

StorHouse Archiving for File System Applications

A low-cost solution for scalable, compliant, persistent data management

System Highlights

Scalability – StorHouse/RFS can easily store and manage increasing data volumes and billions of files. It uses a patented internal relational database to locate archived information. Unlike HSM systems, the number of stored files is never subject to individual file system constraints.

Survivability – StorHouse prevents technology obsolescence by accepting new storage devices and media types dynamically as they become available. Information on today's StorHouse systems will remain retrievable and maintainable with tomorrow's improved technology.

Accessibility – Efficient retrieval of requested data from any storage layer applies equally to a few large files or to billions of small files. No other solution can meet this requirement and maintain such high performance levels.

Affordability – By closely aligning the cost of storage with the value of data, StorHouse provides a low-cost solution that enables implementation of large projects previously considered cost-prohibitive.

FileTek's StorHouse® Archiving for File System Applications is a low-cost, easy-to-use solution for archiving and rapidly retrieving today's escalating volume of e-mail, voice mail, medical images, spreadsheets, customer statements, word processing documents, and other digitized data in file format. The system provides unique benefits that distinguish it from hierarchical storage management (HSM) products and file system-based archiving alternatives, including:

- **Performance** – Regardless of file size, retrievals of requested data from any storage layer occur in seconds with no need to first restore entire files to disk.
- **Scalability** – Archives can grow to billions of files with no performance degradation due to a unique relational method for storing and indexing all file locator data (metadata about individual files).
- **Reduced data ownership costs** – StorHouse provides affordable, optimal storage of application data on a blended media hierarchy of RAID, MAID, and tape.
- **Built-in compliance support** – Configurable parameters and compliant media types ensure retrievals satisfy industry-based retention rules and archive data remains accessible throughout its required lifespan.
- **Data sharing across the enterprise** – StorHouse promotes secure access to archived data from mainframe, UNIX, and Windows platforms through support for NFS, NTFS, and CIFS file systems.
- **Simplified system administration** – Storage management is completely automatic, including data migration between storage levels, backup, recovery, and replication.
- **Support for Information Life Cycle Management (ILM)** – StorHouse architecture and features complement ILM strategies for managing data optimally from creation and use through archive and deletion.

The solution consists of a *StorHouse* data management system with *StorHouse/RFS* for presenting a standard NFS, NTFS, or CIFS file system interface to applications and *StorHouse/SM* for providing automatic storage management features. Figure 1 illustrates a sample architecture.

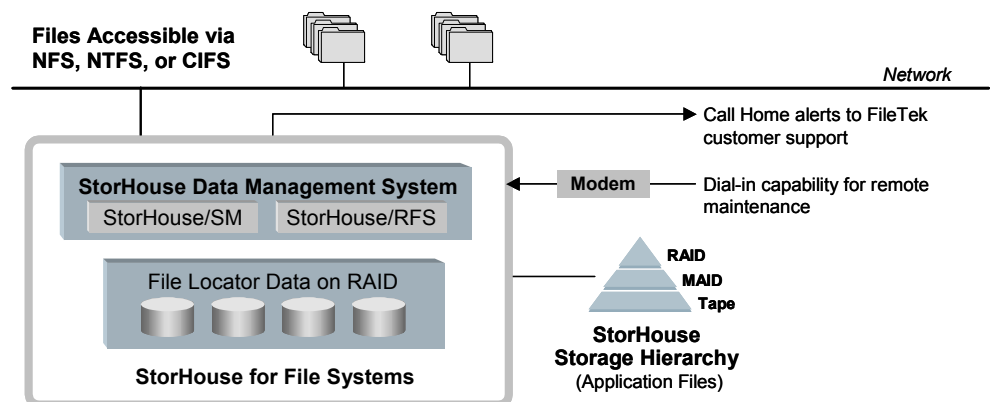


Figure 1: Sample Architecture

FileTek Advantages

- **Dramatically reduces storage costs** for archived data
- **Accesses requested data in seconds** from any storage layer
- **Uses best-of-breed storage devices** in one cohesive system
- **Reduces system administration costs** by managing storage automatically
- **Satisfies** industry-based compliance requirements and media types
- **Enables** multiple retention settings for applications that support different retention criteria
- **Provides** a standard file system interface for different applications from a variety of platforms
- **Promotes** high system availability through built-in proactive support tools

How StorHouse/RFS Works

The StorHouse/RFS file system interface presents itself to an application as a virtual drive (an NFS, NTFS, or CIFS mount or share point). Applications read and write files to the virtual drive just as they would to any mapped Windows drive or NFS mount point.

Collecting and writing files. When an application writes a file to the virtual drive, StorHouse/RFS writes that file to a temporary staging area. Then, it groups multiple files from the staging area into a container, or collection, thereby providing highly efficient storage for small application files. At the same time, StorHouse/RFS generates file locator information such as file path, name, retention period, and size for each application file in the collection.

When a collection reaches a pre-set (configurable) size or at user-specified intervals, StorHouse/RFS copies the collection to StorHouse/SM for permanent file storage. To StorHouse/SM, each collection is one file composed of many individual application files.

After creating a collection, StorHouse/RFS inserts the associated file locator information into a relational table. On retrieval, the file locator data enables StorHouse/RFS to quickly identify the StorHouse file containing the requested application file. Figure 2 shows how staging, collecting, and writing work.

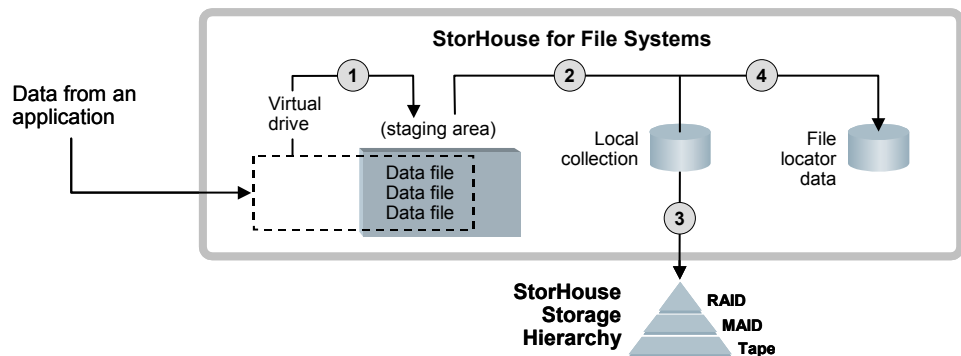


Figure 2: StorHouse/RFS Staging, Collection, and Storage Process

Retrieving files. StorHouse/RFS uses block level retrieval to dramatically reduce network traffic and improve application throughput. An application opens a file from the virtual drive just as it opens a file from any NTFS, remotely mounted CIFS, or NFS drive. StorHouse/RFS intercepts the request, interrogates the locator data, and determines where the collection resides. Then, it returns only the requested data, which the application opens/reads using native NTFS, NFS, or CIFS I/O.

Summary

StorHouse Archiving for File System Applications is an easy-to-use, survivable, scalable, highly accessible, and cost-effective archiving solution for file system applications. It supports compliance requirements as well as ILM processes and procedures for storing data affordably according to its changing value over time. StorHouse/RFS provides the standard interface, while StorHouse/SM supplies the storage management features. For more information, visit www.filetek.com or contact your FileTek account representative.

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