



How breakthroughs begin.™

# Stronghold Data

Delivering 100% restoration for clients with mission-critical data.



### Challenge:

Stronghold Data protects business critical data for a wide variety of companies including an insurance company with over a billion files, an online retailer and a large law firm. As Stronghold Data built their virtualized environment, they found their DAS-based solution didn't scale, was complex and didn't provide fully redundant storage.

### Solution:

Stronghold Data considered several vendors and selected Isilon for the ability to add storage without downtime and ease of management.

*"I needed fully redundant storage, where no single piece could take us out or impact our ability to serve our clients. I also needed to be able to add capacity without interrupting the 24/7 availability of our client's data."*

— David Markley,  
CIO, Stronghold Data.



Since its inception, Stronghold Data has delivered 100% data restoration for a wide range of customers from an insurance company with over a billion files to an online retailer to a large law firm. Stronghold Data specializes in offsite data backup, protection and recovery as well as server mirroring, disaster recovery and virtualization solutions.

When David Markley, CIO, joined Stronghold Data, he inherited a storage infrastructure developed over time from a variety of vendors. He found this patchwork of solutions was extremely complex, had to be individually managed and wasn't meeting the company's needs. After considering Stronghold's business goals, technology needs and evaluating a variety of vendors, Markley selected Isilon.

### Hitting the brick wall of DAS

Before moving to Isilon, Stronghold Data was running more than 100 virtual machines, using standard servers with direct attached storage (DAS). Markley very quickly came up against an insurmountable challenge—in their environment, DAS would have required a complete mirror of the datacenter, had to be individually managed and could not scale. Due to the management cost, growth of their business and criticality of delivering customer information, staying with DAS-based storage wasn't a viable solution. In addition, with a finite budget and staff availability, Markley concluded the day-to-day tasks of capacity planning, LUN management and permissions with a DAS-based solution added too many "slices" of storage to manage.

Stronghold Data researched many vendors, all of whom offered clustered storage, but Markley found significant differences in each vendor's offerings. "I needed fully redundant storage, where no single piece could take us out or impact our ability to serve our clients. I also needed to be able to add capacity without interrupting the 24/7 availability of our client's data," he said.

Markley continues, "Once we decided to make the move from our DAS solution, scale-out NAS from Isilon was an easy choice. It's the easiest to manage of any system I've used and we've had a significant improvement in the performance of our virtualized environment. I've had nothing but success with NFS and it's great that VMWare ESX 4.0 now fully supports NFS", said Markley.

### Fast Deployment and Benefits – Isilon Scale-out NAS

The Isilon OneFS® operating system is the foundation of the Isilon IQ platform. Compared to other storage solutions he had used, Markley appreciated how fast it was to deploy OneFS and how straightforward the system is to use. Unlike simple NAS namespace aggregation products, Isilon's OneFS operating system is distributed and intelligently stripes data across all nodes in a cluster to create a single, shared pool of storage. "Isilon is file based. I really like the 'headless' operation of Isilon storage where each node is its own operation center", said Markley.

### Delivering a Virtualized Environment for Barton Mutual Group

One of Stronghold's infrastructure mirroring clients is Barton Mutual Group, a leading insurance provider in Missouri, with more than one billion digital records, files, aerial images and blueprints that must be accessible around the clock, without fail. To meet the needs of Barton Mutual, virtualized servers and scalable storage were absolute necessities.

To power 24x7x365 data access and real-time data replication for Barton Mutual (and all their customer environments), Stronghold Data has deployed an integrated solution combining VMware ESX and an Isilon solution of hardware, the OneFS operating system, and Isilon's SyncIQ® asynchronous data replication software application. With Isilon, Stronghold Data has an ideal storage solution for powering a VMware environment, with multi-protocol support, single file system, and on-demand scalability—all making deployment and ongoing operation simple and effective.

With Isilon scale-out NAS solutions, Stronghold was able to unify Barton Mutual's SQL databases, image files and Exchange Server data into a single, high performance, shared pool of storage—critical for simplifying Barton Mutual's storage infrastructure, delivering scalability and managing large-scale data transfers.

### Virtualized environment

Stronghold Data has two Isilon clusters and the Isilon Sync IQ application. To replicate between the two clusters and offer high business continuity, they are also using the Isilon Smart Connect IP. Both the primary cluster and back up cluster are running continuous replication nodes.

Stronghold is also running VMWare 4.0. They have 6-7 VMs on each ESX Server and are also using Distributed Resource Scheduler (DRS). NFS is their primary protocol and it backs up to the Application Servers that are VMs running on Isilon. The VMs also mount the Isilon storage system for direct access to network file shares.

*"Since moving to Isilon, we've seen a significant improvement in the performance of our virtualized environment. NFS performance for VMware has been stellar and with Isilon, it's easier to manage data in the virtual environment."*

— David Markley, CIO Stronghold Data.

