

Family guide

HP ProLiant rack and tower servers



The right compute for the right workload at the right economics



August 2015

Reimagine the server. Think compute.

Trusted servers built for today and tomorrow

Mobility, the cloud, Big Data, and data security trends are creating high expectations for businesses of all sizes. These modern IT demands are driving a major shift away from a traditional “server-based” approach to a new “compute” approach that accelerates IT service delivery, lowers costs, and fuels business growth.

Intelligent HP ProLiant servers give you the freedom to reimagine the server and start thinking in terms of compute for your business. No matter what your size, there is an HP ProLiant server that is just right to help you meet increasing user and customer demands—even when time, money, and technology resources are stretched thin.

HP ProLiant servers can help you focus in on key areas of IT transformation that will help you increase agility and flexibility, reduce costs, grow revenue and profits, manage risk, and improve your customers' and employees' experience; in short, transformations that will empower you to compete in the mobile-cloud era. These include:

Transform to a hybrid infrastructure

Hybrid is a reality. In the New Style of Business, extracting optimum performance and efficiency from your applications is essential. The best environment for your applications, whether traditional, mobile, or cloud-native, is unique to your business. Whatever your needs, HP has the right fit for the right workload that can enable your desired business outcomes.

Protect your digital enterprise

Protection is top of mind—all businesses must manage the emerging risks created by the proliferation of apps, new consumption models, and the shift to mobile and cloud. With HP, you can access all the benefits of an app-centric, hybrid world, while proactively protecting your network, business data, and interactions across any location or device.

Empower a data-driven organization

Rapid evolution in technology has created a distributed, digital world—data is everywhere, and presents new opportunities to capture value, as well as new sources of risk. To compete, you need to harness 100 percent of your data, regardless of source or scale, and generate the actionable insights that can drive better business outcomes.

Enable workplace productivity

The workplace is everywhere—and delivering a superior user experience to your customers, employees, and partners is a major driver of productivity. To be competitive, the modern enterprise needs to support ubiquitous access, seamless communication, and high-performing applications—all without jeopardizing data security and corporate assets.

Why choose HP ProLiant rack and tower servers?

To meet the growing demands of your business, HP ProLiant rack and tower servers redefine compute economics by delivering more compute and storage capacity, right-sized compute with flexible choices, and lower compute energy and floor space consumption.

With HP ProLiant rack and tower servers, you can accelerate your business results with faster compute, memory, and I/O performance, coupled with increased storage and networking performance—including lower latency.

HP ProLiant is available in three families:

- HP ProLiant MicroServer family
- HP ProLiant ML family
- HP ProLiant DL family

While all three families are designed to handle multiple workloads—IT infrastructure, Web, business applications, collaboration, analytics, Big Data, and more—each family is optimized for specific use cases.

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A complete compute solution

Choose HP rack and power infrastructure options to complete your foundation for a modern and optimized IT environment. HP delivers the right value where it matters, with:

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



HP ProLiant MicroServer Gen8

Perfect for micro and small businesses



HP ProLiant ML family

Expandable tower servers; ideal choice for remote and branch offices and growing businesses



HP ProLiant DL family

Versatile, rack-optimized server with a balance of efficiency, performance, and management

HP ProLiant MicroServer Family

The HP ProLiant MicroServer Gen8 is a small, quiet, and uniquely designed server that is ideal as a first server solution for micro and small businesses. With server-class performance in a form factor that is easy to use and service, the MicroServer Gen8 helps you drive down expenses while improving productivity and efficiency. And best of all, you don't need a server room to have a server. Together with the common industrial design of the HP PS110 Wireless 11n VPN Router and the PS1810 Switch for a converged solution, they make an elegant front office small- to medium-sized business (SMB) starter solution.

The HP ProLiant MicroServer Gen8 provides the following benefits:

- Easy to manage and service
- Cool design and place it anywhere
- Seamless networking with stackable HP router and switch

HP ProLiant Gen9 tower servers

The ML family of servers delivers simple, efficient business value. Industry-leading compute innovations in the new HP ProLiant Gen9 tower portfolio include simple management and storage tools, along with proven configurations that provide easy remote access and improved energy efficiencies to lower your total cost of ownership (TCO). Integrated with a simplified but comprehensive management suite and industry leading support, the ProLiant Gen9 tower portfolio delivers more business value and helps increase IT staff productivity and expedite service delivery. In addition, the complete, right-sized tower portfolio includes financing options, a service, and a channel network to significantly increase the speed of IT operations and enable IT to respond to business needs faster.

The HP ProLiant Gen9 tower portfolio delivers:

- Simplicity with easy-to-use tools, processes, and support to help server administrators keep hardware running
- Efficiency that office managers need to help improve employee productivity
- Affordability to increase business agility and help acquire and retain customers

HP ProLiant Gen9 rack servers

The DL family of servers are the most flexible, reliable, and performance-optimized ProLiant rack servers—ever. As we continue to provide industry-leading compute innovations, the new HP ProLiant Gen9 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 ProLiant Gen9 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 HP ProLiant Gen9 rack portfolio delivers:

- Flexible choices to redefine compute economics with 3X the compute per watt,¹ and up to 62 percent lower TCO²
- Reliable infrastructure with up to 66X faster service delivery³
- Optimized servers boost business performance with 4X faster workload performance⁴

¹ HP Internal analysis. Comparison between DL380 Gen9 Server vs. DL380p Gen8 Server with Sandy Bridge processors. Source for system wattage was IDC Qualified Performance Indicator located at qpicertificate.idc.com. Performance taken from SPECint_rate_base2006 industry benchmark. Calculation: Performance per watt, August 2014.

² One hundred DL380 G6 Servers consolidated down to 16 DL380 Gen9 Servers enabling 62 percent TCO savings over three years including initial acquisition costs. There is also a potential reduction in monthly operating expenditures (OPEX) of more than 80 percent. Includes software support for vSphere and Microsoft® Windows®. Also includes a 25 percent discount on hardware. August 2014.

³ Sixty-six times faster to build and deploy infrastructure; anonymous customer results. Customer was able to reduce the time to build and deploy infrastructure for 12 call centers from 66 days to 1. Total of 2,000 servers were deployed. IDC white paper sponsored by HP, "Achieving Organizational Transformation with HP Converged Infrastructure Solutions for SDDC," January 2014, IDC #246385.

⁴ HP SmartCache performance done with equivalent controller in a controlled environment. HP Smart Storage engineers, Houston, TX as of 18 May 2014 posted on internal SmartCache wiki page.

HP ProLiant rack and tower server portfolio

Get more depth with the technical white paper:

HP ProLiant Gen9 servers technology and product overview: Delivering the right compute solutions for the right workloads

HP ProLiant servers feature user-inspired innovations to make IT simpler,⁵ including:

- **HP Smart Socket guides**—Simplified access, easy processor installation
- **HP Smart Array Controllers**—Enterprise-class RAID controllers enhance performance, data availability, and storage capacity
- **HP SmartDrives**—Simplified monitoring, reduced data loss, better serviceability
- **HP SmartMemory**—Improved performance, manageability, and efficiency; reduced downtime; lower energy costs
- **HP Flexible Network adapters**—Easy configuration, fast serviceability
- **HP ProLiant 3D Sea of Sensors**—Lower energy costs
- **HP iLO 4 Management**—Rapid deployment, streamlined management
- **HP OneView**⁶—Management software to eliminate complexity with automation simplicity
- **HP Insight Online**—Efficient support management with an online personalized dashboard
- **HP Server Racks**—Efficient and high-performance self-cooling racks designed for maximizing usable cabinet space
- **HP Power and Cooling Management**—Reduce power requirements, reclaim resources, and reduce errors

⁵ For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

⁶ HP OneView supported on HP ProLiant DL and BL servers only.

⁷ HP Internal analysis. Comparison between DL380 Gen9 Server vs. DL380 G7 Server. Source for system wattage was IDC Qualified Performance Indicator. Performance taken from SPECint_rate_base2006 industry benchmark. Calculation: performance/watt, August 2014.

⁸ Internal analysis. Comparison between DL380 Gen9 Server vs. DL380 G6 Server. Dimensions extracted from DL380 QuickSpecs for Gen9 and G6 respectively. Performance taken from SPECint_rate_base2006 industry benchmark. Calculation: performance/(length/width)/144, August 2014.

⁹ IDC white paper sponsored by HP and Intel®, "The Business Value of the HP Proactive Insight Experience," Doc# 239199, March 2013.

¹⁰ Internal performance lab testing using Iometer and the HP Smart Array P840 with RAID 0, 4k random reads, Microsoft Windows 2012 R2; testing is ongoing with changes in FW. Number is current as of 21 July 2014.

¹¹ HP SmartCache Performance done with equivalent controller in a controlled environment. HP Smart Storage engineers, Houston, TX as of 18 May 2014, posted on internal SmartCache wiki page.

¹² Based on HP internal calculations. Up to 14 percent better performance is based on similar capacity DIMM running on HP server compared to a non-HP server with DDR4. Calculation: Intel recommends running DDR4 server memory (two DIMMs per channel at 1,866 MHz) with Haswell processors. By combining HP ProLiant Gen9 servers with HP DDR4 SmartMemory innovations, HP realizes a 14 percent memory improvement (two DIMMs per channel), by running HP DDR4 SmartMemory (RDIMM and LRDIMM) at 2,133 MHz $([2,133 - 1,866] / 1,866) * 100 = 14$ percent. August 2014.

HP ProLiant Gen9 continues to build upon this innovation

Increase capacity and lower TCO



- Enjoy 2X more compute per watt using 12 GB/s SAS solid-state drives (SSDs) and HP DDR4 SmartMemory⁷
- Tailor your solution with flexible choices in storage, networking, and power supplies
- Get up to 3X more compute per square foot with HP PCIe Workload Accelerators⁸

Move faster with management automation



- Set up, monitor, and maintain your servers faster with reliable, secure embedded management
- Provision faster with simplified software-defined HP OneView management
- Reduce service call time by 50 percent⁹ with Insight Online

Accelerate application performance



- Enjoy support for one million IOPS with 12 Gb/s HP Smart Array Fast Controllers¹⁰
- Access data more quickly with up to 4X read and write workload acceleration provided by HP SmartCache¹¹
- Process workloads faster with up to 14 percent better memory performance provided by HP DDR4 SmartMemory and HP ProLiant rack servers¹²

Learn more about investing in the right HP ProLiant server for your business:
[Business white paper](#)
HP ProLiant sizer tools:
[HP server TCO calculator](#)
[Server buying guide](#)

Introducing new server models

We have launched 13 models in the rack and tower portfolio, and there are more to come. The Gen9 family offers right-sized compute to meet your workload needs. As such, we’re tailoring compute to offer more flexibility and choice, such as HP FlexibleLOM, HP SmartMemory, HP SmartCache, and many more options.

In the ProLiant Gen8 family, the e (Essential) and p (Performance) designations were assigned to various server models. Our portfolio has expanded with common Intel architecture in ProLiant Gen9 servers; our naming convention now better represents the features and positioning for ProLiant Gen9 servers. The following table shows the transition from Gen8 to Gen9 naming:

Gen8 models	Gen9 models
HP ProLiant ML10 Gen8	HP ProLiant ML10 v2 ¹³
HP ProLiant ML310e Gen8 v2	HP ProLiant ML110 Gen9
HP ProLiant ML350e Gen8	HP ProLiant ML150 Gen9
HP ProLiant ML350p Gen8	HP ProLiant ML350 Gen9
New, no transition	HP ProLiant DL60 Gen9
New, no transition	HP ProLiant DL80 Gen9
New, no transition	HP ProLiant DL120 Gen9
HP ProLiant DL360e Gen8	HP ProLiant DL160 Gen9
HP ProLiant DL380e Gen8	HP ProLiant DL180 Gen9
HP ProLiant DL360p Gen8	HP ProLiant DL360 Gen9
HP ProLiant DL380p Gen8	HP ProLiant DL380 Gen9
HP ProLiant DL560 Gen8	HP ProLiant DL560 Gen9
HP ProLiant DL580 Gen8	HP ProLiant DL580 Gen9

Choose your rack or tower server

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

Essential servers—The HP ProLiant MicroServer, and the 10 and 100 series servers are right-sized servers with enough headroom to run the New Style of Business, Web collaboration, and business workloads.

- **New to servers**—For SMBs and service providers
- **Growing IT needs**—For SMBs and enterprise customers

Performance servers—The HP ProLiant 300 and 500 series servers offer the most flexibility and best overall system performance to run compute-intensive workloads.

- **Traditional IT needs**—For SMB, enterprise, and high-performance computing (HPC) customers
- **Needing to scale-up**—For enterprise and HPC customers

¹³ HP ProLiant ML10 v2 is not considered a “Gen9” server.

New to servers

Is this your first server? Consider these HP ProLiant Essential servers.



MicroServer Gen8



ML10 v2



ML10

	An ideal first server business-ready solution out-of-the-box	Just-right server class performance and reliability at unmatched value	Single-socket 4U tower delivers value for SMB
Number of processors	1	1	1
Processors supported	Intel® Xeon® E3-1220L v2 Intel Pentium® Intel Celeron®	Intel Xeon E3-1200 v3 Series Intel® Core™ i3 Intel Pentium	Intel Xeon E3-1220 v2 Intel Pentium G2130
Cores per processor	2	2/4	2/4
Maximum processor frequency/cache	2.5 GHz/3 MB	3.5 GHz/8 MB	3.2 GHz/8 MB
I/O expansion slots	1 PCIe 3.0/2.0 (processor dependent)	2 PCIe 2.0 2 PCIe 3.0	Up to 4 PCIe 2.0
Maximum memory/# slots	16 GB/2	32 GB/4	32 GB/4
Storage controller (embedded)	B120i*	B120i*	B110i*
Maximum storage drive bays	4 LFF SATA, non-hot plug	6 LFF, HDD	3 LFF + 1 Optical Drive convert to LFF, non-hot plug, HDD/SSD
Maximum internal storage	16 TB	24 TB	8 TB
Networking ports (embedded)/FlexibleLOM	2 x 1GbE/NA	2 x 1GbE/NA	1 x 1GbE/NA
VGA/serial/USB/SD ports	1/0/7/1	1/0/4/0	1/0/7/0
GPU support	None	Optional (1)	None
Form factor	Ultra micro tower	Micro ATX Tower (4U)	Micro ATX Tower (4U)
System ROM	Legacy BIOS	Legacy BIOS	Legacy BIOS
Management	HP iLO 4, Intelligent Provisioning, HP Insight Online, HP Systems Update Manager (SUM), HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control	HP iLO 4, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control	HP iLO 3, HP SUM Optional: HP iLO Advanced, HP Insight Control
Warranty—(years) (parts/labor/onsite)	1/0/0	1/0/0	1/1/1

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

**DL60 Gen9**

Affordable compute and scalability packaged in a dense design

**DL80 Gen9**

Affordable storage and scalability for cost-conscious service providers and SMBs

**DL320e Gen8 v2**

Compact single application server, suitable for deployment anywhere

Number of processors	1 or 2	1 or 2	1
Processors supported	Intel Xeon E5-2600 v3 Series	Intel Xeon E5-2600 v3 Series	Intel Xeon E3-1200 v3 Series Intel Core i3 Intel Pentium
Cores per processor	4/6/8/10/12	4/6/8/10/12	2/4
Maximum processor frequency/cache	3 GHz/30 MB	3 GHz/30 MB	3.7 GHz/8 MB
I/O expansion slots	Up to 3 PCIe 3.0	Up to 6 PCIe 3.0	Up to 2 PCIe 3.0
Maximum memory/# slots	256 GB/8	256 GB/8	32 GB/4
Storage controller (embedded)	B140i*	B140i*	B120i*
Maximum storage drive bays	4 LFF max, HDD/SSD	12 LFF max, HDD/SSD	2 LFF or 4 SFF HDD/SSD
Maximum internal storage	32 TB	96 TB	16 TB
Networking ports (embedded)/FlexibleLOM	2 x 1GbE/FlexibleLOM slot on riser (optional)	2 x 1GbE/FlexibleLOM slot on riser (optional)	2 x 1GbE/NA
VGA/serial/USB/SD ports	1/0/4/1	1/0/4/1	1/0/7/1
GPU support	N/A	Single-wide (1)	N/A
Form factor	Rack (1U)	Rack (2U)	Rack (1U)
System ROM	UEFI Legacy BIOS	UEFI Legacy BIOS	Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP Systems Insight Manager (SIM), HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	1/1/1	1/1/1	1/1/1

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

Growing IT needs

Are your IT needs growing? Consider these HP ProLiant Essential servers.



ML110 Gen9



ML310e Gen8 v2



ML150 Gen9

	A performance 1P server for more demanding applications	Full-featured 1S tower with enterprise-class manageability	Essential mix of performance, efficiency, and expandability
Number of processors	1	1	1 or 2
Processors supported	Intel Xeon E5-2600 v3 Series Intel Xeon E5-1600 v3 Series	Intel Xeon E3-1200 v3 Series Intel Core i3 Intel Pentium	Intel Xeon E5-2600 v3 Series
Cores per processor	4/6/8/10	2/4	6/8/10/12
Maximum processor frequency/cache	3.5 GHz/25 MB	3.6 GHz/8 MB	2.6 MHz/30 MB
I/O expansion slots	Up to 5 PCIe 3.0	Up to 2 PCIe 3.0, 2 PCIe 2.0	Up to 6 PCIe 3.0
Maximum memory/# slots	256 GB/8	32 GB/4	512 GB/16
Storage controller (embedded)	B140i*	B120i*	B140i*
Maximum storage drive bays	8 LFF, 16 SFF, or 4 NHP LFF HDD/SSD	4 LFF or 8 SFF HDD/SSD	10 LFF or 16 SFF HDD/SSD
Maximum internal storage	48 TB	16 TB	64 TB
Networking ports (embedded)/FlexibleLOM	2 x 1GbE/NA	2 x 1GbE/NA	2 x 1GbE/NA
VGA/serial/USB /SD ports	1/0/8/1	1/1/8/1	1/0/8/1
GPU support	Optional (1)	NVIDIA Quadro K2000 PCIe Graphics Adapter	NVIDIA Quadro K2200 PCIe Graphics Adapter (Optional)
Form factor	Tower (4.5U)	Micro ATX Tower (4U) with optional rack conversion tray kit (4U)	Tower (5U)
System ROM	UEFI Legacy BIOS	Legacy BIOS	UEFI Legacy BIOS
Management	HP iLO 4, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control	HP iLO 4, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control	HP iLO 4, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control
Warranty—(years) (parts/labor/onsite)	3/1/1	1/1/1 Worldwide 3/1/1 Brazil	3/1/1

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

**DL120 Gen9****DL320e Gen8**

	Enterprise-class 1S dense server for performance-driven and virtualized workloads	Ideal single application and IT infrastructure server
Number of processors	1	1
Processors supported	Intel Xeon E5-2600 v3 Series Intel Xeon E5-1600 v3 Series	Intel Xeon E3-1200 v2 Intel Pentium
Cores per processor	4/6/8/10/12/14/16/18	2/4
Maximum processor frequency/cache	3.5 GHz/45 MB	3.7 GHz/8 MB
I/O expansion slots	Up to 3 PCIe 3.0	Up to 1 PCIe 3.0, 1 PCIe 2.0
Maximum memory/# slots	256 GB/8	32 GB/4
Storage controller (embedded)	B140i*	B120i*
Maximum storage drive bays	4 LFF or 8 SFF HDD/SSD	4 LFF or 8 SFF HDD/SSD
Maximum internal storage	32 TB	32 TB
Networking ports (embedded)/FlexibleLOM	2 x 1GbE/Optional FlexibleLOM slot on riser	2 x 1GbE/NA
VGA/serial/USB/SD ports	1/0/4/1	1/1/7/1
GPU support	Single-wide (1)	N/A
Form factor	Rack (1U)	Rack (1U)
System ROM	UEFI Legacy BIOS	Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	3/1/1	1/1/1

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

**DL160 Gen9**

Right-sized performance and storage for space and budget-constrained environments

**DL180 Gen 9**

The new standard for growing data center needs

Number of processors	1 or 2	1 or 2
Processors supported	Intel Xeon E5-2600 v3 Series	Intel Xeon E5-2600 v3 Series
Cores per processor	4/6/8/10/12	4/6/8/10/12
Maximum processor frequency/cache	3.0 GHz/30 MB	3.0 GHz/30 MB
I/O expansion slots	Up to 3 PCIe 3.0	Up to 6 PCIe 3.0
Maximum memory/# slots	512 GB/16	512 GB/16
Storage controller (embedded)	B140i*	B140i*
Maximum storage drive bays	4 LFF or 8 SFF HDD/SSD	12 LFF or 16 SFF HDD/SSD
Maximum internal storage	32 TB	96 TB
Networking ports (embedded)/FlexibleLOM	2 x 1GbE/Optional FlexibleLOM slot on riser	2 x 1GbE/Optional FlexibleLOM slot on riser
VGA/serial/USB/SD ports	1/0/4/1	1/0/4/1
GPU support	N/A	Single-wide and active (1)
Form factor	Rack (1U)	Rack (2U)
System ROM	UEFI Legacy BIOS	UEFI Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Essentials, HP iLO Advanced, HP Insight Control, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	3/1/1	3/1/1

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

Traditional IT needs

Are you continuing to need traditional IT? Consider these HP ProLiant Performance servers.



ML350 Gen9



ML350p Gen8



DL360 Gen9



DL360p Gen8

	Premium 2P performance with unmatched capacity and reliability	Best-in-class performance with maximum expandability	Dense performance for multi-workload compute in the data center	Performance-driven compute and storage density
Number of processors	1 or 2	1 or 2	1 or 2	1 or 2
Processors supported	Intel Xeon E5-2600 v3 Series	Intel Xeon E5-2600 v2 Series	Intel Xeon E5-2600 v3 Series	Intel Xeon E5-2600 v2 Series
Cores per processor	4/6/8/10/12/14/16/18	2/4/6/8/10/12	4/6/8/10/12/14/16/18	2/4/6/8/10/12
Maximum processor frequency/cache	3.4 GHz/45 MB	3.5 GHz/30 MB	3.5 GHz/45 MB	3.5 GHz/30 MB
I/O expansion slots	Up to 1 PCIe 2.0, 8 PCIe 3.0	Up to 1 PCIe 2.0, 8 PCIe 3.0	Up to 2 PCIe 3.0	Up to 2 PCIe 3.0
Maximum memory/# slots	1.5 TB/24	768 GB/24	1.5 TB/24	768 GB/24
Storage controller (embedded)	B140i*	P420i*	B140i*	P420i*
Maximum storage drive bays	24 LFF or 48 SFF HDD/SSD	18 LFF or 24 SFF HDD/SSD	4 LFF or 8 + 2 SFF HDD/SSD	4 LFF or 10 SFF HDD/SSD
Maximum internal storage	192 TB	72 TB	32 TB	32 TB
Networking ports (embedded)/FlexibleLOM	4 x 1GbE/NA	4 x 1GbE/NA	4 x 1GbE/Optional FlexibleLOM	NA/FlexibleLOM
VGA/serial/USB/SD ports	1/1/8/1	1/1/9/1	2/1/5/2	0/1/7/1
GPU support	Single/double-wide and active up to 10.5" (4)	Single/double-wide (3)	Single-wide and active up to 9.5" (2)	N/A
Form factor	Tower or rack (5U)	Tower or rack (5U)	Rack (1U)	Rack (1U)
System ROM	UEFI Legacy BIOS	Legacy BIOS	UEFI Legacy BIOS	Legacy BIOS
Management	HP iLO 4, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Advanced, HP Insight Control	HP iLO 4, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP Insight Control	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	3/3/3	3/3/3	3/3/3	3/3/3

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

**DL380 Gen9****DL380p Gen8****DL385p Gen8**

	The no-compromise data center standard for multi-workload compute	The no-compromise data center standard	Performance and flexibility that means business
Number of processors	1 or 2	1 or 2	1 or 2
Processors supported	Intel Xeon E5-2600 v3 Series	Intel Xeon E5-2600 v2 Series	AMD Opteron 6300 Series
Cores per processor	4/6/8/10/12/14/16/18	2/4/6/8/10/12	4/8/12/16
Maximum processor frequency/cache	3.5 GHz/45 MB	3.5 GHz/30 MB	3.5 GHz/16 MB
I/O expansion slots	Up to 6 PCIe 3.0	Up to 1 PCIe 2.0, 5 PCIe 3.0	Up to 6 PCIe 2.0
Maximum memory/# slots	1.5 TB/24	768 GB/24	768 GB/24
Storage controller (embedded)	B140i*	P420i*	P420i*
Maximum storage drive bays	12 + 3 LFF or 24 + 2 SFF HDD/SSD	12 LFF or 25 SFF HDD/SSD	12 LFF or 25 SFF HDD/SSD
Maximum internal storage	120 TB	96 TB	96 TB
Networking ports (embedded)/FlexibleLOM	4 x 1GbE/Optional FlexibleLOM	NA/FlexibleLOM	NA/FlexibleLOM
VGA/serial/USB/SD ports	1 + 1/1/6/1	2/1/7/1	2/1/8/1
GPU support	Single/double-wide and active/passive up to 10.5" (2)	Single/double-wide and active/passive up to 10.5" (2)	N/A
Form factor	Rack (2U)	Rack (2U)	Rack (2U)
System ROM	UEFI Legacy BIOS	Legacy BIOS	Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	3/3/3	3/3/3	3/3/3

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

Scale-up needs

Do you need to scale up? Consider these HP ProLiant Performance servers.



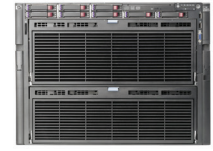
DL560 Gen9



DL560 Gen8

	High-density 4-socket server for multi-workload compute	Concentrated compute without compromising on performance, scalability, and efficiency
Number of processors	1, 2, or 4	1, 2, or 4
Processors supported	Intel Xeon E5-4600 v3 Series	Intel Xeon E5-4600 Series Intel Xeon E5-4600 v2 Series
Cores per processor	6/10/12/14/16/18	4/6/8/10/12
Maximum processor frequency/cache	2.9 GHz/45 MB	3.3 GHz/30 MB
I/O expansion slots	Up to 7 PCIe 3.0	Up to 1 PCIe 2.0, 5 PCIe 3.0
Maximum memory/# slots	3 TB/48	1.5 TB/48
Storage controller (embedded)	Embedded SATA*	P420i*
Maximum storage drive bays	24 SFF HDD/SSD	5 SFF HDD/SSD
Maximum internal storage	48 TB	8 TB
Networking ports (embedded)/FlexibleLOM	NA/FlexibleLOM	NA/FlexibleLOM
VGA/serial/USB/SD ports	2/1/9/1	2/1/7/1
GPU support	Single-wide (2)	*
Form factor	Rack (2U)	Rack (2U)
System ROM	UEFI Legacy BIOS	Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP OneView Advanced
Warranty—(years) (parts/labor/onsite)	3/3/3	3/3/3

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

**DL580 Gen9****DL580 Gen8****DL980 G7**

	The 4-socket enterprise standard for resource and data-intensive workloads	The enterprise standard for business-critical workloads	For your largest and most demanding enterprise-class workloads
Number of processors	2, 3, or 4	2, 3, or 4	4 or 8
Processors supported	Intel Xeon E7-4800 v3 Series Intel Xeon E7-8800 v3 Series	Intel Xeon E7-4800 v2 Series Intel Xeon E7-8800 v2 Series	Intel Xeon E7-2800 Series Intel Xeon E7-4800 Series
Cores per processor	4/8/10/12/14/16/18	6/8/10/12/15	6/8/10
Maximum processor frequency/cache	3.2 GHz/45 MB	3.4 GHz/37.5 MB	2.4 GHz
I/O expansion slots	Up to 9 PCIe 3.0	Up to 9 PCIe 3.0	Up to 16 I/O slots
Maximum memory/# slots	6 TB/96	6 TB/96	4 TB/128
Storage controller (embedded)	P830i*	P830i*	P410i
Maximum storage drive bays	10 SFF HDD/SSD	10 SFF HDD/SSD	8 SFF HDD/SSD
Maximum internal storage	20 TB	16 TB	7.2 TB
Networking ports (embedded)/FlexibleLOM	NA/FlexibleLOM	NA/FlexibleLOM	4 x 1GbE or 2 x 10GbE
VGA/serial/USB ports/SD	2/1/8/1	2/1/8/1	2/1/6/1
GPU support	Double-wide (5)	Double-wide (5)	(4) or (3)
Form factor	Rack (4U)	Rack (4U)	Rack (8U)
System ROM	UEFI Legacy BIOS	UEFI Legacy BIOS	Legacy BIOS
Management	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM, HP RESTful Interface Tool Optional: HP iLO Advanced, HP Insight Control, HP OneView Advanced	HP iLO 4, HP OneView Standard, Intelligent Provisioning, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP OneView Advanced	HP iLO 3, HP OneView Standard, HP SIM, HP Insight Online, HP SUM Optional: HP iLO Advanced, HP Insight Control
Warranty—(years) (parts/labor/onsite)	3/3/3	3/3/3	3/3/3

* For a full list of supported options and details, see the server QuickSpecs at hp.com/go/quickspecs.

Get enhanced functionality and added benefits with HP Qualified Options

Which operating systems/virtual environments are supported?

HP ProLiant rack and tower servers support the following operating systems and virtual environments:

- Microsoft
- Red Hat®
- SUSE
- Oracle
- Canonical

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

For the latest operating system support information and to learn more see:

hp.com/go/ossupport

HP Qualified Options are built to give you compute for the New Style of Business, where IT is tightly aligned with business requirements to streamline operations, contain costs, accelerate the delivery of new products and services, and optimize application performance. HP Qualified Options provide better performance, reliability, and compatibility with HP ProLiant, Integrity, and Storage systems. They are also integrated with many HP system management tools and can help lower your operations costs when compared to other non-HP products.

HP Qualified Options have gone through a rigorous testing process so they're easy to install, maintain, and upgrade. There's a wide range of options from hard drives, memory, and processors, to the rack and power infrastructure and beyond.

HP memory

Choosing the right memory is the key to getting the highest application performance and faster return on your IT investment. HP memory testing is performed and optimized on every HP ProLiant server platform to deliver the utmost compatibility, performance, and reliability. HP's broad portfolio ranges from HP Standard Memory—suitable for smaller capacity needs—to the fastest and efficient HP SmartMemory, for your memory-intensive workloads. Select from different HP memory types and DIMM capacities to optimize your server efficiency, capacity, and performance.

HP Smart Array Controllers

Designed to enhance server uptime and maintain flexibility for future growth, HP Smart Array Controllers blend the reliability of SCSI with the performance advantages of serial architecture. With the redesigned HP Flexible Smart Array and HP Smart SAS HBA Controllers you have the flexibility to choose the optimal 12 Gb/s controller most suited to your environment. Providing industry-leading performance with unmatched data protection, this is the solution for companies with direct attached SAS storage.

HP Smart Host Bus Adapters

Perfect for environments that require fast access, HP Smart Host Bus Adapters (HBAs) provide cost-effective and reliable high-performance SAS connectivity to direct attached storage (DAS), shared storage, and tape drives for HP ProLiant servers running Hadoop, Database Availability Group, VMware VSAN, and Storage Spaces applications. Smart Host Bus Adapters are a perfect conduit for deploying software-defined storage as a means to manage the IT storage pool. For greater flexibility, HP Smart Host Bus Adapters are capable of running in either HBA or simple RAID mode.

HP SmartDrives

You need drive solutions that can handle larger amounts of data, improve performance, reduce overall initialization time, and protect against multi-day outages and data loss. HP SmartDrives hard disk drives (HDDs) and SSDs bring new intelligence to your data center storage infrastructure. You can further increase data center performance with HP NVMe PCIe Workload Accelerators, which focus on efficiency, scalability, and performance when accessing solid-state storage through PCIe.

HP network adapters

Cost-effective, dependable computer networking products keep your IT running at peak performance. HP ProLiant networking products were designed, developed, and tested to deliver state-of-the-art networking technology.

Resources

[HP Qualified Options homepage](#)

[HP Server Qualified Options guide](#)

[HP Rack and Power Infrastructure homepage](#)

HP support for ASHRAE guidelines

Data center cooling systems represent a significant portion of your capital expenditure (CAPEX) and use a substantial amount of energy.

HP supports the adoption of less expensive and eco-friendly cooling methods encouraged by the latest American Society of Heating, Refrigeration, and Air-conditioning Engineers (ASHRAE) guidelines for temperature and humidity operating ranges of IT equipment.

Most HP Gen9 server products support the 2014 ASHRAE class A3 guidelines or higher.

For specific server details visit hp.com/servers/ASHRAE

For additional details on supported options, refer to the server QuickSpecs at hp.com/go/quickspecs

HP power supplies

HP power supplies offer high-efficiency operation and multiple input and output options, allowing users to “right-size” a power supply for specific server/storage configurations and environments. This flexibility helps to minimize power waste, lower overall energy costs, and avoid “trapped” power capacity in the data center. HP Entry-Level Power Supplies offer an optimized set of features for most HP ProLiant DL/ML10 and 100 Gen9 Series Servers, with options for both redundant and non-redundant power configurations.

Supported on the HP ProLiant DL/ML300 Gen9 Series Servers, HP Flexible Slot Power Supplies provide up to 96 percent power efficiency in Titanium Power Supply Kits and up to 94 percent power efficiency with 80 PLUS Platinum-certified power supplies that lower server power requirements and reduce power waste in your data center. The HP 750 W Flexible Slot Battery Backup Unit—the latest HP innovation—provides a backup solution for up to 60 seconds in the event of a power outage. This is most useful during a daisy-chained operation between two Battery Backup Modules that allows paralleled connection for pass through power sharing up to 500 W between two HP ProLiant DL300 Gen9 Series Servers.

HP ProLiant Gen9 Common Slot Power Supplies are supported across a wide range of HP ProLiant and Integrity servers reducing the cost of maintaining spares. HP Common Slot Power Supplies provide server power efficiency with 80 PLUS Titanium certification of up to 96 percent; and infrastructure power efficiencies with 277 VAC and 380 VDC input voltages.

HP PCIe Workload Accelerators

Quick access to key information gives your organization a critical advantage. In an age where data bottlenecks are, quite simply, unacceptable, HP PCIe Workload Accelerators offer a solution that keeps pace with your HP ProLiant server system—delivering faster access to application data, increased productivity, and better business intelligence. Non-Volatile Memory Express (NVMe) is a from-the-ground-up specification that focuses on efficiency, scalability, and performance. The NVMe specification defines an optimized feature set for PCIe-based solid-state storage products and delivers the performance customers can count on with their ProLiant server environment with the HP NVMe PCIe Workload Accelerators.

HP Secure Encryption

HP Secure Encryption is a Smart Array controller-based data encryption solution for protecting sensitive, mission-critical data. This is an enterprise-class encryption solution for data at rest on any bulk storage (with the exception of tape or external arrays such as P2000 and MSA 2040) attached to the supported HP Smart Array Px4x family of controllers. The solution is available for both local and remote deployments.

HP SmartCache

HP SmartCache is a Smart Array controller-based read and write caching solution for HP ProLiant servers in a DAS environment. It caches the most frequently accessed data (“hot” data) onto lower latency SSDs to dynamically accelerate application workloads. HP SmartCache operates transparently to host applications, which means you do not have to change the application, but can still realize better performance with a minimal number of SSDs in your configuration.

HP flash media devices

If you require boot-from-flash for integrated hypervisors and Tier 1 operating systems, trust HP’s high-performance enterprise flash media kits to meet those needs. With high data retention and read/write cycles, HP flash media devices are available in SD and microSD form factors.

HP optical drives

Available as both DVD-ROM and DVD-RW solutions, HP optical drives are available in half-height, slim, and super-slim models to fit any HP system in your data center. Available on select Gen9 servers, the HP Universal Media Bay provides functional flexibility to add an optical disk drive bay, USB, and/or VGA ports to the server while providing two drive bays for SFF drives.¹⁴

¹⁴ The HP Universal Media Bay is currently offered on the ProLiant DL380 and DL360 Servers. Please see server [QuickSpecs](#) as configurations differ.

HP rack and power infrastructure

As the foundation for long-term IT success, these HP products help you react to changes in the industry through efficient, easy-to-use capabilities to manage, monitor, deploy, and provision IT infrastructure and more effectively manage power and cooling costs. Designed for HP servers, our racks are built to be durable with a solid, welded enclosure and a high weight capacity. Unobstructed airflow and a logical cable management system make HP Server Racks the ideal enclosure for all HP rack-mounted products including servers, networking, and storage products. The rack design allows components to be easily accessed and allow for 0U installation in some cases maximizing the amount of usable space in the cabinet. This means you can install more components in our rack, which ultimately reduces the cabinet count. To keep the data center up and running with optimal efficiency, HP offers highly efficient power protection UPSs and highly accurate and flexible PDUs and management solutions.

HP power and cooling management

Choose from a variety of easy-to-use solutions for all your power needs in order to reduce needed power, reclaim resources, and eliminate errors. Through Power Discovery Services and Location Discovery Services, you can eliminate power configuration errors and precisely track power usage plus help you track your server inventory in your data center.

HP IT infrastructure products and services

We offer a range of highly efficient and intelligent solutions for existing and new data centers. For example, HP Performance-optimized Datacenters (PODs) provide outstanding flexibility for a variety of technology deployments.

HP infrastructure management software

For better insight and control

Today, most IT professionals wrestle with numerous management pains, including:

- **Infrastructure management complexity**—There are too many infrastructure management tools to learn and operate, resulting in high IT operating expenses. This proliferation drives up software license costs, as well as increases the time and cost of maintenance—including skills maintenance.
- **Scale and speed**—In enterprise data centers with thousands or tens of thousands of servers, traditional infrastructure management tools cannot scale or operate at the high speeds necessary to effectively manage server sprawl.
- **Siloed infrastructure and outdated IT operational models**—There are often too many non-standard manual tasks, an over-reliance on subject matter experts, and an ever-expanding backlog of projects. The answer to these challenges is to follow a new IT operational model—namely the software-defined data center (SDDC).
- **Planned and unplanned downtime**—Depending on the line of business, the cost of downtime can be millions of dollars of lost revenue. Knowing these costs, IT pros need tools and processes designed to eliminate or dramatically reduce downtime.

To address these gaps, a new management methodology is required—one that drives better system control and greater insight into problems before they occur. And HP has it.

HP infrastructure management is delivered through a complete portfolio of HP ProLiant lifecycle management capabilities that can flexibly operate from embedded management and system utilities, converged management for software-defined data centers, and support management. Managing HP ProLiant servers with HP infrastructure management results in increased efficiency and precise control of resources, with a rich set of capabilities that are easy to access and simple to use, HP infrastructure management encompasses critical areas such as server deployment and configuration, health and alerting, energy, power, remote management, and warranty and contract information access via a cloud-based portal. The core components that comprise HP infrastructure management are Embedded Management, HP OneView, and HP Insight Online. With HP infrastructure management's built-in automation, HP ProLiant servers are so intelligent they practically manage themselves.

In addition, HP Service Pack for ProLiant and HP Smart Update Manager provide breakthrough system maintenance tools that systematically update HP ProLiant rack and tower servers with one-click simplicity at the scale of your data center.

For complete information on the HP Server Management portfolio, refer to the family guide at hp.com/go/servermanagement

HP OneView

Eliminating infrastructure complexity with automation simplicity

Based on a unique modern architecture, HP OneView speeds IT service rollouts and helps actively prevent error-induced downtime through a template-based, software-defined approach to management.

And HP OneView also saves time by acting as an automation hub that performs infrastructure configuration and management tasks at the request of other applications. HP OneView is:

- **Converged**—Manage across compute, storage, and networking, and enjoy up to a 50 percent reduction in tools to learn, manage, deploy, and integrate.¹⁵
- **Software-defined**—Capture best practice knowledge in templates to guarantee that infrastructure is deployed and managed the right way every time.
- **Automated**—Use HP OneView REST application programming interfaces to deploy a VMware vSphere cluster in just five easy steps¹⁶ and leverage HP OneView as the infrastructure automation hub for your enterprise.

Please note that the HP OneView license includes the right to use HP Insight Control until you complete your transition.

Embedded management

Embedded management for the full server lifecycle

A set of essential, yet powerful server management capabilities are embedded on all HP servers. These capabilities, such as HP Integrated Lights Out (HP iLO), are designed to meet the needs of any organization, from enterprise to smaller IT environments.

In addition to embedded offerings like iLO, other products and tools such as UEFI, Intelligent Provisioning, HP SUM, Service Pack for ProLiant (SPP), HP RESTful Interface Tool, Scripting Toolkit for Windows and Linux, and HP Scripting Tools for Windows PowerShell, are available to all HP ProLiant server customers.

HP Insight Online

Support from anywhere, at any time

HP Insight Online is an online infrastructure management and support dashboard available through the HP Support Center portal and powered by HP remote support technology. The Insight Online dashboard in the HP Support Center Mobile App enables you to remain up to date whether you are in the office or on the road.

You can use the Insight Online dashboard to track service events and support cases, view device configurations, create reports, and proactively monitor your HP contracts and warranties, as well as manage your HP Proactive Service credits.

HP storage solutions for HP ProLiant servers

You can gain the full value from your investments when you choose advanced HP storage devices, such as fabric switching, disk enclosures, and shared storage. HP also offers backup systems, tape drives, auto loaders, and libraries for backup or disaster recovery.

HP StoreFabric SAN switches

Choose from a wide range of Fibre Channel switches, multi-protocol routers, host bus adapters, converged network adapters, and cables and optics for your SAN. These offerings deliver the scalability, performance, and broad interoperability that your mission-critical data and applications demand. Combining ease-of-use, flexibility, and improved security with cost-effective pricing, these switches are key enablers of your dynamic and adaptive storage-networking environment. hp.com/go/SAN

HP disk enclosures

Is your storage growing by leaps and bounds, exceeding your current system capacity? Manage your growing storage needs by deploying low-cost, high-capacity/high-performance external storage disk enclosures—the ideal choice for small application environments in SMBs, remote offices, and departmental locations. hp.com/go/disk-enclosures

¹⁵ Based on HP internal analysis, May 2014, comparing OneView 1.10 vs. the traditional approach to infrastructure management requiring eight tools.

¹⁶ Determined during HP internal testing in January 2014, comparing HP OneView 1.05 with the HP Insight Control for VMware vCenter Server v7.30 plug-in vs. traditional HP management tools.

Customize your IT lifecycle management, from acquisition of new IT, management of existing assets, and removal of unneeded equipment. hp.com/go/hpfinancialservices

HP shared storage

When it comes to storage, HP has the broadest and most comprehensive portfolio in the industry, featuring external shared storage that scales capacity and performance as your business grows. With easy-to-use Windows-based NAS file and print solutions for SMBs, through modern scale-out Tier 1 arrays for the most demanding data centers, HP has a storage solution to fit your exact needs and budget. hp.com/storage

HP backup systems

Remove the time and frustration from backup and disaster recovery across your enterprise. HP StoreOnce Backup is the only federated deduplication solution to provide leading disk-based backup for the full spectrum of IT environments—from small remote sites to large enterprises. Seamlessly integrating with your current backup applications, HP StoreOnce Backup provides flexible integration for NAS, SAN, and virtualized environments. hp.com/go/storeonce

HP tape drives, autoloaders, and libraries

Tape plays a critical role in the storage strategy for companies of all sizes. Combined with disk storage in a multi-tier protection strategy, HP tape products offer a storage solution with low total cost of ownership. Tape is also portable, making it ideal for secure offsite and offline backup, disaster recovery, data compliance, and long-term archiving. hp.com/go/tape

Integration services

HP Factory Express provides customization and deployment services along with your storage and server purchases. You can customize hardware to your exact specifications in the factory—helping speed deployment. hp.com/go/factoryexpress

Training and certification

Gain the skills you need with ExpertOne training and certification from HP. With HP ProLiant server training, you will accelerate your technology transition, improve operational performance, and get the best return on your HP investment. Our training is available when and where you need it, through flexible delivery options and a global training capability. hp.com/learn/proliant

HP Technology Services

With technology evolving at a rapid pace, it is increasingly important for you to rely on IT support services that are constantly adapting and evolving, too. The HP Support Services portfolio for HP ProLiant servers and HP BladeSystem redefines support, factoring in the breakthrough capabilities of HP ProLiant core rack and tower servers.

HP offers a comprehensive set of services to manage and optimize every aspect of the server environment. Our HP Lifecycle Event services include working with your IT team to design your environment from scratch or to integrate new technology into your existing infrastructure. Our services are designed for virtualized, converged environments, to help you get systems up and running quickly, and to provide ongoing reactive and proactive support.

- **HP Foundation Care**—Cost-effective, reactive services with separate or integrated hardware and software support options; includes HP Collaborative Support with independent software vendor (ISV) software problem resolution and enhanced call management.
- **HP Proactive Care**—Combines reactive and proactive hardware and software support; offers a single point of contact for remote and onsite hardware support delivered by advanced HP technology experts to help you proactively address potential issues and minimize downtime.
- **HP Datacenter Care**—Supports your entire data center environment; developed for environments that have HP and multi-vendor equipment; customized for your needs and service-level agreements.
- **HP Lifecycle Event Services**—Comprehensive end-to-end services, covering strategy, planning, deployment, technical, and education services that can be used at any stage of the solution lifecycle.

The undisputed server market leader

With one HP ProLiant server shipping every 10.5 seconds¹⁷ and more than 35.9 million sold, HP ProLiant servers are the undisputed market share leader.¹⁸ The industry-leading success of HP ProLiant stems in part from our ongoing commitment to providing a complete industry-standard server infrastructure that delivers innovation, quality, and proven performance.

Through this portfolio of services, HP can help you align support service levels to your business needs worldwide—while also saving you costs and resources. With HP, you receive the right support for the new age, benefiting from a support experience that is personalized, proactive, and simplified. hp.com/services/proliant

For customer service training visit hp.com/learn/proliant or contact your local HP sales representative or authorized HP ServiceOne Partner.

HP server families

A server for every need

HP 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, purpose-built for a wide variety of business needs. Explore our other server portfolios:

- [HP BladeSystem Family](#)—Delivering a whole new experience for IT with the Power of One—one infrastructure and one management platform to speed the delivery of services.
- [HP Moonshot System Family](#)—The industry's first workload-optimized server—designed for the data center and built for the planet.
- [HP Hyperscale Solutions Family](#)—When your IT is the core of your business.
- [HP Integrity Server Family](#)—When you need continuous business, Integrity servers help you achieve mission-critical results.
- [HP NonStop Server Family](#)—For industries that never stop.
- [HP Server Management Family](#)—Improve efficiency and accelerate service delivery.

Learn more

To learn more about how HP ProLiant rack and tower servers—together with Qualified Options and HP Services—can help you confidently lay the foundation for your converged infrastructure, visit the links below.

Learn more at

hp.com/go/proliant
hp.com/servers/rack
hp.com/servers/tower
hp.com/go/microserver
hp.com/go/servermanagement
hp.com/go/hpqa
hp.com/go/rackandpower

^{17, 18} [CQ4 2014 IDC Server Tracker](#): HP has shipped more than 35.9 million servers through CQ4 2014.

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