



# Microsoft Azure StorSimple for File Shares

Growth of data continues to be more pressing on IT with each passing year, and with that the exponential growth in unstructured data. In 2005, it was projected that approximately 36% of stored data (content) was unstructured and would stay that way for the foreseeable future; push ahead almost a decade to 2015 to a time when approximately 70% of data will be unstructured. Unstructured content is harder to organize and prioritize without understanding the content. Typical examples of unstructured data content are word documents, emails, audio and video files and many other data types.

## StorSimple Hybrid Cloud Storage

Microsoft Azure StorSimple is a Hybrid Cloud Storage (HCS) solution that addresses the complexities of unstructured data commonly associated with file shares.

StorSimple uses cloud storage as an extension of the on-premises solution and automatically tiers data across on-premises storage and cloud storage. Integrated data protection, with local and cloud snapshots, eliminates the need for sprawling storage infrastructure.

Manage  
unstructured  
data growth

Lower storage  
costs

Simplify data  
protection and  
disaster recovery

Increase business  
agility

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## Enterprise SAN Storage

StorSimple hybrid storage array can be thought of as a three tier hybrid storage solution. It resides in both the local customer datacenter, and the cloud. StorSimple seamlessly connects the on-premises hybrid storage array, consisting of both SSD and HDD tiers, to the cloud. The cloud, itself, makes up the third tier of the solution. StorSimple does not require any additional integration with the application programming interfaces (APIs) to connect with the cloud. The on-premises storage and cloud storage are seen as a single container of storage.

The hybrid storage array is an iSCSI target for hosts in the customer datacenter. Servers can be physical or virtual servers including Hyper-V, VMware, or Linux. The hybrid storage array connects to Azure over a secure HTTP internet connection. Figure 1, shows a high-level topology for StorSimple.

## Automated Tiering

Data sent to StorSimple is initially stored in the SSD tier of the hybrid storage array. When it approaches a threshold of fullness, the least recently accessed data will be deduplicated, compressed and then pushed to the HDD tier. When the HDD tier approaches a threshold for fullness, the least recently accessed data will be encrypted, using AES-256 bit encryption, and pushed to the cloud.

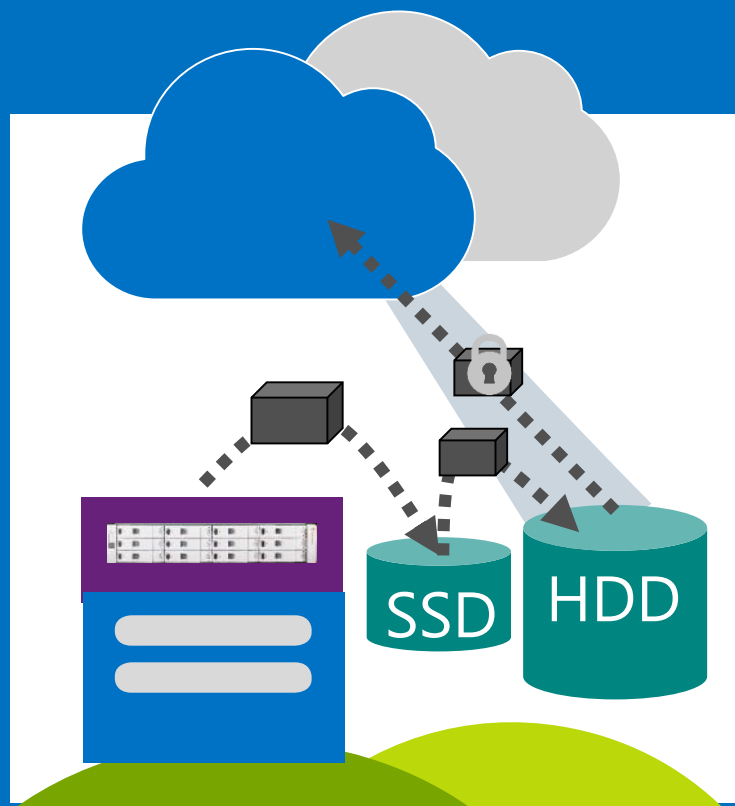


Figure 1. High Level StorSimple Topology

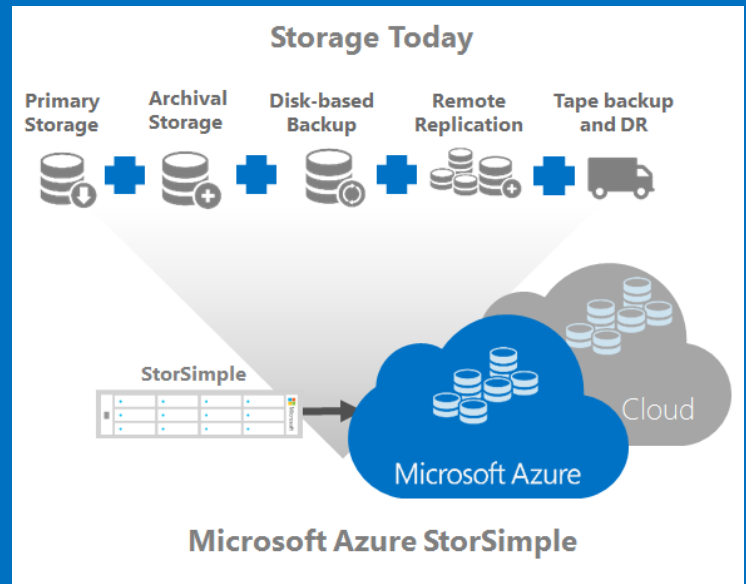
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## Location Independent data protection and disaster recovery

When dealing with file share deployments, data protection problems grow exponentially relative to the capacity of primary storage. For each backup and recovery point, the amount of storage needed and the additional management to maintain that solution grows.

Eventually, the traditional storage approach for data protection in file share environments is fragmented at best with multiple solution accomplishing different tasks.

StorSimple takes a different approach to data protection by leveraging the cloud for backup and recovery needs. The consolidated solution provides some amount of backup and recovery on the local appliance with local snapshots. Cloud snapshots provide location independent full backups which reside in the cloud. StorSimple delivers low cost, long term retention of rapidly growing unstructured data.



Cloud snapshots provide location independent recovery of volume data to a secondary datacenter or a StorSimple Virtual Appliance, residing in Azure. StorSimple disaster recovery is thin and instant, meaning that only necessary data is downloaded to the recovery device to bring the volumes and applications online. The StorSimple disaster recovery solution eliminates the need for redundant storage architecture while providing DR for file share environments.

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## Consolidated Management with Microsoft Azure StorSimple Manager Service

StorSimple is managed as a service in Azure. All workflows for managing the on-premises storage and cloud storage are done using the StorSimple Manager Service, including volume provisioning, data protection, and disaster recovery orchestration. The StorSimple Manager service consolidates the management of multiple devices, both physical and virtual, into a single service. Microsoft Azure provides integration between services, providing simple workflows to create a modern datacenter in Azure.

## Benefits

- ❑ Simple, cost-effective solution for the continually pressing problem of growth of unstructured data
- ❑ 40-60% lower TCO versus traditional enterprise storage approaches
- ❑ Primary storage with automated data protection and highly efficient disaster recovery
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## Resources:

<http://www.microsoft.com/storsimple>

Blog: [blogs.technet.com/b/cis/](http://blogs.technet.com/b/cis/)

MSDN Community: [bit.ly/1GvZvV2](http://bit.ly/1GvZvV2)

