

HPE Small Business Solutions for Small Office Deployment

Contents

About this configuration guide.....	2
HPE Small and Medium Business Solutions.....	2
HPE Small and Medium Business Solutions for Small Office Deployment.....	2
Configuration disclaimer.....	2
Use the iQuote solutions tile.....	2
Build your solution.....	3
Step 1: Size your solution.....	3
Step 2: Choose the right configuration and recommended options.....	3
Step 3: Configure HPE Small Business Solutions for Small Office Deployment.....	3
Hybrid cloud options.....	6
Services and financing.....	6
HPE Pointnext Services.....	6
HPE Financial Services.....	7
Simple, secure, affordable.....	7
Resources.....	7

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 Small Office Deployment

HPE Small and Medium Business Solutions for Small Office Deployment are complete IT infrastructure solutions that enable companies to store files, run general business applications, and have wired and wireless connectivity. They consist of a bundle of HPE ProLiant servers, Aruba Instant On wired and wireless networking, and external storage products including HPE MSA Storage, HPE StoreEasy Storage, HPE RDX Removable Disk Backup System, and HPE StoreEver tape backup products.

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 is highly subjective and depends 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, it can be modified as needed. You can access the universal version 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 Small Office Deployment are sized by the number of users and/or devices they will support. The following table shows the available configurations, with guidance on which base configuration to select based on the number of users/devices you need to support.

Table 1. Small Office Deployment Solution Portfolio

Solution size	Supported users	Server	Networking
Micro	10 on-prem	MicroServer Gen10 Plus	AP11 (1—Optional)
Small	25 on-prem or 15 on-prem + 10 remote	ML30 Gen10 Plus	AP22 (2) + 1930 Sw (1)
Medium	100 on-prem or 80 on-prem + 20 remote	DL20 Gen10 Plus	AP22 (5) + 1930 Sw (2)
Large	150 on-prem or 100 on-prem + 50 remote	DL345 Gen10 Plus	AP22 (6) + 1960 Sw (3) + 1960 PoE Sw (1)

Step 2: Choose the right configuration and recommended options

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

HPE Small Business Solutions consist of a base system plus offer elements. These combinations are the foundation for special pricing and are the starting point for building your solution configuration. After selecting the appropriate HPE Small Business Solution configuration for your business outcome and sizing requirements, you may also wish to expand its capabilities by adding recommended options.

The configurations for HPE Small Business Solutions were designed for cost-effectiveness and structured as building blocks for easy expandability. HPE ProLiant servers are equipped with redundant enterprise or midline drives for boot and data volumes for protection against disk failure. SAS drives provide faster data transfers for better performance and low latency and can be used for storage when database deployment on a guest virtual machine (VM) is expected. SATA drives provide economical storage capacity. HPE recommends combining multiple drives in hardware or software RAID for increased availability and data protection. And HPE Small Business Solutions using the HPE ProLiant ML30 and DL20 Gen10, and DL345 Gen10 Plus server are equipped with redundant power supplies for additional availability protection.

Aruba Instant On Access Points are available in models designed for indoor, outdoor, hospitality, and SOHO environments, there's an option that meets any need, all at an attractive point. Instant On APs use an Auto Mesh technology that allows you to extend Wi-Fi coverage with the same strong signal strength into every corner of your business. Whether using laptops, tablets or phones, users will have an amazing wireless experience.

Aruba Instant On 1930 Switch Series are advanced, smart-managed, fixed-configuration gigabit Ethernet switches that are easy to deploy and affordable to buy. You can choose from different models that best fit your needs. With Instant On mobile app, you can get your network up and running in minutes.

Aruba Instant On 1960 Switch Series add new capabilities like switch local and cloud managed stacking, Class 4 and 6 PoE, and 10G Base-T connectivity.

With Aruba Instant On mobile app, you can see your entire network of APs and switches from a single screen, so it's easy to quickly identify if there's a problem—and troubleshoot accordingly.

Best of all, businesses can count on Aruba Instant On to provide amazing network experiences for employees and customers across your locations. It's affordable and there are no hidden fees for subscriptions.

Step 3: Configure HPE Small Business Solutions for Small Office Deployment

The HPE Small Office Deployment server is equipped with sufficient CPU, memory, and storage resources to provide services up to the stated solution capacity.

Operating system and storage considerations

The Windows Server operating system (OS) and data volumes are intended to be installed on RAID-protected volumes.

The MicroServer has four identical 1 TB SATA HDDs so you have the option of configuring them all together as a single RAID 5 volume, or splitting them into two RAID 1 volumes.

The ML30 should be configured using the two 300 GB SAS drives in RAID 1 for the OS volume and the four 1.2 TB SAS drives in a RAID 5 volume for data storage.



The DL20 should be configured with the two 240 GB SSDs in a RAID 1 configuration for the OS volume and the two 2.4 TB SAS drives in a RAID 1 volume for data storage. The DL20 Small Office Deployment solution is also available with an optional expanded storage configuration which includes an HPE StoreEasy 1460 network attached storage appliance with 8 TB (6 TB usable) of fast, RAID-protected storage incorporating advanced file management features that are typically unavailable in low-cost appliances like deduplication and complete Microsoft Windows Server infrastructure integration, including Microsoft Azure.

The DL345 should be configured with the two 480 GB SSDs in a RAID 1 configuration for the OS volume and the four 2 TB SATA HDDs in a RAID 5 volume for data storage. Alternatively, the DL345 Small Office Deployment solution can be configured with a large variety of high capacity HDDs and SSDs for excellent expandability, avoiding costly external storage.

[HPE RDX Removable Disk Backup System](#) is a recommended “Best Practice” option for all HPE Small Office Deployment solutions. Ransomware and other cyberattacks frequently target cloud and local disk backups as well as main data. The HPE RDX features removable storage media, which can be “air-gapped” to prevent backup corruption, and in-turn save your business from having to pay a nasty ransom to get your data back. The HPE RDX provides reliable disk-based backup and recovery with unmatched portability, fast recovery, and easy integration. The HPE RDX Removable Disk Backup System is a simple, cost-effective way to back up and protect critical data. And you can complement local RDX backups with a cloud backup strategy so you can recover quickly, even if you lose your entire site or local backup copies.

Table 2. Base system plus offer elements

Platform	MicroServer Gen10 Plus	ML30 Gen10 Plus	DL20 Gen10 Plus	DL345 Gen10 Plus
Solution capacity	Up to 10 on-premises users (two devices per user)	Up to 25 on-premises users (two devices per user) or 15 on-premises users and 10 remote users	Up to 100 on-premises users (two devices per user) or 80 on-premises users and 20 remote users	Up to 150 on-premises users (two devices per user) or 100 on-premises and 50 remote users
System	Micro Tower 4 LFF NHP drive bays	4U Tower 4 LFF Hot plug drive bays	1U Rack 4 SFF Hot Plug drive bays	2U Rack 8 LFF Hot Plug drive bays
Processor	1 x Intel® Xeon® E-series 3.4 GHz/4-core	1 x Intel Xeon E-series 2.8 GHz/4-core	1 x Intel Xeon E-series 3.4 GHz/6-core	AMD EPYC 3.1 GHz/8-core
Memory	1 x 16 GB PC4-2666	2 x 16 PC4-2666	2 x 16 PC4-2666	2 x 32 GB PC4-3200
Storage	4 x 1 TB 6G 7.2K SATA HDDs	4 x 1 TB 7.2K SATA HDD	2 x 2.4 TB 12G 10K SAS HDDs 2 x 300 GB 10K SAS HDDs	4 x 2 TB 7.2K SATA HDDs 2 x 480 GB 6G SATA SSDs
Disk controller	HPE Smart Array E208i-p Gen10	Intel® VROC	HPE MR216i-a Gen10 Plus	HPE Smart Array P408i Gen10
Network	4 x ports at 1GbE 1 x port HPE iLO Enablement Kit	2 x ports at 1GbE	2 x ports at 1GbE	4 x ports at 1GbE 1 x port HPE iLO (embedded)
Power supply	1 x 180W external power supply	1 x 350W PSU	2 x 500W Redundant PSU	2 x 500W Redundant PSU
Expanded storage	N/A	N/A	(Optional) HPE StoreEasy 1460 8 TB SATA NAS	N/A
Business Continuity	1 x RDX Removable Disk Backup System w/2 TB cartridge (USB 3.0 connectivity)	1 x RDX Removable Disk Backup System w/2 TB cartridge (USB 3.0 connectivity)	1 x RDX Removable Disk Backup System w/4 TB cartridge (USB 3.0 connectivity)	N/A
Switch	(Optional) 1 x Aruba Instant On 1930 8 port PoE 1GbE Switch	1 x Aruba Instant On 1930 24 port PoE 1GbE Switch	1 x Aruba Instant On 1960 24 port PoE switch 2 x Aruba Instant On 1960 48 port (non-PoE) switch	1 x Aruba Instant On 1960 12 port 10GbE Base-T switch 1 x Aruba Instant On 1960 24 port PoE switch 2 x Aruba Instant On 1960 48 port (non-PoE) switch
Access Point	1 x Aruba Instant On AP11 Wireless Access Points (Optional) 1 x Aruba Instant On AP11D Desktop Wireless Access Point	2 x Aruba Instant On AP22 Wireless Access Points (Optional) 1 x Aruba Instant On AP25 Wireless Access Point	4 x Aruba Instant On AP22 Wireless Access Points (Optional) 1 x Aruba Instant On AP25 Wireless Access Point	6 x Aruba Instant On AP22 Wireless Access Points (Optional) 2 x Aruba Instant On AP25 Wireless Access Points
Software		Microsoft Windows Server 2019/2022 Standard ROK Microsoft Windows RDS CALs HPE iLO Advanced Aruba Instant On mobile App Veeam Backup and Replication (Optional)		



Network installation considerations

Wireless Access Points require power that can be supplied via the Ethernet cable connected to one of the PoE ports on the Small Office Deployment switch, or via optional external power supply (ordered separately). The MicroServer Small Office Deployment includes a single wireless Access Point with external power supply that can be connected to existing network equipment, or you can add an optional switch with PoE to provide additional wired connectivity and provide power to the wireless Access Point.

A simple deployment of the HPE Small Office Deployment network components would be to connect the switch to the customer's internet router, the Small Office Deployment server, the Small Office Deployment wireless Access Points, and all the PCs, and other network devices.

A more secure—but complex—deployment is also possible. The HPE Small Office Deployment switch can support multiple network segments, called virtual LANs (VLANs). In this mode, the internet router (as well as any public facing hosts such as email or VDI gateways) is connected to the VLAN designated for unsecure external network traffic, such as a DMZ. Internal PCs and other network devices to be protected are connected to the VLAN designated for secure internal network traffic. The Small Office Deployment server could be configured to host a ClearOS VM running a secure gateway application that acts as a firewall between the secure VLAN segment and the unsecure VLAN segment.

Instant On is a simple, easy to deploy turnkey networking solution consisting of one or more Instant On APs or switches. A single site can include up to 25 Instant On devices (mix of APs/switches) supporting 8 wireless (SSID) and 22 wired (VLAN) networks. The first device to connect to the ISP equipment can either be an AP or a switch. Instant On APs have the option of acting as a router (and can handle PPPoE configuration) and can also act as a DHCP server providing IP addresses to the wireless network.

Instant On APs come with DHCP, NAT, firewall, and router capabilities that allow them to be directly connected to an ISP modem. If no switch is needed for wired connections (cameras, cash register, etc.), Instant On AP can be connected directly to the modem and additional APs can be connected to the initial AP in Mesh-Mode.

Instant On wireless and wired network can be deployed and managed via Instant On mobile app.

Server configuration considerations

The HPE Small Business Solution for Small Office Deployment is intended to be deployed as a single server that provides all of the services typically used by a small office, which could include the following:

- Network infrastructure services such as Active Directory, domain name services (DNS), and dynamic host configuration protocol (DHCP) services
- Network file and print services
- Line of Business (LoB) application hosting
- Remote desktop services (RDS) (Note: Requires additional licensing)
- Disaster recovery and network security

Note

Remote desktop services (RDS) provide remote users access to virtual desktops running on IT-controlled operating systems. You can run a single Windows Server RDS instance and users access it from a supported terminal client or their Windows PC using Windows Remote Desktop client. Or you can deploy a multiserver instance to enable Remote Desktop access from virtually any device anywhere. All processing takes place on the server itself and not on the local user machine, and multiple user instances run simultaneously on the server.

Each of the services below can impact, or be dependent on, the other services, and can be configured in a variety of ways to meet the needs of the business environment. One possible strategy would be to deploy some or all of these services in one or more Microsoft Hyper-V VMs. For example, the HPE Small Office Deployment server running Windows Server Standard would host:

- Either on the bare-metal Windows OS, or in a Hyper-V VM:
 - Network infrastructure services (Active Directory, DNS, and DHCP)
 - File and print services
 - LoB application or database (Note: Some apps or databases may not be able to run in a VM)
- Windows Hyper-V to host the following VMs:
 - Gateway application (such as a Linux® gateway appliance VM)
 - Windows RDS (running RDS in a VM helps prevent main system crash if a remote user happens to crash their RDS instance)
 - Line of business application or database (Note: Some apps or databases may not be able to run in a VM)



Note

Windows Server Standard allows for up to two VMs. If more VMs are required to meet a complex deployment need, additional Windows licensing is required. For every two VMs needed above the initial two, you must purchase Windows "Additional Cores" licensing equivalent to the number of all cores in the system. However, the HPE Small Office Deployment servers should not be configured with more than four VMs as this will likely result in poor performance depending on the VM workloads. Consider an HPE Small Business Solution for Virtualization if more than four VMs are needed. The additional Small Office Deployment networking and storage components are building blocks and can be added to a virtualization solution just as easily.

Storage considerations

HPE StoreEasy 1460 models come with Windows Server IoT 2019 for Storage preinstalled from the factory on the four internal large form factor (LFF) drives. The HPE StoreEasy 1460 is built on an HPE ProLiant DL360 Gen10 server and includes a rail kit. It connects to any Ethernet network and is easily configured via a simple startup utility.

HPE RDX integrates easily into HPE Small Business Solutions for Small Office Deployment. Compatibility across various operating systems and virtualization platforms makes RDX simple to adapt into any small business environment. You can also use Fixed Disk mode for automated backups via the native Windows Server OS.

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.



Configuration guide

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 allows 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 partnerconnect.hpe.com/partners.

Resources

- [HPE Small Business Solutions Deployment guide—Windows-based solutions](#)
- [HPE ProLiant Server QuickSpecs](#)
- [HPE Server Options](#)
- [IT Support Services](#)
- [HPE Operational Support Services](#)
- [iQuote](#)

Learn more at

hpe.com/info/smbolutions

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 and Intel Xeon 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. Oracle is a registered trademark of Oracle and/or its affiliates. All third-party marks are property of their respective owners.