StorSimple Solution for Microsoft Exchange 2010
Solution Brief

Why StorSimple?
StorSimple provides a solution designed to address real storage-related issues that challenge the growth, scale, and manageability of Microsoft Exchange 2010 deployments.

Challenges
• Exchange 2010 enables larger mailboxes, supports PST centralization via archive folders but drives up capacity needs
• Exchange 2010 high availability (DAG) uses replication between servers, each with captive storage, unlike shared storage models in previous versions of Exchange
• Email users want larger mailbox quotas to store more information
• Over-provisioning and multiple copies of email storage are required to support performance needs, archiving, virus scanning, which increases overall cost
• Cloud-based email solutions lack features, compatibility, and may even require a new user interface

The StorSimple Solution
• Take advantage of DAG for simplified high availability without the added cost of large amounts of on-premises storage
• Provide larger mailboxes to your users with cloud economics
• Enables cost-effective PST centralization into archive folders on the server
• Improve performance by eliminating hotspots while minimizing over-provisioning
• Automatically create clones of mailbox data in the cloud, simplifying data protection, minimizing backup windows, cost, and complexity
• Encrypts all data stored in the cloud, minimizing security risk

Microsoft Exchange Storage Challenges
I/T organizations face numerous challenges in managing Microsoft Exchange storage growth while containing costs. Budgets are declining, headcounts are flat, and users are demanding larger email quotas, requiring organizations to be more cost-efficient. Multiple copies of email data are stored to address compliance, electronic discovery, and security needs – including archival and anti-virus – driving capacity consumption and creating bottlenecks. Enhancements to Microsoft Exchange Server 2010 have been introduced to help customers better manage their data, including support for centralizing PST files into server-based personal archives for searching and discovery, larger mailboxes to mitigate PST file usage and support growing user demand, removal of single-instance attachment storage, and support for lower-cost, lower-performance storage to meet the storage requirements driven by PST centralization and larger mailboxes while trying to minimize cost. Additionally, Microsoft has changed the high-availability architecture with the Exchange 2010 in favor of an “over-the-top” model of replication between servers (Database Availability Groups, or DAG), each with captive storage rather than the previous shared storage model. As a result, customers considering migration to or new deployments of Microsoft Exchange 2010 should carefully consider the storage architecture to account for the expanded capacity requirements and changes to the high-availability design.

The StorSimple Solution
Traditional storage systems do not provide the economics necessary to affordably provide Microsoft Exchange 2010 on-premises with the storage capacity required to support DAG, larger email quotas, PST centralization, and other features and changes. Alternative approaches to solving the need for larger email quotas are either too costly, disrupt the organizational processes and procedures, or frustrate end users due to a lack of compatibility, features, or a new user interface altogether. The StorSimple appliance attaches to your LAN, exposing cloud storage as block storage volumes to Exchange Mailbox servers:
• Allows I/T to provide the economics of online email solutions with larger quotas with on-premises Microsoft Exchange, while ensuring performance levels provided by today's enterprise storage systems
• Cost-effectively increase storage capacity to support use of DAG for high availability, PST file centralization, and integrated archiving
• Simplifies data protection through support for VSS-integrated snapshots and Cloud Clones, which automatically create space-efficient online backup copies in the cloud, reducing backup windows, cost, and complexity
• Secures all mailbox data written to the cloud using the strongest commercially-available encryption
Alternative Approaches

Many approaches claiming to simplify or reduce overall Microsoft Exchange costs exist, however, each falls short compared to StorSimple:

- Traditional networked storage lacks the necessary intelligence and pricing to support adoption of Exchange 2010 features. StorSimple provides on-premises storage performance with cloud economics, enabling confident deployment of Exchange 2010.
- Using DAS for Exchange 2010 does nothing to address data protection. DAS is captive, leading to low utilization and higher up-front and long-term cost. StorSimple provides cloud economics and a pay-as-you-grow storage model while simplifying data protection.
- Cloud-based email systems lack feature compatibility with today’s email clients or require an entirely new interface, and can disrupt processes, procedures, and remove control from I/T. With StorSimple, you retain Microsoft Exchange on-premises, and maintain control.
- Cloud storage caching devices can’t provide the performance demanded by Exchange due to coherency and performance tradeoffs, and force you to use the cloud. StorSimple provides consistent, high performance without coherency concerns, and allows you to take advantage of the cloud when you’re ready to.

How It Works

StorSimple uses public and private storage clouds in addition to an integrated local tier of storage (including SSD) with intelligent tiering (Weighted Storage Layout) and primary storage deduplication to help organizations simplify their Microsoft Exchange data storage environments, dramatically lower storage costs, confidently take advantage of Exchange’s built-in DAG and archival features, centralize PSTs, and enable business agility. Deployed quickly and easily as an appliance in the data center, the StorSimple appliance provides block storage volumes to Microsoft Exchange Mailbox servers, enabling seamless integration. StorSimple uses a hierarchical storage architecture that provides fast access to working set data through our patented Weighted Storage Layout (WSL) technology, and optimizations such as data deduplication and compression to scale integrated local storage tiers and increase efficiency should cloud storage be used. Additionally, should cloud storage be used, all mailbox data stored in the cloud is encrypted using keys you supply, meaning you remain in compliance and in control of your data.

Features

- **Block Protocol Access** – simplifies integration into existing Microsoft Exchange Mailbox server environments, eliminating the need for new protocols, while transparently supporting cloud storage if desired
- **Weighted Storage Layout (WSL)** – identifies hotspot and working set data for storage on a high-performance local tier (including SSD) to eliminate storage performance bottlenecks
- **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

StorSimple Benefits

- **Confidently deploy Exchange 2010** – StorSimple helps minimize storage costs while retaining on-premises storage performance for Exchange 2010, helping organizations take advantage of DAG, integrated archiving, PST centralization, and larger mailboxes
- **Minimize data protection cost and complexity** – StorSimple provides VSS-integrated snapshots and Cloud Clones, which create always-on, space-efficient, encrypted backup copies in a cloud storage service, helping reduce cost and provide fast, 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
- **Ensure data privacy** – encryption of all data stored in the cloud, eliminating the worry over privacy should a provider lose physical media
- **Business agility** – StorSimple enables I/T organizations to do more with less and become an innovation center rather than a cost center