

StorSimple Enables Cloud Storage as a Tier Solution Brief

Why StorSimple?

StorSimple provides a solution designed to address real storage-related issues that prevent I/T from providing the capacity, service, and speed necessary to accommodate high-impact business projects.

Business Challenges

- More projects requiring lower-performing storage on-demand
- Traditional storage lacks flexibility, elasticity, and economics, and is difficult and expensive to protect
- Larger quantities of data are being stored for longer periods of time, must be online all the time, and must be simple to protect

Cloud Storage Challenges

- Attractive cost, pay-as-you grow billing, but incompatible due to use of APIs instead of block protocols
- Security concerns due to lack of visibility into provider operations, and chain of custody issues
- Performance limitations due to bandwidth limitations, packet loss, latency, and shared infrastructure

The StorSimple Solution

- Enables use of cloud storage as primary capacity for high-growth applications that don't demand primary storage performance
- Instantaneous capacity for workgroup and file server storage, archives and libraries, temporary workloads, projects, and more
- Simplified data protection through Cloud Snap and Cloud Clones, with fast on-line restores
- Allows for virtually unlimited retention of low-touch data
- Provision capacity fast for engineering, development, and lab applications

Storage Capacity Growth Challenges

Storage administrators face numerous challenges in addressing storage requirements for today's dynamic, Internet-centric business. Traditional models of deploying and managing storage do not provide the flexibility or elasticity necessary to accommodate the increasing number of high-value business initiatives, nor do traditional storage systems provide the economics necessary to do so efficiently. Cloud storage services are an attractive solution, providing elasticity, pay-as-you-grow cost models, and price points that could allow I/T to be more responsive and flexible to helping move the business forward. However, cloud storage has challenges that have slowed its adoption, including:

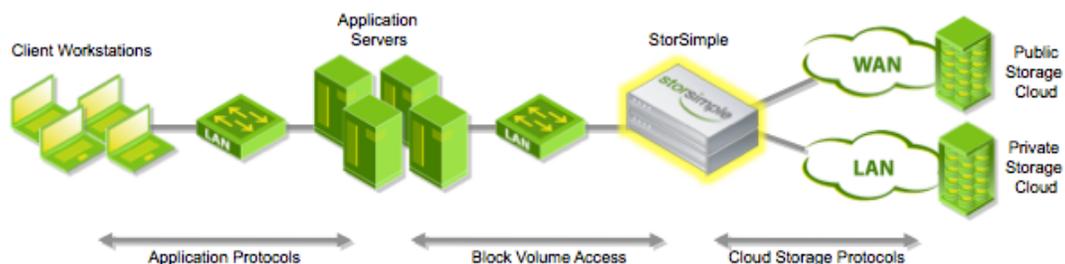
- **Security** – use of a shared resource with little to no visibility or control over your data or how it is managed
- **Performance** – accessing cloud storage over the Internet is slower due to bandwidth limitations, latency, and packet loss
- **Incompatibility** – applications expect block protocol access, rather than HTTP API access provided by cloud storage services
- **Data protection** – cloud storage services do not provide services equivalent to those found in today's enterprise architectures

As storage capacity requirements continue to increase at near exponential rates, storage administrators need an efficient, secure, performant, and compatible solution to address storage requirements for applications that need immediate capacity but do not demand the performance provided by traditional storage:

- Workgroup and file server storage
- Archives and libraries – engineering, images, software, and email
- Long-term retention of low-touch data
- Temporary capacity for migration, new projects, or web workloads
- Engineering, development, and lab applications

The StorSimple Solution

StorSimple provides a solution that allows I/T to confidently leverage cloud storage to provide secure storage capacity for applications that demand immediate capacity such as those above. Deployed as an appliance in the data center, StorSimple's solution makes cloud storage services as accessible, performant, and as secure as traditional storage. StorSimple couples Weighted Storage Layout (WSL) with primary storage deduplication and asymmetric cloud WAN optimization with advanced security features to overcome performance and security concerns associated with the cloud, while providing data management and data protection capabilities that not only integrate with enterprise architectures, but also simplify them and reduce cost.



Alternative Approaches

Many approaches claiming to help lower cost and increase speed of deploying storage capacity to support the needs of applications that have lower performance requirements. Each fall short compared to StorSimple:

Cloud Caching Devices

- Limited internal capacity causes performance inconsistency
- Lack of Microsoft VSS support for consistent snapshots causes pain during restore operations
- Caching forces users to make tradeoffs between coherency and performance
- Lack of integrated high availability increases complexity

Traditional Storage

- Expensive, lacks elasticity and pay-as-you-grow model provided by cloud storage services
- Consumes significant amounts of power, floor space, and cooling, and is difficult to protect
- Does not simplify data protection or provide fast, online restores by taking advantage of the cloud

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How It Works

StorSimple's solution uses public and private storage clouds in addition to integrated local tiers of storage (SSD and SAS) with intelligent tiering (Weighted Storage Layout) and primary storage deduplication to provide storage capacity to application servers. Cloud Snap (point-in-time backup) and Cloud Clones (truly-independent backup copy) can be used in place of traditional backup architectures, eliminating the use of tape in favor of a more cost-effective and streamlined experience centered around snapshots for faster, less expensive, on-line restores. Data stored in a storage cloud is space-efficient and encrypted using the most powerful commercially available encryption using keys that never leave your data center, ensuring lower cost and ultimate control of your data.

When coupled with the elasticity of the cloud, StorSimple allows you to immediately provision volumes for servers that need storage capacity rapidly – without having to buy additional trays of disk or find floor in your data center. This allows you to quickly provide capacity for the numerous applications that are not storage intensive, but need the capacity available to them fast.

Features

- **iSCSI Storage Access** – simplifies integration of cloud storage into existing server environments, eliminating the need for new protocols
- **Weighted Storage Layout (WSL)** – identifies hotspot and working set data for storage on a high-performance local tier (including SSD)
- **Data Deduplication and Compression** – eliminates the storage of redundant data patterns, minimizing storage capacity consumption and improving performance for cloud storage
- **AES-256 Encryption** – all data written to the storage cloud is encrypted using keys you control; you stay in control and compliance
- **Simplified Data Protection** – integrated VSS snapshots, Cloud Snap, and Cloud Clones eliminate use of tape for many applications while lowering costs and providing consistency during restore

StorSimple Benefits

- **Address application-specific storage issues** – StorSimple addresses storage-related issues that hinder deployments, impact performance at scale, and add complexity with many applications, including Microsoft Exchange 2010, SharePoint, Windows User Files, and virtualized environments
- **Minimize data protection cost and complexity** – VSS-integrated snapshots, Cloud Snap, and Cloud Clones help minimize cost and complexity. Truly independent backup copies can be stored in the cloud in a space-efficient, secure manner, enabling fast, low-cost online restores
- **Provable, fast return on investment (ROI)** – StorSimple minimizes costs by bringing cloud economics to the enterprise with no disruption to the organization or application architectures, pay-as-you grow capacity, reduced storage footprint
- **Simple, intuitive management of storage** – easy-to-use, secure web GUI that streamlines configuration and management. Powerful monitoring provides valuable insight and helps lower operational costs
- **Business agility** – StorSimple enables I/T organizations to do more with less and become an innovation center rather than a cost center