



HP StoreEasy Storage: Remote Office – Branch Office (ROBO) Solutions

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Introduction

According to Enterprise Strategy Group (ESG), unstructured data (data not stored in a database or other organized structure) is growing exponentially throughout the IT environment. Unstructured, file-based content accounted for 25,127 PB (or 76 percent of the archived capacity) in 2010.¹ Unstructured content is expected to constitute the vast majority of archived digital assets in the foreseeable future. Managing storage growth is a difficult task on the whole, but the distributed nature of unstructured file-based data adds to the challenge significantly and drives the need for improved file-serving solutions.

Consolidating file data with a dedicated Network Attached Storage (NAS) solution can help address your changing file-serving needs and reduce your cost of ownership by enabling simplified management, better resource utilization, centralized growth, and data protection.

HP StoreEasy Storage changes and adapts to your fast-changing organizational storage needs by using an optimized and integrated combination of software capabilities, HP ProLiant rack-mount and blade servers, and industry-standard storage and network technologies. Together, these industry standard-based building blocks allow you to implement change faster, scale farther, and respond to data growth more effectively.

Regardless of the size of your organization, HP StoreEasy Storage enables you to control explosive file growth while reducing costs and simplifying data management. HP StoreEasy Storage covers a wide range of customer needs and IT environments.

For Remote Office/Branch Office (ROBO) deployments, centralized management, optimization of WAN usage and data availability & protection form the key requirements. HP StoreEasy Storage helps address these key requirements in combination with the software capabilities by enabling simplified remote management of resources in ROBOs, low-cost and highly efficient data hosting and replication capabilities along with enabling business continuity by providing data & user failover capabilities. HP StoreEasy Storage in combination with HP StoreOnce Backup provides highly efficient data protection and consolidation capabilities.

ROBO deployment challenges

Business continuity: Users need access to data at all times. Downtime in a branch office can have major impact on productivity if access to the corporate data center is not available. Employee mobility adds to the data access challenges. Disaster recovery can be key to the survival of the company.

Remote data access: Branch offices need to access the corporate data center, but often their remote location and their low-bandwidth network connections limit their ability to access the needed data with acceptable performance.

Limited IT resources: Minimal or no IT resources in branch offices. IT infrastructure in branch offices needs to be managed centrally from the corporate data center.

Data Protection: Backups need to be completed in smaller backup windows. Backup from branch offices need to happen over low bandwidth connections. Recovery expectations are high.

Security: ROBOs may not need access to all the data in corporate data center or have limited (e.g. read-only) permissions for data access. In addition, data security guidelines in the ROBOs may not be enforced as strictly as at the corporate data center.

Data consolidation: Critical business data needs to be available centrally for management and reporting purposes.

Objective of this White Paper

Businesses with ROBOs face many of the challenges listed above. HP StoreEasy Storage provides an excellent solution for these challenges.

This paper provides an overview of the deployment use-cases in a ROBO setup and shows how HP's storage products address the data access challenges while simplifying data management and availability.

¹ "Digital Archive Market Forecast," ESG Research Report 2010–2015, June 2010

Solving ROBO deployment challenges with HP Storage

Common ROBO scenarios

ROBO challenges can manifest in a number of ways. Here are some common deployment use-cases, along with possible HP solutions.

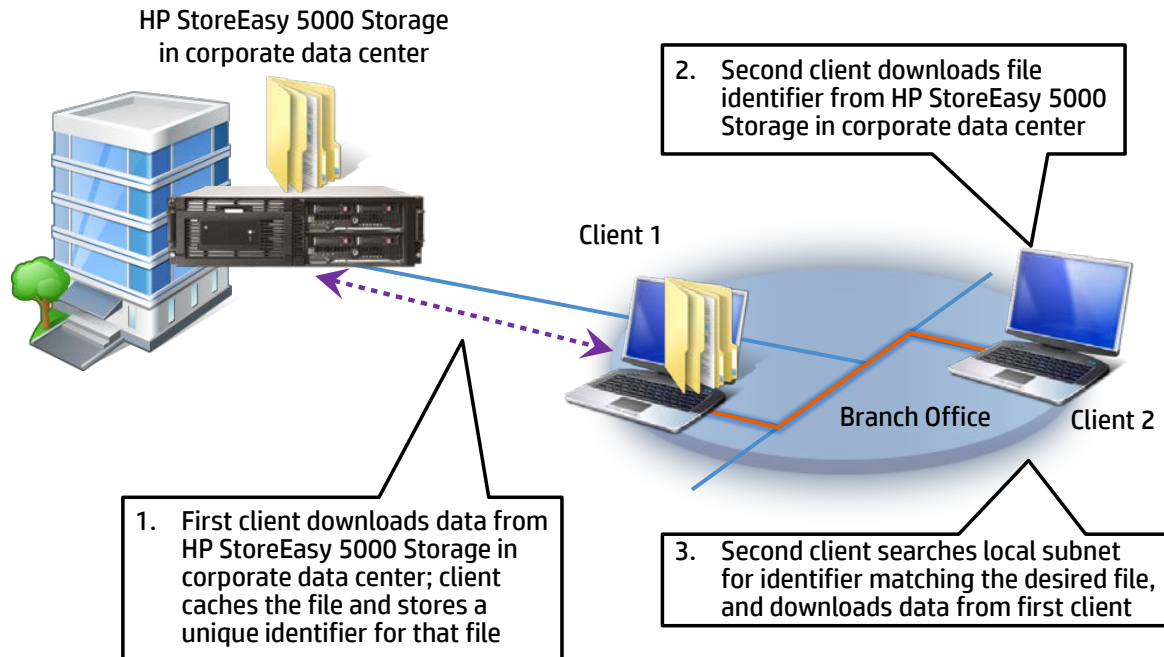
Scenarios	Deployment use-case	HP Solution Components	Solution Benefits
Scenario 1: Small branch offices with no local servers	<ul style="list-style-type: none"> Small branch offices No local servers in branch offices Client systems in branch offices access data from the corporate data center 	<ul style="list-style-type: none"> HP StoreEasy 3000 / 5000 Storage in corporate data center for file serving Distributed BranchCache for local access to frequently used files 	<ul style="list-style-type: none"> Low-cost and low-overhead No additional hardware or software required Reduced WAN usage with caching of frequently used files Clients access data at LAN speed
Scenario 2: Mid-sized branch offices with local file-server	<ul style="list-style-type: none"> Mid-size branch offices Offices use local servers for local file serving Users in branch offices have access to local data, but occasionally need to get data from corporate data center 	<ul style="list-style-type: none"> HP StoreEasy 3000 / 5000 Storage in corporate data center for file serving HP StoreEasy 1000 Storage in branch offices for local file serving and cache Hosted BranchCache for local access to frequently used files 	<ul style="list-style-type: none"> Local HP StoreEasy 1000 Storage caches data for all office clients Fast local file serving Minimize WAN usage by accessing corporate data center files not available locally
Scenario 3: Data availability in corporate data center and branch offices	<ul style="list-style-type: none"> Branch offices use local servers for local file serving Data sharing required between corporate data center and branch offices Branch office user connections to corporate data center are not allowed 	<ul style="list-style-type: none"> HP StoreEasy 3000 / 5000 Storage in corporate data center for file serving HP StoreEasy 1000 Storage in branch offices for local file serving Data replicated between the two sites using Distributed filesystem (DFS-R) 	<ul style="list-style-type: none"> Branch office has a complete copy of important data Automatically propagates changes in both directions Enables DR in case of branch office failure
Scenario 4: Data availability in corporate data center and branch offices along with user connection failover	<ul style="list-style-type: none"> Branch offices use local servers for local file serving Data sharing required between corporate data center and branch offices Business continuity for branch offices is a critical requirement 	<ul style="list-style-type: none"> HP StoreEasy 3000 / 5000 Storage in corporate data center for file serving HP StoreEasy 1000 Storage in branch offices for local file serving Data replicated between the two sites using Distributed filesystem (DFS-R). Namespace replicated between two sites using Distributed Filesystem (DFS-N) 	<ul style="list-style-type: none"> Provides a high-availability solution including data and namespace failover Immune to WAN outages Provides business continuity with failover of user connections as well
Scenario 5: Self-sufficient branch offices with data consolidation to corporate data center	<ul style="list-style-type: none"> Branch offices use local servers to host locally-generated data Branch offices mostly self-sufficient for data requirements Data must be backed up by central backup server 	<ul style="list-style-type: none"> HP StoreEasy 3000 / 5000 Storage in corporate data center for file serving HP StoreEasy 1000 Storage in branch offices for local file serving HP StoreOnce Backup devices to hold local and central backups 	<ul style="list-style-type: none"> Centralizes the backup & recovery process HP StoreOnce Backup devices provide high-density storage and automatic low-bandwidth replication to a corporate data center Data consolidation to the corporate data center Data recovery enabled on both sites in case of failures

Scenario 1: Small branch office with no local servers

Solution components: HP StoreEasy 5000 Storage with integrated Microsoft Windows Storage Server 2012 - using Distributed BranchCache.

Users at a small branch office may want high-performance access to frequently-accessed data, but they often have little or no local IT expertise. Distributed BranchCache is a perfect low-overhead solution. De-duplication in Windows Storage server further reduces the amount of data download by fetching the blocks that are not already available in the local cache.

Distributed BranchCache uses a peer-to-peer model requiring no extra servers. As each user (on Windows 7, Windows 8, Windows Server 2008 R2 or Windows Server 2012) accesses a file in the corporate data center, the file is cached locally on that user's system. When other users need the same file, their system communicates with other local systems to see if any other system has already downloaded and cached the content. If so, the data is sourced from the local copy.



Note that all clients contact the corporate data center to download files. When BranchCache is enabled, the central server returns a file identifier instead of the file itself. The client uses this identifier to query other systems on the local subnet. If none of the local systems have the file, the client contacts the central office again to download and cache a copy of the file. This reliance on the central system for issuing file identifiers means BranchCache cannot work without a functioning WAN connection, even if the desired file has already been cached locally.

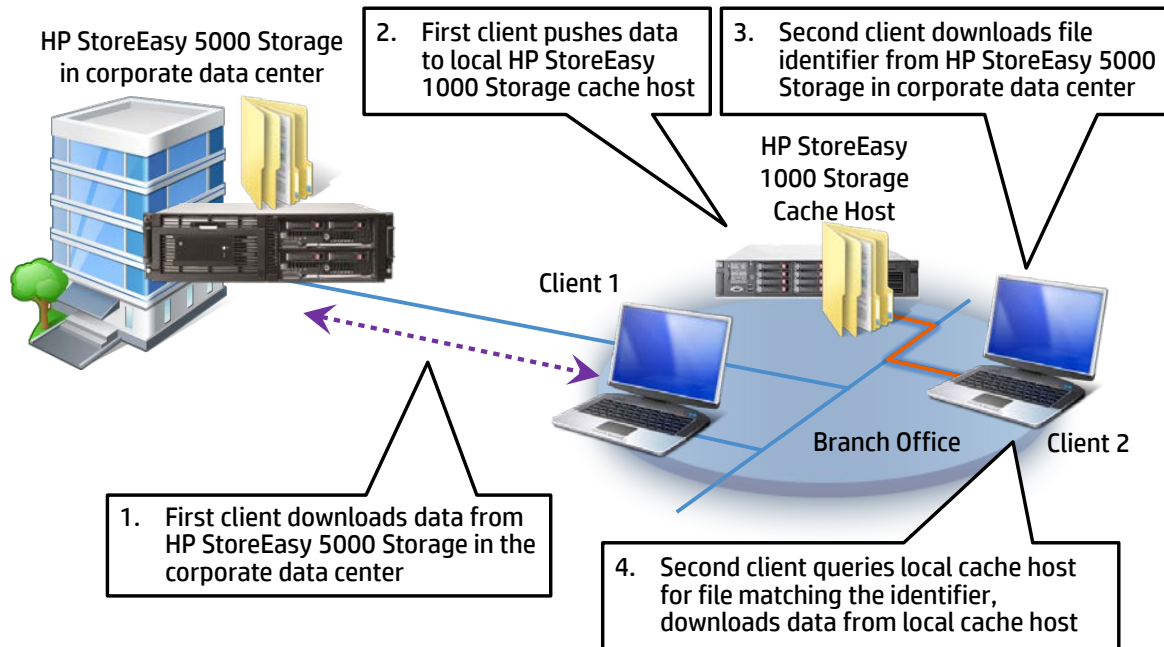
Distributed cache is limited to a single subnet, so if the ROBO includes multiple subnets, you may not derive full benefit from the local caching. Also, if a user's system is unavailable (such as when a user takes a laptop on a business trip, or when users turn off or sleep their systems), the data on that system is unavailable to other users.

Key Benefits: Fast and efficient file-serving for frequently used files. WAN usage optimization. No additional hardware needed in ROBOs.

Scenario 2: Mid-sized branch office with local file-server

Solution components: HP StoreEasy 5000 Storage in corporate data center, HP StoreEasy 1000 Storage in branch office, integrated Microsoft Windows Storage Server 2012 - using Hosted BranchCache.

For better data availability, you can use hosted cache. This is a better solution for mid-size offices with multiple subnets. This approach adds a local server to cache all data for the entire branch. This cache host is always available, and hosted cache is available across all local subnets, so the hosted BranchCache maximizes the opportunities to optimize WAN traffic to the branch office. De-duplication in Windows Storage server further reduces the amount of data download by fetching the blocks that are not already available in the local cache.



Any system running Windows Server 2012 can act as the local cache host. HP StoreEasy 5000 Storage can be a cache host, but its high availability features are not necessary for a cache host. (All data is hosted and backed up to the HP StoreEasy 5000 Storage in central data center, so the remote-office cache host does not need to provide high availability.) HP StoreEasy 1000 Storage is a more economical match for this application.

The cache host does not have to be dedicated to cache duty. It can provide other services such as file server, print server, or other light-duty activities.

Key Benefits: Fast and efficient file-serving for local & frequently used files. Minimize WAN utilization.

Implementing BranchCache

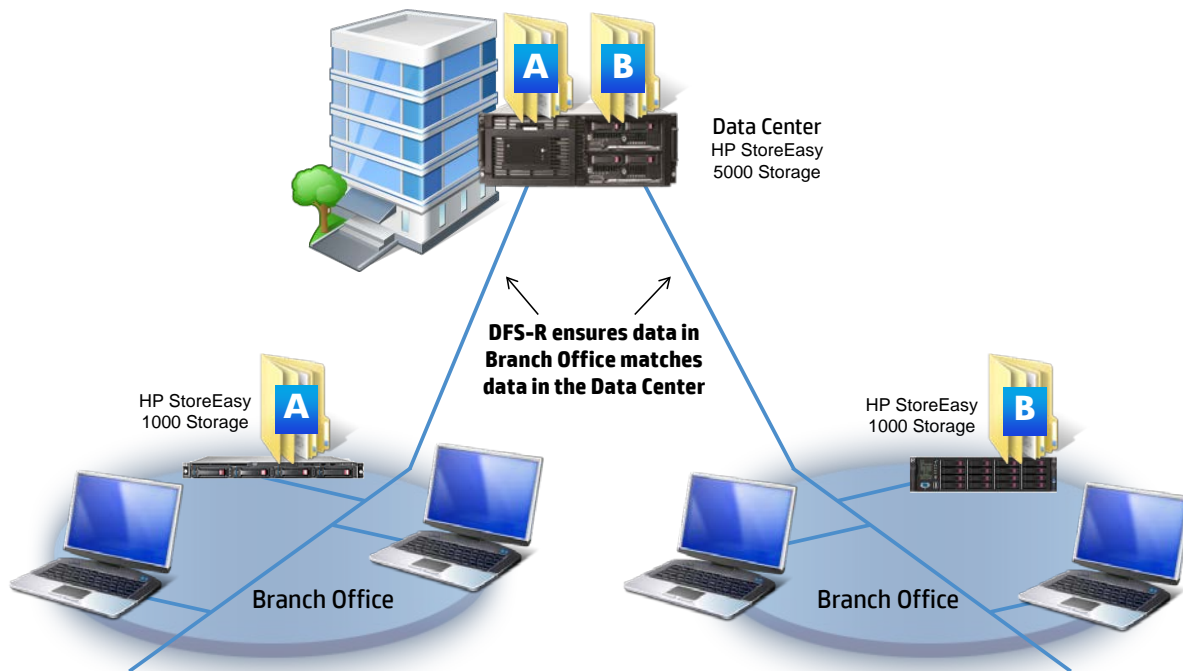
BranchCache is off by default. You can enable and configure it using Group Policy or a command-line interface. See <http://technet.microsoft.com/en-us/library/hh831696.aspx> for details.

Scenario 3: Data availability in corporate data center and branch office

Solution components: HP StoreEasy 5000 Storage in corporate data center, HP StoreEasy 1000 Storage in branch office, integrated Microsoft Windows Storage Server 2012 – using Distributed File System Replication (DFS-R).

In this scenario, users want local access to important data, without having to access the corporate data center. DFS-R allows you to host copies of data in multiple locations, and ensure that all copies are kept synchronized. You can use DFS-R to copy the critical data to each branch office, where it can be accessed like any other local storage.

DFS-R runs on a user-specified schedule. At chosen times, the DFS-R services copy data in one direction or the other. Changes from one location are overwritten in the other location, based on file-change timestamps. If a file has been changed in both locations, DFS-R uses the newest change, but saves the files for manual reconciliation by an administrator.



There are many possible uses for this capability:

- A central data center pushes copies of important data to many remote branch offices for local access.
- A remote branch office creates its own local data, but it has no backup facilities. DFS-R is used to push copies of the data to the central data center.
- DFS-R is used to ensure geographically-separated offices have identical copies of important data. This is critical for proper implementation of DFS-N, covered in deployment use-case scenario 4.

As with BranchCache, the DFS-R replication results in a local copy of all files. They do not need to be backed up locally because they are already included in the corporate backup strategy. Replicating the data resolves the backup issue for the remotely-accessed data.

See <http://technet.microsoft.com/en-us/library/cc771058> for a short overview of DFS-R.

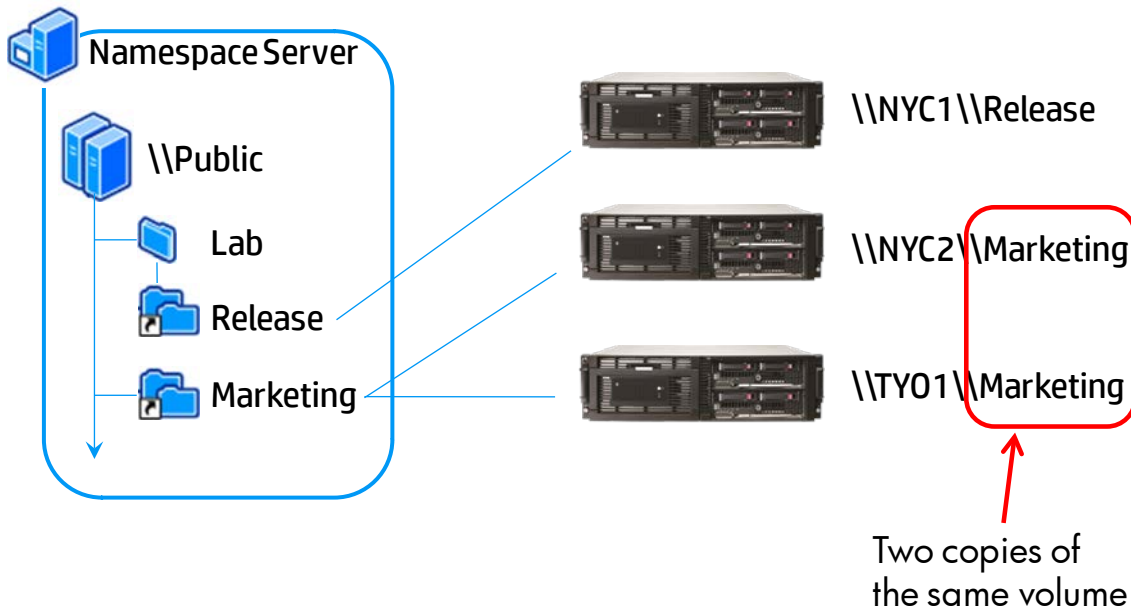
Key Benefits: Fast and efficient local file serving in branch offices; Data available locally in branch office and corporate data center; Disaster recovery enabled in case of branch office failure.

Scenario 4: Data availability in corporate data center and branch office along with user connection failover

Solution components: HP StoreEasy 5000 Storage in corporate data center, HP StoreEasy 1000 Storage in branch office, integrated Microsoft Windows Storage Server 2012 – using DFS-R and Distributed File System Namespace (DFS-N).

In this scenario, users in branch office want access to specific data. This data resides locally in branch office and data center at the same time. Most importantly, the data must remain available even if the primary data site goes down.

DFS-N addresses this requirement by defining multiple failover copies of the data, described by a shared file namespace. This allows you to transparently combine file resources from many locations into one virtual filesystem. In this example, volumes located in New York (on HP StoreEasy 5000 Storage units \\NYC1 and \\NYC2) and one volume located in Tokyo (on \\TYO1) are combined into a single virtual file system:



When the DFS namespace is defined, users can access data in any of the target systems without even being aware that the data are hosted on different systems, and perhaps in different locations. Accessing files under \\Public\\Lab\\Release automatically accesses files on the \\NYC01 system.

Notice also that there are two instances of the **Marketing** directory. This allows you to transparently offer optimally located storage to users depending on their location. A user in North America who accesses \\Public\\Marketing would automatically access the **Marketing** copy located in New York, while a user in Asia accessing the same folder would automatically be directed to the copy in Tokyo.

You would use DFS-R to ensure that the two copies of the **Marketing** directory stay synchronized. Multiple copies of directories (such as the **Marketing** example) also provide High Availability features. If the NYC2 system goes down, DFS-N can transparently reroute North American connections to **Marketing** to the TYO1 server.

The DFS-N capabilities allow you to manage your storage better, transparently moving folders to different storage servers or different locations without affecting any of your users.

See <http://technet.microsoft.com/en-us/library/cc730736.aspx> for a short overview of DFS-N.

Key Benefits: Fast and efficient local file serving in ROBOs. Business continuity for users in case of a failure.

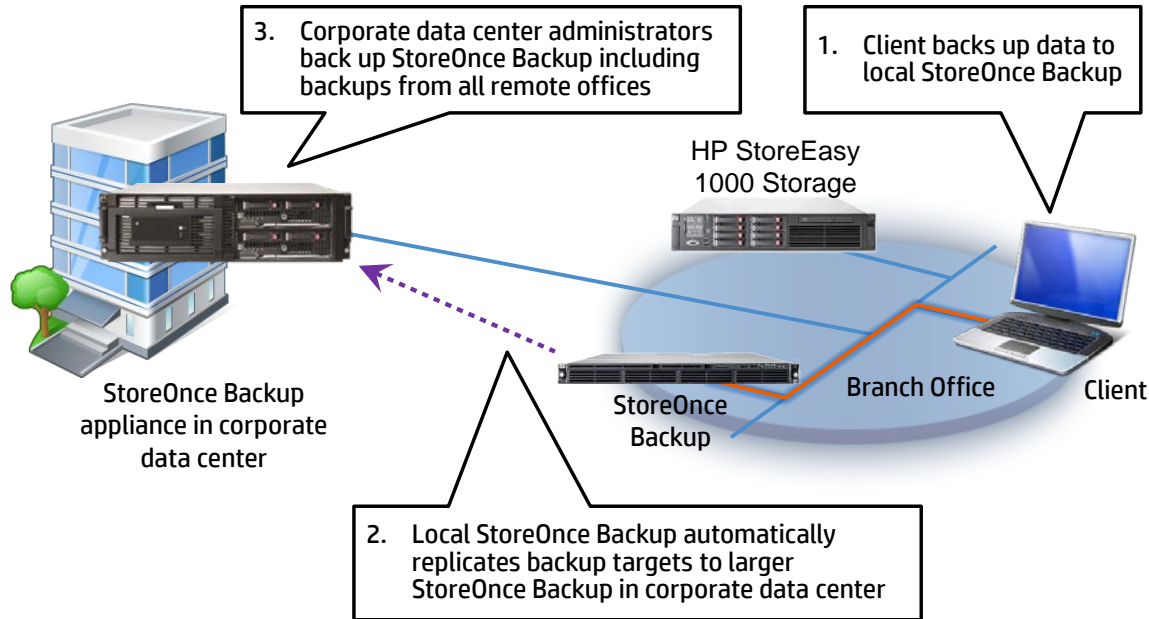
Implementing DFS-N and DFS-R

Configuring DFS-N and DFS-R is a fairly involved process. See <http://technet.microsoft.com/en-us/library/cc771424> for DFS-N and <http://technet.microsoft.com/en-us/library/cc770925> for DFS-R.

Scenario 5: Self-sufficient branch office with data consolidation to corporate data center

Solution components: HP StoreEasy 1000 Storage in corporate data center, HP StoreEasy 1000 Storage in branch office, HP StoreOnce Backup in corporate data center and branch office

ROBO clients often create business-critical data that must be properly backed up and protected, but they have no local IT staff to handle this job. For example, Scenario 5 might describe a small retail store that generates important sales data, but the employees are not qualified to manage daily backups. Corporate IT personnel could set up their systems to back up their data to a local HP StoreOnce Backup appliance. The local clients see a very simple backup model so it is easy to manage. The local HP StoreOnce Backup appliance can then be configured to replicate its backup targets to an HP StoreOnce Backup appliance at the corporate data center, placing a very low load on the WAN. The corporate StoreOnce Backup appliance could consolidate backup targets from many branch offices, and it could be backed up using the standard backup facilities at the corporate office.



Key Benefits: WAN usage optimization with low-bandwidth replication. Data recovery enabled on both sides of the setup. Data consolidation in corporate data center.

Additional Capabilities for optimizing ROBO deployments

In addition to the specific use-case related features, HP StoreEasy Storage and Gateways bring value-add to ROBO and non-ROBO setups alike with inherent capabilities from being Windows Storage Server based products. These features enable operational efficiency in addition to simplifying deployment of IT setups.

- Antivirus applications can be installed directly on the File Storage. This eliminates the need for additional hardware and usage of system's network resources for virus scans. Support of Windows Server based antivirus applications makes it easier to align with existing IT guidelines.
- HP StoreEasy Storage also supports additional windows services that enable optimization of system usage and implementation.
 - Print server role allows customers to utilize the HP NAS solution for print services. Print services can be configured to address homogenous windows environments using 'Print Server' role or heterogeneous environments with the 'Line Printer daemon service' in addition to providing internet printing using the HTTP interface.
 - Active Directory Domain Services (AD DS) provides centralized management of credentials, accounts, passwords, and is used for accessing all workloads. AD LDS can also be used to provide identity mapping for NFS file services in environments where an Active Directory infrastructure does not already exist.
 - The HP NAS solution device can also be used as a DHCP server.
- Advanced data management is provided based on the File Classification Infrastructure (FCI) technology with which files can be classified based on business criticality and drive appropriate management for the different levels of data. One of the key advantages to the File Classification Infrastructure technology is the ability to centrally manage the classification of the files by establishing classification policies using the File Services Resource Manager snap-in. This centralized approach allows you to classify user files without requiring their intervention. This classification can then be used to drive various file management tasks. Reporting in multiple formats and ability to send notifications to content owners when an automated file management task runs simplifies administrative tasks.
- Common Server and Storage management with HP value-add tools with remote management capabilities in Windows Storage Server centralize and simplify ROBO deployments and management. HP value-add tools like Insight Dynamics, ILO and Storage Management Pack for MS System Center provide centralized common management and monitoring interface for HP File Storage.
- The choice between rack-mount and tower models for the HP StoreEasy 1000 Storage provides greater flexibility for ROBO deployments.

Summary

ROBO configurations pose a number of storage challenges: lack of local IT personnel, difficulty managing backups, appropriately protecting important data, and low-performance WAN connections. HP StoreEasy 1000, 3000, and 5000 Storage provide a wide range of options that are ideal for addressing these challenges.

These options vary from optimizing access of frequently used files over low bandwidth WAN connections with BranchCache to enabling distributed data access and failover with Distributed File System. Integration with HP StoreOnce Backup provides the value-added data consolidation and deduplication capabilities.

The remote management capabilities combined with simple windows based management interface allow for centralized management removing the need to have trained IT personnel in the ROBOS.

The native agent support for backup applications provides an additional advantage over other File Storage Appliances by providing varying level of data protection capabilities based on the required SLAs. The inherent capabilities of the backup applications can be leveraged providing a flexible and efficient data protection model to address the varying protection requirements. Snapshot support eliminates the need to have backup windows and enable faster recovery times.

Appendix A – HP NAS Solution product family overview

HP StoreEasy Storage leverage proven HP BladeSystem and ProLiant hardware for maximum efficiency and manageability. HP offers purpose-built file-serving appliances and NAS/SAN gateways to meet the needs of virtually any deployment, including:

- Simple storage for entry-level file consolidation: HP StoreEasy 1000 Storage
- Turnkey, active-active high availability for midsized environments: HP StoreEasy 5000 Storage
- A SAN gateway to use with existing disk arrays: HP StoreEasy 3000 Storage

HP StoreEasy 1000 Storage



HP StoreEasy 1000 Storage is the fast and easy way to add Windows Storage Server-powered unified shared storage to your small or medium environment. HP StoreEasy 1000 Storage offers you more for your money: it's a multi-protocol file server for Windows and UNIX/Linux, supporting file shares and iSCSI storage for applications and virtual environments. Built on industry standards, HP StoreEasy 1000 Storage is an economical and easy to manage solution for consolidating to centralized shared network storage. The operating system (Windows Storage Server 2012 Standard Edition) is pre-installed and comes with HP Automated Storage Manager, so you'll be up and running in minutes.

HP StoreEasy 3000 Gateway Storage



HP StoreEasy 3000 Storage gateways boost the value of your array or SAN by adding Windows-powered IP-based gateway services to it. You'll spend less time and effort on maintenance and deliver a better return-on-investment for your array/SAN when you consolidate to a single, unified storage pool that can serve files to your clients and blocks to your servers via multiple protocols (FC/iSCSI or SAS/iSCSI). As with the HP StoreEasy 1000 Storage, the operating system (Windows Storage Server 2012 Standard Edition) is pre-installed, so you can install and use the system very quickly. Industry standards protect your investment by providing compatibility with your network and applications, and a Microsoft Cluster Server (MSCS) license is included to provide high availability and reduce downtime.

HP StoreEasy 5000 Storage



HP StoreEasy 5000 Storage is ideal for midsize companies with Windows-centric environments. It helps them control and file unstructured data cost-efficiently. This high availability solution includes a two-node Network Attached Storage (NAS) cluster with shared storage built on HP BladeSystem technology and integrated into a converged 3U chassis. This provides high availability and greater storage density in one platform, with easy expansion options using attached storage racks.

HP StoreEasy 5000 Storage uses Microsoft Windows Storage Server 2012 Standard Edition and is designed to deliver a better file serving experience. Storage technologies such as file deduplication and iSCSI provide unique storage features for these converged file and block I/O network attached storage appliances. HP and Windows Storage Server 2012 management software provide simplified deployment and management.

Appendix B – HP StoreOnce Backup product family overview

HP StoreOnce Backup



In cases where remote or LAN-based backup is not feasible, it is still important to adequately protect the data at the ROBO. Physical-tape backups are not practical at sites with no IT personnel. Many companies are moving toward remotely-managed backup processes, often utilizing on-site backup appliances.

HP StoreOnce Backup systems are a good match for this need. HP StoreOnce Backup products provide simple backup targets with the ability to automatically replicate backup data to remote HP StoreOnce Backup hardware. The HP StoreOnce Backup unit can emulate a virtual tape library, meaning that existing backup software can be used without change, but all physical backup operations (changing, rotating, and storing tapes, cleaning tape heads, shipping tapes off-site) are avoided and offloaded to the corporate data center.

HP StoreOnce Backup units use sophisticated deduplication to dramatically reduce the amount of data to be sent to the corporate data center, thus greatly reducing the traffic on the WAN.

HP StoreOnce Backup units are not optimized to provide file or volume sharing like the HP NAS Solution devices; they are intended to be used only as backup targets.

Appendix C – Microsoft Windows Storage Server 2012 feature overview

BranchCache™

Windows Storage Server 2008 R2 (WSS2008 R2), Windows Storage Server 2012 (WS2012), Windows 7 and Windows 8 provide the BranchCache facility to improve ROBO data access. BranchCache “caches” data on-site, in the ROBO. The first user to access the data must download it from the corporate data center, but then that data is stored locally. As long as the local copy stays current, and no changes happen to the master copy in the corporate data center, local clients can transparently access the data at local-LAN speeds. ROBO users can approach the performance experienced by users at the corporate location. Corporate costs can be reduced by reducing the data that must flow across the WAN link, while also simplifying the data management overhead.

Furthermore, since the master copy of each file resides at the corporate data center, the existing corporate backup strategies automatically protect all files accessed with BranchCache.

BranchCache works by creating a local “cache” of storage on the remote-office LAN. When any of the supported systems access a file from the corporate servers (using SMB, HTTP, or HTTPS protocols), BranchCache checks to see if a current local copy exists. If so, it transparently accesses the local copy instead of downloading a copy from the corporate data center.

There are two variants of BranchCache: distributed and hosted BranchCache. See [Scenario 1: Small branch office with no local servers](#) and [Scenario 2: Mid-sized ROBO with local file-server](#) for a description of the two variants.

DFS-R & DFS-N

Distributed File System Replication (DFS-R) service is a multi-master replication engine that is used to keep data synchronized on multiple servers and in multiple locations.

Data replication increases data availability and gives ROBO users fast, local access to files.

DFS-R uses a sophisticated “diff over the wire” protocol to efficiently determine what data on both ends has changed. DFS-R detects insertions, removals, and rearrangements of data in files, enabling it to replicate only the changes when files are updated. This allows DFS-R to update files over a limited-bandwidth network.

Distributed File System Namespace (DFS-N) enables you to create a shared namespace that appears to the user as an extension to the local filesystem. You can group shared folders from one or more servers under this namespace. The user can transparently access folders from many servers in many geographical locations, simply by referencing files in different parts of the namespace. For example the path `\\Files\Data` might reference a folder that physically resides on a server in New York, and `\\Files\Backups` might reference a folder on a server in London.

Furthermore DFS-N can define multiple failover locations for shared folders. This increases data availability and improves disaster recovery. As an example, the `\\Files\Data` folder located in New York might work well for users in North America, but users in Europe and Asia might suffer unacceptable performance due to the large distances involved. You can replicate the Data folder to new locations in Tokyo and Paris, and configure the DFS-N namespace to refer to any of those locations when a user accesses `\\Files\Data`. A user in China would be routed to the Tokyo copy, and a user in Prague would be routed to the Paris copy. DFS-R would ensure all copies contain the same data.

If the New York copy becomes unavailable, DFS-N can transparently re-route North American users to the European or Asian copies. They might suffer reduced performance while they access the distant copies, but they will have uninterrupted access to their critical data. If failover performance is a concern, you could host multiple copies on each continent. North American users would be split between New York and Los Angeles copies, and would fail over to the other local copy if they cannot reach their normal copy.

DFS-R vs. BranchCache

There is a lot of functional overlap between DFS-R and BranchCache. Both services replicate data from one place to another, giving remote users access to centralized data. They have some differences which may result in one or the other being a better choice for a particular application.

- DFS-R replicates a standalone copy of the data to the remote site. No WAN connection is required to access it using local paths. (A DFS-N namespace homed on a remote server might require network connectivity, but if necessary you can circumvent the central namespace and access the storage with a local path.) BranchCache always requires a WAN connection to retrieve the file identifier from the corporate data center.
- File locking is handled differently. A DFS-R user locks the local replicated copy of a file. It is possible for multiple writers to lock multiple replicated copies of the same file. This can result in change conflicts that must be resolved

manually. With BranchCache there is only one master copy of the file; the local cached copy is not considered a separate copy. A BranchCache user locks the single central copy of the file. Therefore BranchCache may be a better match if many users might edit a file at the same time. (If you need full file-locking ability with versioning, SharePoint may be a better answer.)

- BranchCache updates changes (in both directions) immediately. DFS-R pushes updates only on a specified schedule.
- BranchCache copies and caches only the data that the ROBO actually uses. DFS-R copies the entire directory structure specified in the replication instructions, regardless of whether those files actually get used.

The HP products referenced in this paper include:

To read more about HP StoreEasy 5000 Storage, go to <http://www.hp.com/go/StoreEasy5000>

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To read more about HP StoreEasy 1000 Storage, go to <http://www.hp.com/go/StoreEasy1000>

To read more about HP StoreOnce Backup family, go to <http://www.hp.com/go/storeonce>.

For more information, or to purchase HP StoreEasy Storage or HP StoreOnce Backup units, please contact your HP representative.

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4AA4-4675ENW, Created November 2012

