Cost-Effective Remote Office / Branch Office (ROBO) Virtualization with HP StorageWorks P4000 Virtual SAN Appliance (VSA)

Affordable high availability and disaster recovery for remote sites

Solution brief

At a glance

Every HP StorageWorks P4000 Virtual SAN Appliance (VSA) delivers:

- A complete storage solution without the need for an expensive and complex external storage infrastructure

- Enterprise-class data-availability and disaster-recovery features to remote offices – affordably

- Centralized management and automation of critical data protection features like snapshots, remote copy, and storage allocation

- Scalable, highly efficient systems that can grow with your business and the latest technologies, while leveraging existing infrastructure investments

- Significant savings in total cost of ownership, with 49-percent lower costs in remote sites

Solving IT challenges at remote offices

The data housed at your branch offices is just as important as the data located at your headquarters. However, many organizations inadvertently place this critical information at risk because deploying physical SANs at each remote location can be cost prohibitive. This does not have to be the case. HP has an approach that can affordably provide high availability (HA) and disaster recovery (DR) for each of your remote sites.

With the HP StorageWorks P4000 Virtual SAN Appliance (VSA), you can create an enterprise-class, shared SAN **inside** your VMware® ESX™ environment, taking advantage of unused storage on your existing server disk drives to create a virtual storage pool. External legacy storage also can be included in that pool. Furthermore, HP P4000 VSA software eliminates single points of failure. Using an innovative clustering approach to application data availability, the HP P4000 VSA reduces your risks and cost-effectively provides the same advanced HA features used by larger data centers.
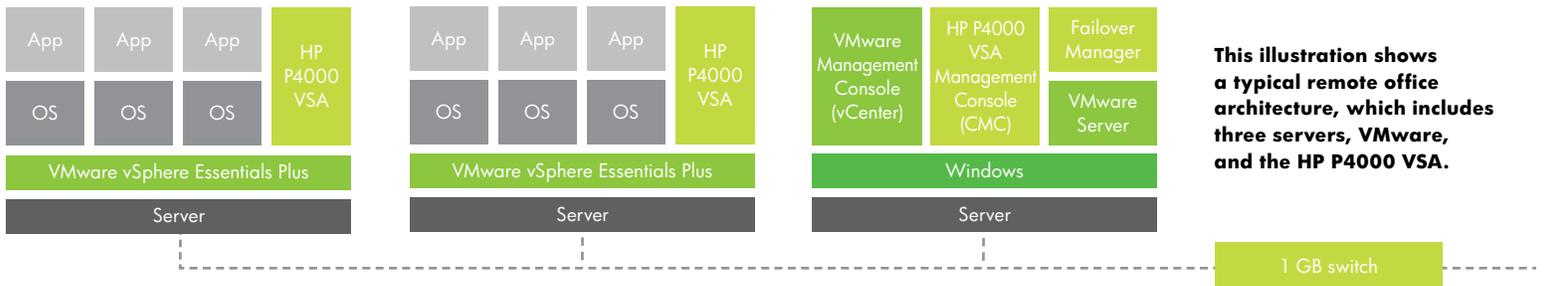
Additionally, HP P4000 VSA is completely compatible with the HP P4000 SAN appliance. Many organizations choose to use HP P4000 VSAs at their branches and the HP P4000 SAN at their headquarters. If the remote sites require a physical SAN in the future, organizations can then easily substitute the HP P4000 SAN for the HP P4000 VSA without disruption. Remote replication over low-bandwidth networks provides central backup and DR for the remote sites – all managed centrally.

HP solutions help you address your IT objectives, namely:

- Reducing costs

- Leveraging your central IT staff

- Consolidating servers and storage

- Achieving business continuity

- Simplifying management

Figure 1. Remote office architecture

This illustration shows a typical remote office architecture, which includes three servers, VMware, and the HP P4000 VSA.

Reducing costs

HP P4000 VSA solutions can help you overcome storage challenges and fully realize the benefits of virtual server infrastructures. With a combined HP and VMware virtualization solution, you can provide your remote sites with HA, DR, and remote management for data and applications. Because HP P4000 VSA leverages the full capabilities of VMware without requiring additional external storage systems or onsite IT staff, you receive all the features of a data center at only a fraction of the cost.

Leveraging your central IT staff

With an HP solution for ROBO, onsite IT professionals are not needed at your branches. Remote management capabilities and the lack of a physical SAN permit the required IT expertise to reside at your central location, and it can be amortized over all branches.

Consolidating servers and storage

Virtualization enables your remote offices to do more with less by using a smaller number of servers to support the applications you need. In most cases, you can decrease the number of servers required at each remote site from five or more to only two or three. This reduction saves space and money, including

reduced power usage. With the HP P4000 VSA, you can consolidate and virtualize the necessary storage onto the same servers, avoiding the need for external shared storage systems.

Achieving business continuity

HP ROBO solutions provide a cost-effective architectural framework that ensures business continuity for all of your locations. Through a resilient infrastructure, the solution can survive common outages – even a complete server failure. Furthermore, remote offices can be connected to the main data center via the IP network to protect against complete outages of the remote offices. Every HP solution can be tailored to your business' required recovery time objective and recovery point objective.

Simplifying management

Central management and automation of key data protection functions – like automated backups, remote copy, and snapshots – ensure the reliability of critical processes, without the need for hands-on intervention or maintenance by remote office staff. Best-practice analyzer tools constantly and centrally monitor the entire system and recommend adjustments to maximize efficiency.

Tailoring architecture to your changing business needs

Because HP solutions are tailored to your individual business needs, they immediately provide cost efficiencies while ensuring HP reliability and adaptability into the future in a scalable, as-you-need-it plan that leverages your existing IT investments. And HP provides the most complete set of options from a single vendor in the industry.

The example in Figure 1 shows a typical configuration of a remote office's system architecture. This configuration, which includes three HP servers, VMware vSphere™, and the HP P4000 VSA, is designed for local HA.

A variety of architectural options are possible, depending on your objectives. Each scenario leverages the remote office's existing infrastructure and adapts it for the primary goal (DR, remote management, centralized backup, and other demands), while delivering the highest reliability, continuity, efficiency and capacity utilization, and scalability.

HP solutions maximize latest and existing technology

HP has everything you need – servers, VMware software, HP P4000 VSA software, switches, and support – to provide your remote offices with a virtual, low-cost solution for HA. Standing out among its competitors as the more affordable, most cost-efficient, and most adaptable solution partner, HP continues to lead the way in virtualization and compatibility. HP P4000 VSA is the only virtual SAN appliance provider

with VMware's HCL certification. And VMware High Availability, VMware Fault Tolerance, and VMware vCenter Site Recovery Manager™ are fully integrated into HP solutions.

Virtual SANs, real solutions

Organizations with remote or branch sites are everywhere – and in every major industry. HP has helped retail organizations, government agencies, healthcare providers, financial service organizations, and others successfully deploy solutions for their remote sites.

One example of a recent deployment involved a financial services firm headquartered in London with branches in a number of countries. The company needed a virtualization solution that would:

- Reduce total costs

- Protect against branch office failures

- Simplify the system's management and reduce maintenance costs

- Increase utilization and flexibility by using virtual storage to consolidate existing Microsoft® applications

HP tailored a solution that achieved the company's goals, while leveraging existing equipment at each location. The solution created highly available, fully featured storage that was managed by three HP P4000 VSAs at each site – giving the firm flexible capacity to meet its growing needs. The HP P4000 VSA's Remote Copy functionality provided automated DR that also efficiently allocated the necessary space through thin-provisioning features.

For more information

To learn more about HP solutions, contact your local HP authorized partner or your HP representative. If you do not know who these contacts are, send an e-mail to vsa.inquiries@hp.com. You can also learn more at www.hp.com/go/vsa, www.hp.com/go/tryvsa, and www.hp.com/go/vmware.

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