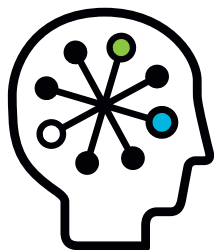


HP LeftHand SAN and Microsoft® SharePoint Server

Solution brief



At a glance

Microsoft® Windows® SharePoint Services and Microsoft Office SharePoint Server (collectively known as “SharePoint”) are among the most powerful and flexible collaboration systems on the market. The underlying IT infrastructure for SharePoint needs to be just as powerful and flexible. No matter how SharePoint grows and changes, the HP LeftHand SAN can easily accommodate it—without add-on products, complexity, expensive consultants, or months of training.

Introduction

Gone are the days of unmanaged public folders, public e-mail folders, intranet wiki sites, and flash drives passed from person to person. SharePoint provides a self-service environment where office workers can take control of how information is organized, accessed, and displayed.

From an IT perspective, SharePoint is a collection of technologies that provides a server infrastructure to support the needs of information workers. By tying together software such as Word, Excel, PowerPoint, Outlook, and Internet Explorer using Windows Server, ASP.NET, Internet Information Server, and SQL Server, SharePoint creates a single infrastructure.

SharePoint’s storage requirements are linked to the size, use, and information-criticality of the SharePoint deployment. These can range from a small group implementation on a single server up to large server farms supporting thousands of users. The specific deployment will dictate the data protection, performance, availability, capacity, storage management, and scalability requirements. By its very nature, SharePoint will morph and grow to accommodate new projects and new uses as the user community fully exploits its capabilities.

What is needed is an affordable storage subsystem that is flexible enough to meet initial demands and adaptable enough to accommodate change—without requiring an army of storage experts to manage.

Solution overview

From a storage perspective, SharePoint is implemented as a set of SQL Server databases that reside in NTFS volumes. For best performance and reliability, these volumes should reside on direct attach storage (RAID storage arrays) or in block-level storage on a SAN.

HP LeftHand SANs have five advantages that make them an ideal choice:

- They have all the storage management features and benefits of a modern, state-of-the-art SAN (e.g., thin provisioning, replication, high availability, snapshots).
- The storage is sharable from all servers, making the environment flexible and scalable as the server farms change and grow.
- HP LeftHand SANs are easy to manage and do not require specific array management or storage networking expertise.
- They are optimized for the small, random I/O associated with database transactions.
- It is easy to apply additional data protection and HP features as needed, and without downtime.

For high-end SharePoint deployments, there are two key storage requirements: first, the ability to change storage configurations on the fly; second, the ability to construct a highly available storage environment that will survive virtually any component failure and keep on running without impact to SharePoint users.

HP LeftHand SANs meet both these requirements. Based on the patented HP SAN/iQ® Software, an HP LeftHand SAN is comprised of multiple storage nodes, each a self-contained server with six to 15 drives. These storage nodes are clustered together to create a virtual storage array—or storage pool—from which iSCSI volumes are created. HP LeftHand SAN load-balances volume data across the storage nodes within a cluster and replicates individual blocks to different storage nodes using a technology called network RAID (nRAID). The storage subsystem scales with the addition of more storage nodes to the cluster. Existing volumes are automatically rebalanced

About HP and Microsoft

HP and Microsoft have a strong partnership working together to provide scalable IT and business solutions for the mid-tier market. HP is a Microsoft Gold Certified Partner, a Managed ISV Partner, and a Microsoft Storage Partner. HP is also contributing storage systems to the SQL Server Customer Lab at Microsoft corporate headquarters, where the two companies collaborate on joint customer deployments, performance testing, and best practice development.

to accommodate the new nodes, increasing both the capacity and the performance of the storage cluster. A performance bottleneck related to the storage subsystem can be immediately resolved by adding a node to the storage cluster. No replanning or reconfiguration, no downtime, and no storage expertise is required.

nRAID also provides the same level of protection between storage nodes as disk RAID provides between disks in a RAID array. Thus, if any part of a node (e.g., disks, CPU, network connections, power) fails, other copies of the data within the SAN keep the data volumes available. Because of the method nRAID uses to create data replicas, multiple nodes can fail without interruption of service.

HP LeftHand SAN has a rich set of additional storage management features including:

- Thin provisioning
- Live snapshots
- Remote snapshots between clusters
- Volume Shadow Copy Service (VSS) support
- Online upgrades of HP SAN/iQ Software
- Automated volume growth
- Automated snapshot capacity management
- iSCSI network load balancing (via Microsoft Multipath I/O [MPIO])
- Central SAN management console with administrative access rights
- Full iSCSI security and server authentication

All these features and more are included in the base HP LeftHand SAN; there is no a la carte feature pricing. In short, an HP LeftHand SAN is an ideal storage infrastructure for running a SharePoint environment.

The power of SharePoint and HP LeftHand SAN

HP LeftHand SAN provides a cost-effective, easy-to-manage, highly scalable, and highly available iSCSI storage environment for use with Microsoft SharePoint. As you add new documents, new users, or entire new site collections, your SharePoint infrastructure expands easily. Unlike other systems, HP LeftHand SAN is flexible enough to allow SharePoint to start small on a two-node SAN and then scale along with the business up to a 40-node, multi-site SAN without once requiring reconfiguration of existing volumes or needing SharePoint to be taken offline.

HP Services

Partner with HP Technology Services to boost availability and avoid costly downtime by mitigating technology-related business risks. To help take the worry out of deploying, supporting, and managing your HP LeftHand SAN solution, we've designed a portfolio of service options that are as flexible, scalable, and affordable as our storage. For more information, talk with your HP sales representative or HP-authorized Channel Partner, or visit:

www.hp.com/hps/storage

HP Financial Services

HP Financial Services provides innovative financing and financial asset management programs to help you cost-effectively acquire, manage, and ultimately retire your HP solutions. For more information, please contact your HP representative or visit:

www.hp.com/go/hpfinancialservices

For more information

For more information on HP LeftHand SANs, visit:

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