11

	Most powerful and versatile 2P tower—HPE ProLiant
<b>Workloads</b>	IT infrastructure, data management, VDI, ERP/CRM
<b>Number of processors</b>	1 or 2
<b>Processors supported</b>	Intel Xeon Scalable processor 8400, 6400, 5400, 4400, 3400 series
<b>Cores per processor</b>	8/12/16/18/20/24/28/32/36/40/44/48/52/56/60
<b>Maximum processor frequency/cache</b>	3.7 GHz / 112.5 MB
<b>I/O expansion slots</b>	Up to PCIe 5.0, 10 x8 or 4 x16/2 x8
<b>Maximum memory / # slots / speed</b>	8 TB / 32/4800 MT/s
<b>Maximum HPE Persistent Memory</b>	N/A
<b>Maximum HPE Persistent Memory NVDIMMs</b>	N/A
<b>Storage controller</b>	Embedded Intel VROC HPE Smart Array controller for SAS/SATA Tri-Mode RAID controllers for SAS/SATA/NVMe PCIe and OCP form factors available
<b>Maximum storage drive bays</b>	24 SFF SAS/SATA/x1 NVMe or 12 LFF SAS/SATA HDD/SSD or 8 SFF x4 NVMe or 12 EDSFF 3.5 1T
<b>Maximum internal storage</b>	368.64 TB (24 x 15.36 TB)
<b>Networking ports (embedded) / option</b>	None/OCP or standup card
<b>VGA/serial/USB/SD ports</b>	1/1 (optional) / 5/0
<b>GPU support</b>	Single-/double-wide active/passive, up to 8SW/4DW
<b>Form factor / chassis depth</b>	Tower (4U)/28" or rack (5U)/28"
<b>Power and cooling</b>	Up to 2 Flex Slot, redundancy optional, 500W, 800W, or 1600W, or 2200W, up to 96% efficient
<b>Industry compliance</b>	ASHRAE A3 and A4, lower idle power, ENERGY STAR
<b>System ROM</b>	UEFI
<b>Management</b>	HPE iLO 6, HPE OneView Standard, intelligent provisioning, Smart Update Manager, RESTful Interface Tool, HPE iLO Amplifier Pack, HPE GreenLake for Compute Ops Management Optional: HPE InfoSight, HPE iLO Advanced, HPE OneView Advanced
<b>Serviceability—easy install rails</b>	1U Tower-to-rack conversion kit
<b>Warranty—(years) (parts/labor/on-site)</b>	3/3/3

## Cloud-native servers

Do you need cloud-native servers optimized for your workloads? Consider the HPE ProLiant 300 series server.



### HPE ProLiant RL300 Gen11

	Cloud optimized
<b>Workloads</b>	Scale-out, cloud-native workloads
<b>Number of processors</b>	1
<b>Processors supported</b>	Ampere® Altra® and Ampere Altra Max
<b>Cores per processor</b>	80 to 128 cores
<b>Maximum processor frequency/cache</b>	3.0 GHz / 64 KB L1 I-cache, 64 KB L1 D-cache per core, 1 MB L2 cache per core
<b>I/O expansion slots</b>	4 PCIe Gen4, for detailed descriptions
<b>Maximum memory / # slots / speed</b>	Up to 2x16 PCIe Gen5 Up to 2 OCP slots; both x8 default
<b>Maximum HPE Persistent Memory</b>	Not supported
<b>Storage controller</b>	Not supported
<b>Maximum storage drive bays</b>	10 SFF NVMe SSDs or 8 SFF NVMe SSDs or 2 M.2 NVMe SSDs optional, depending on model
<b>Maximum internal storage</b>	38.4 TB
<b>Networking ports (embedded) / FlexibleLOM</b>	2 OCP 3.0 PCIe Gen4 slots available
<b>VGA/serial/USB/SD ports</b>	Optional, rear serial port 1 rear VGA port—standard 1 Gb dedicated remote mgmt. HPE iLO port 1 standard front HPE iLO service port USB 3.2 Gen1: Up to 3 total: 1 front, 2 rear
<b>GPU support</b>	N/A
<b>Form factor / chassis depth</b>	1U 1P
<b>Power and cooling</b>	Up to 2 Flex Slot, redundancy optional, 800W; up to 96% efficient (Titanium); hot plug performance fans with full N+1 redundancy
<b>Industry compliance</b>	N/A
<b>System ROM</b>	UEFI
<b>Management</b>	Included—HPE iLO Standard and Advanced features
<b>Serviceability—easy install rails</b>	Standard
<b>Warranty—(years) (parts/labor/on-site)</b>	3/3/3

Which OSs / virtual environments are supported?

HPE ProLiant rack and tower servers support the following OSs and virtual environments:

- Microsoft
- Red Hat®
- SUSE
- Oracle®
- Canonical
- ClearOS (supported on 10, 100, and 300 series servers)

You can purchase your entire operating environment from HPE; we resell and provide full service and support for Microsoft Windows OSs; Red Hat Enterprise Linux® subscriptions; SUSE Linux subscriptions; Microsoft Hyper-V, VMware®, and Red Hat Virtualization subscriptions.

ClearOS is a simple, secure, and affordable OS with an application marketplace of over 100 applications that allows customers to lean on their trusted IT partner to build customized solutions. ClearOS is available via CTO, intelligent provisioning, or via download.

## Get enhanced functionality and added benefits with HPE

Inside each HPE server are essential performance building blocks—think core DNA—such as DDR4 memory, storage, and network adapters. We call these building blocks HPE Server Options—designed to deliver high performance for your selected workloads, deliver that performance with persistent reliability, and at economics that don't slow down your business. Thus, HPE ProLiant servers configured with HPE Server Options create the ideal solution for any application workload and any IT environment, from the smallest SMB site to the largest enterprise data center.

HPE Server Options are integrated with many HPE system management tools for easy configuration, maintenance, and installation, lowering your operations costs when compared to third-party components.

HPE Server Options have gone through a rigorous testing process for flawless installation, maintenance, and upgrade. There's a wide range of options, from storage drives, memory, network adapters, and processors, to the rack and power infrastructure and beyond.

### HPE Server Memory

Choose from a large selection of memory types and capacities to support a variety of price points as well as both current and future computing needs.

#### HPE SmartMemory

- Operates at 2933 MT/s data transfer speeds with Gen10 memory subsystem bandwidth, 81% faster than 2400 MT/s in Gen9 servers, increasing performance for memory-intensive applications
- Consumes less power, reducing IT budgets

#### HPE Standard Memory

- Meets the needs of SMBs and ROBOs with the right memory at the right price without compromising quality
- Performs to industry-defined specifications

All HPE memory modules are tested on HPE ProLiant server platforms beyond industry standards to diagnose problems, deliver rapid resolutions, and avoid failures. Additional authentication helps assure you that your memory is optimized and performance tuned for your server.

### HPE Server Storage

A broad portfolio of workload-optimized solutions that includes hard disk drives (HDDs), solid-state drives (SSDs), and Gen11 controllers featuring HPE technologies to deliver high performance, outstanding reliability, security, and improved operational efficiency.

#### HPE HDDs

- Deliver proven performance and reliable data integrity at the lowest cost per gigabyte

#### HPE SSD

- Remove performance bottlenecks, enabling faster access to data with consistently low latency—all while using less power
- **Gen11 controllers:** Our newest line of enterprise-class RAID controllers help maximize performance, data availability, and storage capacity

## Server networking

Presents a wide variety of server networking offerings including standard, advanced, and performance series adapters from 1GbE to 200GbE. These adapters are supplemented by a broad range of transceiver and cable offerings.

### HPE Server Networking delivers:

- Performance—Improve network bandwidth and lower latency with our broad Ethernet-enhanced network adapters portfolio
- Reliability and security—Helps eliminate downtime and ensure seamless integration with servers through rigorous qualification and testing. Monitor health with HPE iLO and critical software updates and latest security features to protect, detect, and recover from a cyberattack
- Efficiency—Optimize workload with HPE software-defined features from virtualization to Network Partitioning, boosting application performance

These adapters help prevent, detect, and recover from cyberattacks by protecting applications, data, and server infrastructure through authentication of digitally signed firmware via a root of trust architecture. In addition, they offer secure boot, device-level firewall, and other advanced security features.

## HPE Rack and Power Infrastructure

Includes HPE rack enclosures and HPE power and cooling management offerings that provide the foundation for a secure and reliable hybrid cloud infrastructure.

### HPE racks

- Whether you're just looking into getting your first server rack or researching advanced, high-density options for your enterprise data center, HPE racks offer you an amazing range of features and options designed to satisfy your business needs and fit within your IT budget.

### HPE Rack and Power Infrastructure portfolio

- HPE IT Management
- HPE Power Distribution Units
- HPE Uninterruptable Power Supplies
- Intelligent Tools from HPE
- HPE Power Advisor

### HPE Power Supplies

HPE Power Supplies offer high-efficiency power options available in multiple input and output options, allowing you to **rightsize** a power supply for specific server/storage configurations and environments. This flexibility helps to minimize power wastage, lower overall energy costs, and avoid trapped power capacity in the data center.

#### Standard

- Optimized features at an entry-level price

#### Advanced

- Compact flexibility and efficiency
- HPE Flex Slot Power Supplies are 25% smaller than previous generation power supplies, providing more space and power.

#### Performance

- Higher power density, enhanced business continuity
- HPE Performance Power Supplies that provide highly efficient and flexible power options specifically designed for HPE dense computing environments



**HPE accelerators**

Workloads can never finish their tasks too quickly. HPE offers a variety of accelerators to help customers accelerate the completion of their workloads. For increased computational and graphics requirements, HPE offers GPU accelerators from both NVIDIA® and AMD. GPUs can be used for graphics acceleration, virtualization, as well as high performance computing and AI. HPE also offers field-programmable gate array (FPGA) accelerators, which are programmable multifunction accelerators that can be tailored to fit specific workloads.

**HPE server and infrastructure management software**

HPE server management solutions provide improved operational efficiency, faster application deployment, and reduced costs—through agile operations, error reduction, faster response times, and streamlined processes.

**HPE GreenLake for Compute Ops Management**

Seamlessly monitor, manage and gain visibility of your distributed compute environment.

**Modernize your compute management experience**

HPE GreenLake for Compute Ops Management simplifies and automates operations across the server lifecycle, no matter where your compute infrastructure lives. The service provides a consistent, secure cloud experience for the whole environment that scales elastically and unifies compute management.

**Included with HPE ProLiant Gen11 servers**

With the HPE ProLiant Gen11 next-generation portfolio, the management experience is being transformed. It provides an intuitive cloud operating experience that's simple to use and can be managed via a single console using HPE GreenLake for Compute Ops Management.

**See how easy it is to manage compute**

Stop managing your management tools and instantly access new services, features, and fixes.

**Unify compute management**

Streamline compute management operations with a centralized, cloud experience. With real-time access to servers, you can quickly gain visibility to your distributed environment, identify issues, and update servers in a few clicks.

**Simplify and automate tasks**

Save time and money with agile server lifecycle management that reduces manual efforts, drives better efficiency of server deployments and updates, gives visibility into server health status, and alerts you to critical hardware failures.

**Secure compute operations**

Take a zero trust approach that incorporates multi-factor authentication, security certificates, and the world's most secure industry-standard server—HPE ProLiant—so you can easily establish governance and compliance controls across the entire environment.

**HPE iLO**

Securely configure, monitor, and update your HPE ProLiant servers seamlessly, from anywhere in the world.

**HPE OneView**

Integrated IT infrastructure management software that automates IT operations, HPE OneView simplifies infrastructure lifecycle management across compute, storage, and networking.

**Access the best IT more affordably when you need it.**

**Select the program that fits your goals**

- **Transition from old legacy IT to new hybrid cloud:** Shift existing owned assets to a flexible usage payment model. Receive the value hidden in your existing IT equipment to invest in new technology innovation
- **Increase deployment flexibility:** Acquire forecasted compute and storage capacity in advance of the actual need, begin monthly payments as you deploy, and install it over 12 months
- **Manage experimental deployments:** Lower risks and improve control with built-in flexibility to return equipment without penalty within a set time window
- **Routinely refresh your servers:** Regularly update your IT infrastructure more affordably every 24 to 48 months for predictable monthly or quarterly payments
- **Simplify IT consumption for small and mid-sized businesses:** Subscribe to a complete, customized solution for a predictable monthly subscription fee and help eliminate the hassle of ownership. Trade in your old IT to make room for a new subscription

**HPE Financial Services: Creating investment capacity to accelerate digital transformation.**

HPE Financial Services helps organizations create the investment capacity they need for digital transformation, in an innovative and sustainable way. HPEFS partners with customers to develop a playbook for their entire IT asset portfolio (from edge to cloud to end user), one that is unique to their aspirations and size. Our financial and asset management solutions are anchored by best-in-class tech upcycling services.

Advisory and Transformation Services—HPE Pointnext Services designs the transformation and builds a road map tuned to your unique challenges including hybrid cloud, workload and application migration, Big Data, and the edge. HPE leverages proven architectures and blueprints, integrates and partner products and solutions, and engages Professional and Operational services teams from HPE Pointnext Services as needed.

## HPE storage solutions for HPE ProLiant servers

No matter what your storage needs, HPE offers virtualized shared storage, data protection, and data retention and archiving solutions that complement your HPE ProLiant investment and are designed to offer a seamless service, support, and management experience. With storage solutions for any scale, performance, or investment level, you can handle more workloads more simply and more affordably by combining servers and storage solutions from HPE.

### HPE disk enclosures

Manage growing storage needs with modular solutions for HPE ProLiant capacity expansion. HPE disk enclosures let you expand your HPE ProLiant server storage capacity at a low cost for a variety of general use cases.

### Entry-level shared storage

When performance and scale are your priorities, HPE also offers low-cost external storage systems that deliver the benefits of virtualized, shared storage and file sharing capably designed with HPE ProLiant server users in mind. Our flexible entry storage options let you choose from direct-attached storage to extend your server capabilities, NAS appliances for file sharing and home directory consolidation, and highly scalable shared storage arrays for physical and virtual applications that can run on your existing IP network or a dedicated Fibre Channel SAN.

### All-flash and hybrid flash storage

The world is changing, fast. An all-flash data center is now a reality, thanks to HPE Nimble Storage—with a choice between all flash and adaptive flash arrays—and the HPE 3PAR StoreServ family of all-flash and flash-optimized arrays. These lightning-fast arrays deliver 99.9999% uptime with built-in resiliency. In addition, HPE Nimble Storage offers radical simplicity of management and a transformative support experience through predictive analytics from HPE InfoSight.

### Data availability, protection, and retention

Today's businesses demand aggressive service levels. Data loss, risk, and downtime must be avoided at all costs. When an outage does occur, recovery time must be minimized. HPE can equip you meet the most stringent recovery-time objectives (RTOs) and recovery-point objectives (RPOs), all while reducing your protection storage capacity requirements. Learn more about our affordable portfolio of modern data availability, protection, and retention solutions with the right scale, performance, and application integration to meet your needs.

### Storage management and orchestration

With HPE, you can get past hardware management limitations with open, automated orchestration. Control storage, compute, and networking resources as well as data services across physical and virtual domains. It's all compatible with many third-party tools and fully integrated into HPE data storage solutions—from flash optimized to software defined.

### Storage networking

HPE provides dynamic end-to-end solutions, solving your storage networking challenges with nearly 15 million SAN fabric ports deployed worldwide. Agile HPE StoreFabric host adapters, multiprotocol switches, and highly scalable directors for cloud-optimized SANs helps ensure reliability and high performance.



## Integration services

With HPE Factory Integration Services, all the build, integration, and testing are done at our factory, resulting in a ready-to-deploy, custom IT solution built to your specific requirements. Our services cover the entire HPE portfolio from single server to multi-rack solutions.

## Technical training courses

HPE Education Services focuses on your most important asset, your people, to help prepare them to have the right skills to deliver business outcomes. With over 35 years of experience, we lead the industry when it comes to modern skills-based IT training and digital on-demand learning. We deliver unmatched expertise across a broad range of HPE products, industry-leading technologies, and IT process disciplines by combining technical knowledge, business insight, and hands-on experience.

## HPE Pointnext Services

HPE Pointnext Services leverages our strength in infrastructure, partner ecosystems, and the end-to-end lifecycle experience, to accelerate powerful, scalable IT solutions to provide you the assistance for faster time to value. HPE Pointnext Services provides a comprehensive portfolio including Advisory and Transformational, Professional, and Operational Services to help accelerate your digital transformation.

### Operational services

- **HPE GreenLake Management Services:** An infrastructure service that offers on-demand capacity, combining the agility and economics of public cloud with the security and performance of on-premises IT
- **HPE Pointnext Complete Care:** Our edge-to-cloud IT environment service that provides a holistic approach to optimizing your entire IT environment and achieve agreed-upon IT outcomes and business goals through a personalized and customer-centric experience
- **HPE Pointnext Tech Care:** Get more from your IT with an AI-powered and digitally enabled service that drives your business forward
- **HPE Lifecycle Services:** Predefined and custom services delivering technology outcomes and helping you get the most from your IT at every stage of its lifecycle

**Advisory and Professional Services**—Stay ahead of new opportunities with proven strategies from our team of experts. Create new edge experiences, implement effective cloud strategies, modernize your IT, and simplify IT operations with global technology services from HPE.

## HPE server families

### A server for every need

HPE understands that when it comes to servers, one size does not fit all. That's why we offer you a comprehensive array of server families, designed for a wide variety of business needs. Explore our other server portfolios:

- HPE BladeSystem family—Simplify your data center with modular infrastructure platform
- HPE Hyperconverged—Smaller, faster systems with integrated storage, networking, compute, and virtualization
- HPE ConvergedSystem—Optimized for Big Data, client virtualization, cloud, and density-optimized workloads
- HPE Moonshot System family—Software-defined servers designed for specific workloads
- HPE Apollo System family—Purpose-built platforms delivering extreme performance, scale, and efficiency for your AI and HPC workloads
- HPE Edgeline IoT Systems—Edge computing that delivers secure control and accelerate time to insight from the Industrial Internet of Things
- HPE Cloudline Server—Open systems that keep service providers ahead of growth, help ensure adaptability, and reduce costs while complying with Open Compute Project standards
- HPE Synergy—A new category of infrastructure that accelerates application delivery in both traditional and new IT environments
- HPE Integrity server family—High-speed, resilient, mission-critical servers that exceed the demands of today's always-on world



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