

HPE Small Business Solutions for Virtualization

Contents

About this configuration guide.....	2
HPE Small and Medium Business Solutions.....	2
HPE Small and Medium Business Solutions for Virtualization.....	2
Configuration disclaimer	2
Use the iQuote Solutions tile.....	2
Build your solution.....	2
Step 1: Size your solution.....	2
Step 2: Choose the right configuration and recommended options	3
Hybrid cloud options	10
Services and financing.....	10
Simple, secure, affordable.....	11
Resources.....	11

About this configuration guide

HPE Small and Medium Business Solutions

HPE Small and Medium Business Solutions are validated configurations designed to meet a variety of IT workloads and sizes for small to medium sized businesses. They consist of a base system plus options and software to make up a complete solution. In most cases these combinations are the foundation for Flex Offer special pricing. Note that pricing and special offers change much more frequently than these configurations and subject to change without notice.

- Remote Worker (VDI)—Fast and secure remote access for all your apps and data from anywhere
- Small Office Deployment—A simple approach for your first complete IT solution including wired and wireless networking
- General Purpose—Low-cost solutions for smaller environment with customizable functionality
- [Business Continuity](#)—Protect data and applications from catastrophic loss
- [Virtualization](#)—Run multiple workloads on a single server
- Shared Storage—A single storage pool for multiple servers with recommended workload configurations
- Hyperconverged Infrastructure (HCI)—Software-defined storage for high availability virtualization
- Database and Application—Host line-of-business database and applications on-premises

HPE Small and Medium Business Solutions for Virtualization

HPE Small and Medium Business Solutions for Virtualization provide improved application and data availability, consolidate workloads, and reduce server sprawl to save businesses energy and cooling costs by leveraging virtualization technology from Microsoft and VMware®.

With more than 20 solutions designed to meet the needs of a wide variety of businesses from very small 1 to 2 VMs to very robust configurations capable of more than 20 VMs there is sure to be a solution to meet the virtualization needs of your small to medium business.

Configuration disclaimer

The configurations in this guide have been tested and validated to meet the stated solution capacity for a variety of typical small to medium business workloads. While they are complete solutions as configured, they can be considered reference configurations and may be sensibly modified as needed to achieve your unique solution requirements as long as the configuration specifications are not reduced. They are typically a minimum configuration for the solution size, so if a smaller configuration is needed it is often more advantageous to scale-up from a smaller configuration rather than scale-down from a larger configuration.

The stated capacity for workloads in this guide are highly subjective and depend on the environment they are deployed to. Use these values as a guide—not as an absolute. The stated capacity is also based on default settings for the server and storage options specified in the configuration. Stated capacity does not take into account all of the possible system settings or option modifications available, which can greatly impact the configuration's stated capacity. For example, certain BIOS settings are not factored into the solution capacity by default but can potentially greatly increase the number of virtualized desktop workloads possible in a VDI or virtualization solution. Another example would be the increased performance that can be achieved by replacing hard disk drives with solid-state drives or by adding more memory.

Note also that this guide is updated from time to time and these configurations are subject to change without notice, as solution components can be discontinued before this guide is next updated. When substituting discontinued options be sure to replace with comparable options that match or exceed the discontinued option specifications.

Use the iQuote Solutions tile

Unless otherwise noted, all of the configurations in this guide are available in the **Solutions** tile on the iQuote home page. iQuote is an online sales enablement web application that simplifies the process of configuring, quoting, and purchasing HPE products and solutions from a single location. The **Solutions** tile provides a quick and convenient way to select the complete solutions presented in this guide without having to manually configure them in iQuote. After selecting the desired solution in iQuote it can be modified as needed. You can access the universal version of iQuote via iquote.hpe.com, or contact your preferred HPE authorized partner or distributor for live pricing.

Build your solution

Step 1: Size your solution

HPE Small Business Solutions for Virtualization are sized by the number of virtual processors (vCPUs) as well as other hardware resources like storage capacity. These solutions can be operated as standalone solutions or combined with other servers in a resilient, multinode cluster configuration. Table 1 shows the current configurations, with guidance on which base configuration to select based on the performance level and number of vCPUs required.



Table 1. Sizing for HPE Small Business Solutions for VM

Platform	Solution Capacity*
Standard Virtualization Solutions—featuring hard disk drive storage media and 2nd generation processors	
HPE ProLiant MicroServer Gen10 Plus	Starting at 4 vCPU/4 TB HDD
HPE ProLiant ML30 Gen10	Starting at 4 vCPU/4.8 TB HDD
HPE ProLiant ML110 Gen10	Starting at 10 vCPU/6 TB HDD
HPE ProLiant ML350 Gen10	Starting at 13 vCPU/6 TB HDD
HPE ProLiant DL20 Gen10	Starting at 7 vCPU/4.8 TB HDD
HPE ProLiant DL160 Gen10	Starting at 10 vCPU/4.8 TB HDD
HPE ProLiant DL180 Gen10	Starting at 13 vCPU/4.8 TB HDD
HPE ProLiant DL360 Gen10	Starting at 13 vCPU/4.8 TB HDD
HPE ProLiant DL380 Gen10	Starting at 32 vCPU/12 TB HDD
Performance Virtualization Solutions—featuring solid-state drive storage media and 3rd generation processors**	
HPE ProLiant DL325 Gen10 Plus v2	Starting at 22 vCPU/3.84 TB SSD
HPE ProLiant DL325 Gen10 Plus v2	Starting at 33 vCPU/4.8 TB SSD
HPE ProLiant DL365 Gen10 Plus	Starting at 22 vCPU/3.84 TB SSD
HPE ProLiant DL365 Gen10 Plus	Starting at 45 vCPU/7.68 TB SSD
HPE ProLiant DL385 Gen10 Plus v2	Starting at 45 vCPU/7.68 TB SSD
See also highly available HPE SMB Solutions	
<u>Shared Storage Virtualization Solutions</u>	
HPE MSA 1060 iSCSI/HPE ProLiant DL360 Gen10	Starting at 13 vCPU (per node)/14.4 TB HDD
HPE MSA 2060 iSCSI/HPE ProLiant DL360 Gen10	Starting at 16 vCPU (per node)/7.2 TB HDD
<u>Hyperconverged Infrastructure Virtualization Solutions</u>	
HPE ProLiant DL180 Gen10	Starting at 13 vCPU/4.8 TB (per node—minimum 2 nodes)
HPE ProLiant DL360 Gen10	Starting at 13 vCPU/4.8 TB (per node—minimum 2 nodes)
HPE ProLiant DL380 Gen10	Starting at 33 vCPU/9.6 TB (per node—minimum 2 nodes)
HPE ProLiant ML350 Gen10	Starting at 13 vCPU/4.8 TB (per node—minimum 2 nodes)

Note:

* vCPUs are available for guest VMs after reserving physical cores. Storage capacity is the raw total data storage before configuring RAID

- Reserve one physical core if the total core count is less than sixteen.
- Reserve one additional physical core per every sixteen physical cores.

** Performance Virtualization Solutions can often greatly exceed the stated Solution Capacity due to the use of solid-state drives for VM data storage when combined with additional memory and enabling performance settings such as multithreading

Step 2: Choose the right configuration and recommended options**Select the solution offer and elements for your business outcome and sizing needs**

HPE Small and Medium Business Virtualization Solutions are designed for cost-effectiveness and structured as building blocks for easy expandability. They are equipped with multiple HPE hard disk drives (HDDs) or solid-state drives (SSDs) that can be configured in a Redundant Array of Independent Disks (RAID) for protection against data loss due to a drive failure. And most HPE Small and Medium Business Solutions are equipped, or can be equipped, with redundant power supplies for additional availability protection.

Most HPE Small and Medium Business Virtualization Solutions can scale up as workload demands grow. To scale up, add optional storage and/or memory to support more VMs, users, or more resource-intensive applications. A second processor and associated memory can be added to the HPE ProLiant ML350, DL160, DL180, DL360, DL365, DL380, and DL385 Gen10 Servers. Additionally, some solutions featuring hard disk drives can add HPE SmartCache and related hardware to increase server performance through disk acceleration.



CPU, memory, and storage sizing calculation

CPU, memory, and storage resources need to be allocated to each guest virtual machine (VM) while reserving some resources for the host machine. While some virtualization solutions include dynamic allocation features that allow for overprovisioning of physical resources, a more conservative approach would be to avoid overprovisioning by planning your virtualization requirements ahead of deployment. This section will guide you in determining your physical resource requirements with a view toward a conservative allocation.

As a general rule, a minimum of two vCPUs, and twice the minimum required storage and memory (as dictated by the OS of the VM guest) should be provisioned for each VM guest, though this will likely vary depending on the workload requirements of each VM guest.

HPE and hypervisor software vendors recommend you reserve some physical server resources for the host, depending on your specific deployment:

- A minimum of one to two physical cores per installed processor. A good rule of thumb is to reserve one physical core plus one core per every 16 physical cores over the initial 16 cores.
- The minimum required memory as dictated by the hypervisor, plus at least 800 MB per planned VM guest.

At least twice the minimum required storage for the system boot volume specified by the OS/hypervisor vendor. Best practice is to dedicate a separate set of disk drives to the hypervisor boot volume and another set of disk drives for VM guest data storage. Separate disk controllers are also recommended for some high-performance virtualization configurations (see hypervisor vendor guidance).

For memory, HPE ProLiant Gen10 servers feature two memory channels per CPU with 2, 4, 6, or 8 DIMM slots per channel depending on server model. Best practice is to ensure that at least one channel is fully populated with like memory DIMMs for best performance. All HPE Small and Medium Business Virtualization Solutions are configured with at least one fully populated DIMM channel (or one channel per CPU in the case where two CPUs are present) with enough memory to provision a minimum ratio of 4 GB memory for each vCPU of the solutions' stated capacity—plus the reserve amount for the host system as recommended by the operating system.

For storage, all HPE Small and Medium Business Virtualization Solutions are provisioned with storage that allows for separate boot and data volumes. Each solution can be configured with two drives in a RAID 1 mirror for the boot volume, and 2 or more drives dedicated for virtual machine files.

Note that most operating systems require that all storage be attached to a hardware-based disk controller such as one of the HPE Smart Array E- or P-series controllers. While it is possible to use the server-embedded software based S100i controller for Microsoft Windows and Hyper-V, it is not recommended for volumes that store virtual machine files, and the use of an HPE Smart Array controller for the boot volume is highly recommended. VMware and Linux®-based hypervisors cannot use the embedded S100i SATA ports in RAID mode. VMware and Linux hypervisors can use the embedded SATA ports in AHCI mode. In AHCI mode S100i Software RAID is not enabled and thus is not recommended for SMB Virtualization Solutions.

Another boot volume alternative is the new HPE NS204i-p Boot Device, available as a stand-alone PCIe card or embedded into certain rack-server riser options which avoids consuming a PCIe slot (check QuickSpecs for availability). This boot device consists of a hardware RAID controller and two M.2 SSD drives for RAID protected storage of the boot volume. This device is ideal for operating systems like VMware that require hardware-based RAID controllers, or when it is required to have the boot volume on a hardware controller which is separate from the storage volumes, such as the case for hyperconverged infrastructure virtualization solutions like VMware vSAN™ or Microsoft Storage Spaces Direct.

Please refer to each hypervisor documentation for more information on host server resource requirements, as each hypervisor has its own requirements depending on workload.

Allocating guest virtual machine resources

Generally, 1.5 vCPUs can be provisioned for each physical CPU core, depending on the total workload demand required by all running guest VMs. Be sure to reserve at least one or two physical cores for the host, depending on workloads and software recommendations.

To calculate the total CPU core-count requirements:

1. Determine how many VMs you will deploy, and how many vCPUs are needed for each VM.
2. Divide the total number of vCPUs needed by 1.5.
3. Add the results of step two with the number of cores to reserve for the host machine (recommended minimum of one to two or more depending on the total number of physical cores available).



As an example, a conservative configuration for an average workload might look something like this.

Table 2. Average workload VM configuration

VM guest application/workload	Required Cores Calculation
Network infrastructure services (Active Directory, DNS, DHCP, etc.)	2
File and print server	2
Database server	2
Total vCPUs	6
Physical cores required to support vCPU (total vCPU ÷ 1.5)	4
Host machine physical core requirement	
Physical cores required to support vCPU*	4
Physical cores to reserve for host	1
Total required physical cores	5

* **Note:** A minimum of one to two physical cores per installed processor. A good rule of thumb is to reserve one physical core plus one core per every 16 physical cores over the initial 16 cores

Virtualization memory resources

A general rule of thumb is to provision each VM guest with at least twice the minimum hardware requirements for the OS of the guest, but this should likely be increased depending on the guest VM's workload and application requirements. Consider adding more memory if memory-intensive workloads are anticipated; be sure to follow HPE QuickSpecs guidelines when adding more memory.

Virtualization storage resources

HPE Small Business Solutions for Virtualization are configured with a pair of HDDs or SSDs that are intended as a RAID 1 mirror to host the OS or hypervisor, and two or more HDDs or SSDs intended to be configured as a RAID 1, RAID 5, or RAID 6 array to host the VM files.

VMs exist in the physical world as files on the server's physical storage, consisting of virtual disk (vDisk) files, VM configuration files, and usually VM snapshot files. A general rule of thumb is to provision each guest VM with two vDisks volumes. One vDisk volume for the guest OS should be at least twice the minimum disk space required by the guest OS. The other vDisk volume is for the VM workload data and should be sized according to the workload needs and expected storage growth. Storage for vDisks can usually be set to expand dynamically so you can allocate less physical storage initially and allow the hypervisor to increase the vDisk size as needed up to a preset maximum. Doing so can allow you to overprovision storage resources, however care should be taken to monitor physical disk utilization to ensure sufficient physical storage is available for all VM storage needs. Dynamically expanding disks are not supported for some workloads, so be sure to refer to the workload application documentation.

Additionally, as memory allocated to the VMs is increased, more storage should be allocated to the guest VM's OS volume—this ensures adequate storage for the guest OS page file (see guest OS documentation for requirements). Consider adding more physical storage if high capacity vDisk requirements are anticipated.

Businesses that need highly available virtualization solutions should consider either HPE SMB Hyperconverged Infrastructure (HCI) Solutions or HPE SMB Shared Storage Solutions for Virtualization. Both enable multiple servers to share storage, adding failover capability.

Shared storage solutions can reduce cost of ownership by sharing external storage versus multiple servers having their own internal storage. Shared storage can expand beyond its initial configuration by adding disks and enclosures. Please see the [HPE SMB Shared Storage Solutions configuration guide](#) for details.

Alternatively, highly available virtualization servers in a Hyperconverged Infrastructure solution share their compute and internal storage resources using software-defined storage. This technology distributes many virtualized workloads among multiple servers, enabling automated failover to remaining servers should one or more servers go down. Please see the [HPE SMB Hyperconverged Infrastructure Solutions configuration guide](#) for details.

Select the solution offer and elements for your business outcome and sizing needs:

New for fall 2021, HPE SMB Virtualization Solutions are available in Standard or Performance configurations. Standard configurations are based on HPE ProLiant Gen10 and Gen10 Plus servers with 2nd generation Intel® Xeon® Scalable and 2nd generation AMD EPYC™ processors, and feature SAS HDD storage volumes. Performance configurations are based on HPE ProLiant Gen10 Plus and Gen10 Plus v2 servers with 3rd generation Intel Xeon Scalable and 3rd generation AMD EPYC processors, and feature SAS SSD storage volumes for greater performance compared to Standard solution configurations.



Backup, recovery, and replication

Most HPE Small Business Solutions for Virtualization have optional backup solutions in the form of:

- RDX Removable Disk Backup System
- HPE StoreEver MSL 1/8 Tape Autoloader
- HPE StoreEver MSL2024 Tape Library

Backup with Veeam® Backup & Replication™

Veeam Backup & Replication software is a recommended option for HPE Small Business Solutions for Virtualization. Veeam provides fast, flexible, and reliable backup and recovery of virtual, physical, and cloud environments from a single management console. Note that the backup target can be any target with sufficient capacity, including a network attached storage (NAS) server. A replication target server should be at least as capable as the source VM host so it will have sufficient resources should a failover scenario be needed.

On-premises backup

For data protection on-premises consider HPE RDX or HPE StoreEver backup products.

HPE RDX Removable Disk Backup System is a recommended option for reliable disk-based backup and recovery with unmatched portability, fast recovery, and easy integration. The HPE RDX Removable Disk Solution provides a simple, cost-effective way to back up and protect critical data.

HPE StoreEver MSL 1/8 Tape Autoloader or MSL2024 Tape Library are recommended options that meet demanding storage requirements for businesses needing unattended backup, disaster recovery, or low-cost long-term archive capability. Both systems offer a broad choice of storage capacities and technology including LTO-8, LTO-7, LTO-6, or LTO-5 Ultrium tape drives. Web-based remote management enables easy management from across the room or across the globe. Quickly manage tape media both in and out of the library with the standard bar code reader, configurable mail slots, and multiple removable magazines. Protect important business data from unauthorized access with several data encryption options. Quickly increase capacity and/or performance with tool-free drive upgrades in the MSL2024/MSL4048 or move tape drive kits to an MSL3040/MSL6480 for scalability and additional enterprise class features.



Table 3. HPE Small Business Standard Solutions for Virtualization technical specifications

Platform	MicroServer Gen10 Plus	ML30 Gen10 Plus	ML110 Gen10	ML350 Gen10
Solution Capacity*	4 vCPU/4 TB	4 vCPU/4.8 TB	10 vCPU/6 TB	13 vCPU/6 TB
Form Factor	Micro Tower Server 4 x LFF Non-Hot Plug bays	4U Tower Server 8 x SFF Hot-Plug bays	4.5U Tower Server 8 x SFF Hot-Plug bays	4U Tower Server 8 x SFF Hot-Plug bays
Processor	Intel Xeon E-2224 (4-core/3.4 GHz)	Intel Xeon E-2314 (4-core/2.8 GHz)	Intel Xeon Scalable 4208 (8-core/2.1 GHz)	Intel Xeon Scalable 4210 (10-core/2.4 GHz)
Memory	2 x 16 GB	4 x 16 GB	6 x 16 GB	6 x 16 GB
OS Storage	2 x 1 TB SATA HDD**	2 x 480 GB SATA SSD	2 x 240 GB RI SATA SSD	2 x 240 GB RI SATA SSD
Data Storage	2 x 1 TB SATA HDD**	4 x 1.2 TB SAS HDD	5 x 1.2 TB SAS HDD	5 x 1.2 TB SAS HDD
Disk Controller	HPE E208i-p Gen10	HPE P408i-p Gen10	HPE P408i-p Gen10	HPE P408i-a Gen10
Network Ports	4 x 1GbE Embedded 1 x 1GbE HPE iLO Enablement	2 x 1GbE Embedded (HPE iLO port shared)	2 x 1GbE Embedded 1 x 1GbE HPE iLO Embedded	4 x 1GbE Embedded 1 x 1GbE HPE iLO Embedded
Power Supply	1 x 180W External	2 x 500W	2 x 800W	2 x 800W
Operating System	Microsoft Windows Server 2022/2019 Standard VMware vSphere® Essentials	Microsoft Windows Server 2022/2019 Standard VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Standard VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Standard*** VMware vSphere Essentials
Optional Software	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption HPE SmartCache	HPE iLO Advanced HPE Secure Encryption HPE SmartCache
Solution Options	N/A	N/A	SmartCache Bundle (SATA MU SSD + HPE SmartCache)	Scale-up Bundle (CPU, Memory, Disk) SmartCache Bundle (SATA MU SSD + HPE SmartCache)
Archival/DR	HPE RDX External USB 3.0 Backup System 1TB Bundle Veeam Backup	HPE RDX External USB 3.0 Backup System 2TB Bundle Veeam Backup	HPE RDX External USB 3.0 Backup System 4TB Bundle Veeam Backup	HPE RDX External USB 3.0 Backup System 4TB Bundle Veeam Backup

Note: These configurations represent the solution offers and recommended options.

* vCPUs are available for guest VMs after reserving physical cores. Storage capacity is the raw total data storage before configuring RAID.

** An alternative MicroServer HDD configuration would be to configure all 4 HDDs in a single RAID 5 volume for both boot and data.

*** Microsoft Windows Datacenter is recommended for Windows-based solutions if more than 5 virtual machines are hosted.



Table 3. HPE Small Business Standard Solutions for Virtualization technical specifications (continued)

Platform	DL20 Gen10 Plus	DL160 Gen10	DL180 Gen10	DL360 Gen10	DL380 Gen10
Solution Capacity*	7 vCPU/3.88 TB	10 vCPU/4.8 TB	13 vCPU/4.8 TB	13 vCPU/4.8 TB	32 vCPU/12 TB
Form Factor	1U Rack Server 4 x SFF Hot-Plug bays	1U Rack Server 8 x SFF Hot-Plug bays	2U Rack Server 8 x SFF Hot-Plug bays	1U Rack Server 8 x SFF Hot-Plug bays	2U Rack Server 8 x SFF Hot-Plug bays
Processor	Intel Xeon E-2336 (6-core/3.4 GHz)	Intel Xeon Scalable 4208 (8-core/2.1 GHz)	Intel Xeon Scalable 4210 (10-core/2.4 GHz)	Intel Xeon Scalable 4210R (10-core/2.4 GHz)	2 x Intel Xeon Scalable 4214 (12-core/2.2 GHz)
Memory	4 x 16 GB	6 x 16 GB	6 x 16 GB	6 x 16 GB	12 x 16 GB
OS Storage	2 x 300 GB SAS HDD	2 x 240 GB RI SATA SSD	2 x 240 GB RI SATA SSD	2 x 240 GB RI SATA SSD	2 x 240 GB RI SATA SSD
Data Storage	2 x 2.4 TB SAS HDD	4 x 1.2 TB SAS HDD	4 x 1.2 TB SAS HDD	4 x 1.2 TB SAS HDD	5 x 2.4 TB SAS HDD
Disk Controller	HPE MR216i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10
Network Ports	2 x 1GbE Embedded (HPE iLO port shared)	2 x 1GbE Embedded 1 x 1GbE HPE iLO Embedded	2 x 1GbE Embedded 1 x 1GbE HPE iLO Embedded	4 x 1GbE FlexLOM 1 x 1GbE HPE iLO Embedded	4 x 1GbE FlexLOM 1 x 1GbE HPE iLO Embedded
Power Supply	2 x 500W	2 x 500W	2 x 500W	2 x 500W	2 x 800W
Operating System	Microsoft Windows Server 2022/2019 Standard*** VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials
Optional Software	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption HPE SmartCache	HPE iLO Advanced HPE Secure Encryption HPE SmartCache	HPE iLO Advanced HPE Secure Encryption HPE SmartCache	HPE iLO Advanced HPE Secure Encryption HPE SmartCache
Solution Options	N/A	Scale-up Bundle (CPU, Memory, Disk) SmartCache Bundle (SATA MU SSD + HPE SmartCache)	Scale-up Bundle (CPU, Memory, Disk) SmartCache Bundle (SATA MU SSD + HPE SmartCache)	Scale-up Bundle (CPU, Memory, Disk) SmartCache Bundle (SATA MU SSD + HPE SmartCache)	SmartCache Bundle (SATA MU SSD + HPE SmartCache)
Archival/DR	HPE RDX External USB 3.0 Backup System 4TB Bundle Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL2024 Tape Library Veeam Backup

Note: These configurations represent the solution offers and recommended options.

* vCPUs are available for guest VMs after reserving physical cores. Storage capacity is the raw total data storage before configuring RAID.

*** Microsoft Windows Datacenter is recommended for Windows-based solutions if more than 5 virtual machines are hosted.



Table 4. HPE Small Business Performance Solutions for Virtualization technical specifications

Platform	DL325 Gen10 Plus v2	DL325 Gen10 Plus v2	DL365 Gen10 Plus	DL365 Gen10 Plus	DL385 Gen10 Plus v2
Solution Capacity*	22 vCPU/3.84 TB	33 vCPU/4.8 TB	22 vCPU/3.84 TB	45 vCPU/7.68 TB	45 vCPU/7.68 TB
Form Factor	1U Rack Server 8 x SFF Hot-Plug bays	1U Rack Server 8 x SFF Hot-Plug bays	1U Rack Server 8 x SFF Hot-Plug bays	1U Rack Server 8 x SFF Hot-Plug bays	2U Rack Server 8 x SFF Hot-Plug bays
Processor	AMD EPYC 7313P (16-core/3.0 GHz)	AMD EPYC 7443P (24-core/2.85 GHz)	AMD EPYC 7313 (16-core/3.0 GHz)	AMD EPYC 7513 (32-core/2.6 GHz)	AMD EPYC 7513 (32-core/2.6 GHz)
Memory	8 x 32	8 x 32	8 x 32	8 x 32	8 x 32
OS Storage	* NS204i-p (2 x 480 GB M.2 SSD)	* NS204i-p (2 x 480 GB M.2 SSD)	* NS204i-p (2 x 480 GB M.2 SSD)	* NS204i-p (2 x 480 GB M.2 SSD)	* NS204i-p (2 x 480 GB M.2 SSD)
Data Storage	4 x 960 TB MU SAS SSD	5 x 960 TB MU SAS SSD	4 x 960 TB MU SAS SSD	4 x 1.92 TB MU SAS SSD	4 x 1.92 TB MU SAS SSD
Disk Controller	HPE P408i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10	HPE P408i-a Gen10
Network Ports	4 x 1GbE OCP 1 x 1GbE HPE iLO Embedded	2 x 10GbE OCP 1 x 1GbE HPE iLO Embedded	4 x 1GbE OCP 1 x 1GbE HPE iLO Embedded	2 x 10GbE OCP 1 x 1GbE HPE iLO Embedded	2 x 10GbE OCP 1 x 1GbE HPE iLO Embedded
Power Supply	2 x 500W	2 x 800W	2 x 800W	2 x 800W	2 x 800W
Operating System	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials	Microsoft Windows Server 2022/2019 Datacenter VMware vSphere Essentials
Optional Software	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption	HPE iLO Advanced HPE Secure Encryption
Solution Options	N/A	N/A	Scale-up Bundle (CPU, Memory, Disk)	Scale-up Bundle (CPU, Memory, Disk)	Scale-up Bundle (CPU, Memory, Disk)
Archival/DR	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL 1/8 Tape Autoloader Veeam Backup	HPE StoreEver MSL2024 Tape Library Veeam Backup

* You may substitute up to two SFF SSDs in the standard drive bays for the NS204i-p Boot Device as long as the total drive count does not exceed the available drive bays. NS204i-p is recommended for performance SMB Virtualization Solutions as it provides separate boot volume RAID controller and frees up to two drive bays which can thus be used for data volume capacity expansion.



Hybrid cloud options

To extend your solution to hybrid cloud, start with the hardware configuration and follow the considerations as outlined in the section on HPE Small Business Solutions for Virtualization with Microsoft Windows Server and Hyper-V. The additional Microsoft Azure Cloud Services that make up the hybrid cloud solution are:

- **Veeam Backup & Replication** software is a recommended option when considering any HPE Small Business Solution, or when using an HPE Small Business Solutions for Backup as a Veeam backup target. Veeam Backup & Replication delivers powerful availability across all cloud, virtual, and physical workloads with a simple, flexible, and reliable solution. Protect your data no matter the location or workload type.
- **Azure Virtual Machines** gives you the flexibility of virtualization for a wide range of computing solutions—development and testing, running applications, and extending your data center. It's the freedom of open-source software configured the way you need it. It's as if it was another rack in your data center, giving you the power to deploy an application in seconds instead of weeks. Supports Linux, Windows Server, SQL Server, Oracle®, IBM, and SAP®.
- **Azure Backup** can be used to back up and restore data in the Microsoft cloud. Azure Backup replaces existing on-premises or off-site backup solutions with a cloud-based solution that is reliable, secure, and cost-competitive. Azure Backup automatically allocates and manages backup storage with a pay-as-you-go model, so you only pay for the storage that you consume. In addition, Azure Backup uses the underlying power and unlimited scale of the Azure cloud to deliver high availability with no maintenance or monitoring overhead.

Services and financing

HPE Pointnext Services

A services partner built for your business today and tomorrow, HPE Pointnext Services enables you to meet availability commitments with a variety of coverage levels and response times, and easily connect to HPE for faster problem resolution. HPE Pointnext Services offers comprehensive hardware and software services to help increase the availability of IT infrastructure and extend in-house IT staff with HPE expertise. You can do more with less by leveraging service tools with built-in simplification and remote management tools.

Service offerings include:

- HPE Pointnext Complete Care
- HPE Pointnext Tech Care
- HPE Lifecycle Services

Note

HPE recommends HPE Pointnext Tech Care as the minimum recommended service level for HPE Small Business Solutions.

HPE Financial Services

Simple IT equipment financing, asset lifecycle solutions and SMB finance option designed to help your business seize opportunities to evolve and thrive. hpe.com/us/en/services/finance-it-technology.html.

HPE Subscription services allow SMBs to select a complete solution from predefined options that include best-in-class compute, storage, and networking hardware; software; accessories; and worry-free support services for a predictable monthly subscription fee. No large, up-front purchase to make—just subscribe, use, return, and renew. No worries about what to do with old equipment. Need to expand? Simply add more hardware or services. HPE channel partners can offer hardware, software, and support services in a single solution and deliver it in one simplified subscription contract.

HPE Technology Refresh program replaces ownership with predictable monthly or quarterly payments and provides for a shorter, routine refresh cycle every 24 to 48 months. SMBs don't have to be locked into holding onto aging IT equipment and delaying upgrades.



Simple, secure, affordable

HPE Small Business Solutions lower the cost of accessing easy-to-use on-premises and hybrid cloud solutions without sacrificing security. To learn more about HPE Small Business Solutions, visit the resources included in this document, or contact your HPE or authorized partner representative. Find an IT reseller close to you at findapartner.hpe.com/.

Resources

- Solution brief: [HPE Small Business Solutions for Virtualization](#)
- [HPE ProLiant Server QuickSpecs](#)
- [HPE ProLiant Server Options](#)
- [IT Support Services](#)
- [Get connected](#)
- [iQuote](#)

Learn more at

hpe.com/info/smbolutions

Our solution partners



Make the right purchase decision.
Contact our presales specialists.



Chat now (sales)



Call now



Get updates

Explore **HPE GreenLake**

© Copyright 2022 Hewlett Packard Enterprise Development LP. The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

AMD is a trademark of Advanced Micro Devices, Inc. Intel Xeon and the Intel logo are trademarks of Intel Corporation or its subsidiaries in the U.S. and/or other countries. Linux is the registered trademark of Linus Torvalds in the U.S. and other countries. Active Directory, Azure, Hyper-V, Microsoft, SQL Server, Windows, and Windows Server are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. SAP is a trademark or registered trademark of SAP SE (or an SAP affiliate company) in Germany and other countries. VMware vSAN, VMware vSphere, and VMware are registered trademarks or trademarks of VMware, Inc. and its subsidiaries in the United States and other jurisdictions. Oracle is a registered trademark of Oracle and/or its affiliates. All third-party marks are property of their respective owners.