



HPE ProLiant DL325 Gen10 Servers with VMware vSAN

Affordable, simple, and secure software-defined storage for small and midsize businesses

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Overview

A digital transformation is taking place, fueled by [Big Data](#), mobility, the [Internet of Things \(IoT\)](#), social media, and cloud technologies. Applications are at the heart of this transformation—and for small and midsize businesses (SMBs) to be successful, speeding time to value with the new generation of applications and data will require affordable, simple and secure software-defined storage solutions.

In the past, the cost and complexity of software-defined storage (SDS) has made it more suitable for enterprises, but now SDS based on HPE ProLiant DL325 Servers with [VMware vSAN™](#) frees SMBs from the cost and complexity of traditional storage arrays with a low-cost, scalable storage resource that is simple to deploy, manage, and support. The solution is suitable for SMBs and remote and branch offices (ROBOs) seeking better ways to deal with storage sprawl, or those already using a storage area network (SAN) and looking for a simpler, less costly way to deploy and manage storage to support modern workloads.

Of course, SMBs need affordable, secure on-premises IT that's easy to purchase and manage. HPE DL325 Gen10 Servers with VMware vSAN reference configurations are optimized and validated. This document provides a complete solution recipe, including hardware, software, services, and HPE ProLiant options, for an SDS solution that's suitable for businesses with 150–250 employees.

With HPE ProLiant DL325 Gen10 Servers and VMware vSAN, SMBs can easily adopt [software-defined storage](#) that is simple, affordable, and secure.

Solution details



HPE ProLiant DL325 Gen10 Servers

Secure and versatile HPE ProLiant DL325 Gen10 Servers deliver an exceptional balance of processor, memory, and I/O for 2P performance at 1P economics. Based on the AMD EPYC™ processors, the ProLiant DL325 Gen10 Server is a game-changer for virtualization use cases such as software-defined storage. With up to 32 cores and 2 TB of memory, the ProLiant DL325 Gen10 is the right choice for smaller scale SDS; in fact, the DL325 sets the bar with #1 single-socket virtualization performance.¹

AMD EPYC processors

With innovation to accelerate today's applications, the AMD EPYC processors complement the benefits of HPE ProLiant DL325 Gen10 Servers with the right balance of core count, memory support, and high I/O capacity, delivering the utmost in flexibility for matching resources to workloads. With its industry-leading core count and memory support, EPYC can enable more virtual machines (VMs) and more robustly configured VMs per server than previously possible while helping make those VMs more secure.

VMware vSAN

VMware vSAN is a radically simple, enterprise-class, SDS solution that pools direct-attached storage devices across a VMware vSphere® cluster to create a distributed shared datastore. Since disks internal to HPE ProLiant DL325 Gen10 Servers are used to create a vSAN datastore, there is no need for costly, complex external shared storage. The scale-out architecture leverages x86 servers and server-side hybrid storage to drastically lower overall storage total cost of ownership (TCO). The product's seamless integration with VMware vSphere and VMware vCenter Server® makes it the simplest storage platform for SMBs. As the only native vSphere storage, vSAN enables businesses to seamlessly extend virtualization to storage, creating an SDS solution that works with existing tools, skill sets, and software and hardware platforms.

¹ [HPE Server Performance Benchmarks](#)



Better together

HPE software-defined storage solutions for SMBs using HPE ProLiant DL325 Gen10 Servers with VMware vSAN are:

Simple

- HPE ProLiant servers include automated intelligence that reduces the time and skills required for deployment and management.
- VMware vSphere software jump-starts virtualization projects with simplified solutions that are defined and validated yet flexible.
- vSAN is simple and automates time-consuming manual storage tasks. vSAN and storage policies are easily configured and managed using the familiar and user-friendly VMware vSphere® Web Client, with no need for administrators and managers to learn a separate tool just for managing storage.
- VMware vCenter® integrates with HPE Insight Control to provide intuitive management tools that deliver system health, remote control, vulnerability scanning, flexible deployment, and power management in one package for virtual and physical servers.

Affordable

- HPE Subscription offers a flexible, worry-free option that packages best-in-class hardware, software, accessories, and services into a predictable monthly payment.²
- The ProLiant DL325 Gen10 Server scales very linearly with respect to virtualization price/performance, with up to 27% better price/performance and 25% lower cost per VM than the leading 2P competitor.³
- The AMD EPYC processors support up to 2 TB memory per socket and 13% more CPU cores, with the ability to execute 13% more simultaneous threads.
- AMD EPYC shaves costs by requiring 12% less power and providing lower VMware® licensing costs on a per-core basis.⁴
- Since drives internal to the ProLiant DL325 Gen10 are used to create the vSAN datastore, there is no dependence on expensive, difficult to manage, external shared storage.
- The solution can reduce CAPEX up to 50% by leveraging server-side hard disk drives (HDDs) and solid-state drives (SSDs) to create a converged and resilient shared-storage solution within the VMware hypervisor.⁵
- vSAN allows granular scaling to avoid overprovisioning and overpaying for future capacity and performance needs.

Secure

- Protect against attacks and quickly recover from unplanned downtime with built-in security features that make HPE ProLiant Gen10 the world's most secure industry-standard servers.⁶
- HPE's silicon root of trust is unique technology that anchors essential firmware to the custom HPE iLO 5 chip. This creates an immutable fingerprint that verifies the firmware code is valid and uncompromised, so the server won't boot with compromised firmware.
- A dedicated AMD Secure Processor is embedded in the AMD EPYC system on a chip (SoC). It manages secure boot, tying into the silicon root of trust at the firmware level, and validating the HPE BIOS during the boot process.
- AMD Secure Encrypted Virtualization (SEV) can isolate VMs from one another and from the hypervisor itself to protect data, while AMD Secure Memory Encryption (SME) enables inline encryption and decryption with secure key generation and management.
- VMware vSAN offers the industry's first native software-based, FIPS 140-2 validated, hyperconverged infrastructure (HCI) data-at-rest encryption, supports two-factor authentication (SecurID and CAC), and offers the first Security Technical Implementation Guide (STIG) for HCI approved by the Defense Information Systems Agency (DISA).

Simple



Affordable



Secure



² Subject to minimum commitment.

³ Comparing HPE ProLiant DL325 Gen10 SPECvirt_sc2013 benchmark results with competitive offerings: hpe.com/servers/benchmarks.

⁴ Compared to a top competitor. Source: AMD.

⁵ Why Customers Choose VMware vSAN, based on internal analysis, December 2016. Based on 20 TB all-flash vSAN versus leading all-flash array pricing.

⁶ Based on external firm conducting cyber security performing penetration testing of a range of server products from a range of manufactures, May 2017.



Working together for you

For more than 17 years, HPE and VMware have been delivering the industry’s most complete portfolio of tightly integrated and jointly engineered systems—spanning the desktop and device to the data center, the cloud, and beyond. When you choose a standards-based solution from Hewlett Packard Enterprise and VMware, your business benefits from:

- Faster application deployment
- Greatly improved performance
- Streamlined operations made possible through automation
- An innovative IT infrastructure that’s easier to manage and less costly to own
- A better user experience, giving users fast response times and continuous availability

HPE ProLiant DL325 Gen10 Servers with VMware vSAN for software-defined storage

HPE ProLiant DL325 Gen10 Servers with VMware vSAN create a simple, secure, and affordable solution ideal for software-defined storage. These offers are optimized and validated with VMware and include hardware, software, services, and top-selling HPE ProLiant options.

Bill of materials

Base system plus offer elements

Compute	3 x HPE ProLiant DL325 Gen10 Servers*
Capacity	150–250 users
Processor	AMD EPYC 7251 (8-core)
Memory	2 x 16 GB
HDDs	2 x 300 GB 10k SAS (to be configured as RAID 1 for 300 GB ESXi volume) 4 x 1.2 TB 10k SAS (to be configured as the capacity tier in vSAN)
SSDs	2 x 240 GB SATA (to be configured as the cache tier in vSAN)
Disk controller	HPE Smart Array P408i
USB	8 GB
Network	4 x 1GbE
Power supply	2 x 500W
Software**	iLO Advanced Premium—3-year subscription (per node) VMware vSphere Standard—3-year subscription (per node) VMware vSAN Standard—3-year subscription (per node) VMware vCenter Standard—3-year subscription (1 instance to manage unlimited number of vSphere hosts)
Support	HPE Pointnext Foundation Care hardware support—3-year 24x7 VMware software support—3-year 24x7

Note: The configurations represent base elements and recommended configuration options.

* A witness host—a virtual machine running VMware ESXi™—is a required third node in the vSAN cluster. Witness hosts are typically deployed to a vSphere environment at a central main data center. The use of a virtual appliance as a witness host eliminates the need to deploy a third physical server. Refer to the VMware solution overview, “Native vSphere Storage for Remote and Branch Offices,” for more details on how to configure vSAN architecture in a two-node configuration.

** VMware subscriptions are sold and supported by HPE. Visit the [product page](#) and the [download page](#) for more details.



HPE Pointnext

[HPE Pointnext services](#) enable SMBs to meet availability commitments with a variety of coverage levels and response times, and to easily connect to HPE for faster problem resolution. HPE Pointnext offers comprehensive hardware and software services to help increase the availability of IT infrastructure and extend in-house IT staff with HPE expertise. IT staff can do more with less by leveraging service tools with built-in simplification and remote management tools. Service offerings include:

- HPE Foundation Care
- HPE Proactive Care
- HPE Proactive Care Advanced
- HPE Installation and Deployment Services
- HPE Capacity Care
- HPE GreenLake Flex Capacity

Note

That HPE recommends Foundation Care 24x7 as the minimum SDS service level for SMBs using HPE ProLiant DL325 Gen10 Servers with VMware vSAN in vSphere environments.

VMware support

HPE provides comprehensive support for the entire physical and virtual infrastructure, delivering one-stop shopping for VMware software and HPE hardware support. HPE includes a choice of 1-, 3-, or 5-year unlimited 24x7 technical software support and updates with all VMware software licenses. HPE Pointnext 24x7 technical support services are included with these licenses, allowing HPE to act as your single-source provider for service and support. All HPE Pointnext support products have a 2-hour response time, regardless of the severity of the reported problem.

HPE Financial Services

Purchasing new IT and upgrading it in three or four years can be financially daunting for SMBs. HPE is offering a better way for SMBs to acquire and pay for the IT infrastructure they need, from options to pay monthly, to solutions that make it easier to scale or upgrade.

HPE Technology Refresh 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 in to holding on to aging IT equipment and delaying upgrades. With HPE Technology Refresh, SMBs can have the IT they need to meet business goals and pay over time to conserve cash, saving 10% to 15% over three or four years.

HPE Subscription services allow SMBs to select a complete solution from defined 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, upfront purchase to make, and no worries about what to do with old equipment—just subscribe, use, return, and renew. Need to expand? Simply add more subscriptions. HPE channel partners can offer hardware, software, and support services in a single solution and deliver it in one simplified subscription contract.

Simple, secure, affordable

HPE ProLiant DL325 Gen10 Servers with VMware vSAN lower the cost of accessing easy-to-use SDS solutions with enterprise-grade security and availability. To learn more about HPE and VMware solutions, visit the resources included in this document, or contact your HPE or authorized partner representative.



Configuration guide

Resources

[ProLiant server QuickSpecs](#)

[HPE Server Options](#)

[IT Support Services](#)

[Get connected](#)

[iQuote](#)

[VMware vSAN data sheet](#)

[VMware compatibility guide](#)

[VMware vSAN hardware guide](#)

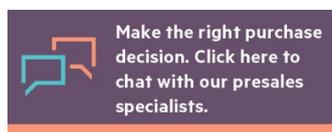
[VMware vSAN licensing guide](#)

[Native vSphere Storage for Remote and Branch Offices](#)

Learn more at

hpe.com/servers/dl325

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a00049585ENW, July 2018

