**Build a fast, flexible, scalable VDI infrastructure**

**HP Virtual SAN Solution for Client Virtualization**

Improve the economics of your virtual desktop infrastructure with a hyper-converged, flash-optimized solution that enables greater business productivity with faster application response.

**Making VDI a cost-effective reality**

Drive down costs with highly efficient servers, shared storage, and increased virtual machine (VM) density, enabling more users and desktops to access the system.

**Scalability to meet growing needs**

Raise service levels and support growth needs with flexible deployment and configuration options. The three-server base configuration can easily scale by adding more HP ProLiant DL360 Gen9 Servers to the cluster—supporting a maximum of 3,200 users.

**Breakthrough solution performance**

Application response time is a critical service level requirement for VDI environments. Using VMware View Planner, application response times benchmarked for both CPU- and disk-sensitive desktop applications are well below targeted thresholds:

- CPU-sensitive applications: 95th percentile, 0.92 seconds
- CPU- and disk-sensitive applications: 95th percentile, 4.33 seconds

**Tested solution elements**

- 3 x HP ProLiant DL360 Gen9 Servers with 256 GB RAM
- 2 x 2.6 TB HP LE PCIe Workload Accelerators in each server
- 2 x 10 Gb NICs, 1 x 1 Gb NIC in each server
- 1 x Brocade VDX 6740 switch
- VMware vSphere 5.5
- VMware Virtual SAN
- VMware Horizon 6.1.1 for virtual desktop workloads

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**Note**

Where useful, this solution can be flexibly configured with lower capacity 1 TB, 1.3 TB, or 1.6 TB HP Workload Accelerators, and with one accelerator per server.

**VDI, made better**

For years, virtual desktop infrastructure (VDI) has been used to deliver desktops and apps to mobile users. While traditional VDI solutions provide the necessary functionality, they often require prohibitively high capital outlay to deploy and operate—which creates a roadblock for many dollar-conscious organizations.

Today, HP and VMware® offer a new approach to VDI—making it not only more cost-efficient and budget-friendly, but also more available, responsive, scalable, and flexible.

**Hyper-convergence is the key**

To take VDI to new heights of efficiency and functionality, HP and VMware designed HP Virtual SAN Solution for Client Virtualization. This PCIe flash-based hyper-converged system includes everything you need to support your mobile workforce—servers, storage, networking, management, and virtualization software, including desktop virtualization.

This hyper-converged solution includes modular infrastructure building blocks that offer a fast, simple, and efficient way to deploy a VDI infrastructure. These building blocks allow IT to respond to the demands of your business, to quickly adapt to new markets, and to address the needs of your workers, customers, and partners.

By applying this modern architecture to HP Virtual SAN Solution for Client Virtualization, you benefit from:

- Significant cost reduction in terms of hardware to purchase, manage, and operate.
- Enhanced productivity, made possible by the increased responsiveness of the system.
- Faster application response, giving your people the information they need—when they need it—to do their jobs.

**Enhancing VDI performance**

To deliver the high performance you need to support a growing mobile workforce, HP Virtual SAN Solution for Client Virtualization leverages the power of the HP ProLiant DL360 Gen9 Server platform. And to make this industry-leading server even better, we added SanDisk Fusion ioMemory-based HP PCIe Workload Accelerators. Specifically designed to support mixed workloads like VDI, HP Workload Accelerators have enterprise-grade reliability and capacities up to 6.4 TB, delivering the ultra-low, microsecond latency and real-time data access your mobile workers need.

By leveraging the significant performance improvements flash-based HP PCIe Workload Accelerators provide, as compared to traditional hard disk drive (HDD) infrastructures, you can:

- Deliver virtual desktops faster and more efficiently
- Reduce infrastructure and the data center footprint
- Increase the number of virtual machines/virtual desktops supported
- Improve overall system efficiency

These improvements enable you to drive down expenditures including application licensing fees, data center space, cooling costs, and energy use.
Designed to scale
Each HP Virtual SAN Solution for Client Virtualization appliance includes three host servers (nodes) with the built-in VMware Virtual SAN datastore configured using two disk groups in each node. Each disk group is configured with one caching tier, using one 2.6 TB HP PCIe Workload Accelerator and three capacity-tier HDDs.

As your needs grow, you can easily scale this solution with additional HP ProLiant DL360 Gen9 Server nodes to support a maximum of 3,200 users/desktops.

The right solution based on the right technology
HP ProLiant DL360 Gen9 Servers
Designed with performance in mind, the HP ProLiant DL360 Gen9 Server leverages the latest Intel® Xeon® E5-2600 v3 processors to offer up to 70 percent performance gains\(^1\) for handling your VDI workloads. Continuing its legacy of reliability, serviceability, and continuously availability, the HP ProLiant DL360 Gen9 Server is the ideal choice for HP Virtual SAN Solution for Client Virtualization because of its ability to handle:

- Low-latency and transactional applications such as VDI
- Space-constrained server workloads
- Dynamic workloads
- Compute-intensive applications

VMware vSphere
As the leading server virtualization platform, VMware vSphere delivers business value from day one with powerful server virtualization, breakthrough availability, safe automated management, and intelligent operational insight that adapt to your VDI environment.

Get ready for better VDI
Contact your HP representative today. Find out how your organization can boost workforce productivity and lower operating costs by deploying a high-performance VDI solution running in a hyper-converged IT environment.

Learn more at hp.com/go/WorkloadAccelerator

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*Figure 1. The HP ProLiant DL360 Gen9 Server-based solution for VDI, powered by SanDisk Fusion ioMemory-based HP PCIe Workload Accelerators*

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\(^1\) Intel performance testing, comparing measurements on platform with two E5-2697 v2 (12C, 2.7 GHz), 8x8 GB DDR3-1866, RHEL 6.3 vs. platform with two E5-2697 v3 (14C, 2.6 GHz, 145 W), 8x8 GB DDR4-2133, RHEL 6.3, April 2014.