SGI® StorHouse® Storage Manager (SM) Overview

Providing scalable, reliable storage and access management throughout the data lifecycle

StorHouse/SM Features:

- Runs on UNIX and Linux platforms to accommodate different customer standards
- Scales to multiple petabytes with no performance degradation
- Accepts newer and more advanced device/media technology with ease and migrates existing data to them with no need for conversion
- Optimizes media usage and response time for all storage levels
- Automatically migrates data up and down a virtual storage hierarchy while providing full access
- Provides timely, direct, record-level access to all storage types with no need to previously stage data back to disk
- Supports user-configurable storage allocation strategies for organizing, retaining, replicating, staging, and migrating data
- Performs automatic file recovery, backup, electronic replication, and retention
- Supports comprehensive error and event logging and Call Home reporting and error detection
- Offers FileTek remote access for 24x7 proactive customer support and maintenance
- Includes an import/export capability to move physical volumes off-site and/or between StorHouse systems
- Uses a comprehensive graphical user interface (GUI) for system and database administration

StorHouse® Storage Manager (SM), the cornerstone of SGI's StorHouse family of products, is comprehensive storage and access management software specifically designed to administer massive amounts of structured and unstructured fixed content, historical data, and their associated backups. The software manages storage allocations and administration for all StorHouse data, regardless of the archive method (relational, file system, API, etc.).

StorHouse/SM uniquely virtualizes and abstracts an automatically managed, multi-layered hierarchy of storage devices that can include traditional and alternative storage media such as disk and tape to provide a single view of storage to client applications. Because of this virtualization, users never need to be concerned about where data resides. Figure 1 illustrates the StorHouse/SM architecture.

StorHouse/SM has been designed to satisfy different enterprise requirements for storage, performance, cost, information lifecycle management (ILM), and regulatory compliance. The software provides file and media management features and unrivaled data accessibility and availability.

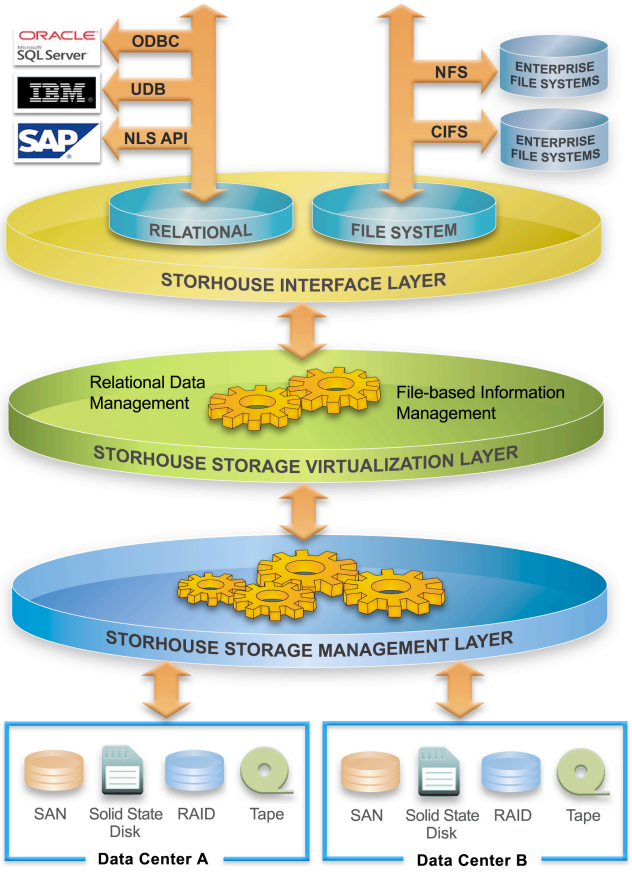

Figure 1: StorHouse/SM Architecture

Managing StorHouse Media

StorHouse/SM includes specialized Volume Allocation and Control (VSAC™) software for managing all layers of the virtual hierarchy. VSAC supports user-configurable volume sets, or pools of storage resources, that group data according to specific access and aging patterns. Volume sets define storage allocation parameters, including device and media types. They can be:

- Migrated, or moved, to different layers in the virtual hierarchy to more closely align the value of data with the cost of storage
- Deleted as a group to minimize administration overhead
- Physically exported to another StorHouse system or to off-site storage for disaster preparedness.

During operation, VSAC tracks available space, chooses appropriate volumes, and automatically allocates or de-allocates the required physical storage to satisfy different application requirements. The software manages storage allocations transparently to insulate applications from the devices they use.

Performance Features

- Uses a disk performance buffer that provides fast access to the most frequently accessed data and enables extremely fast ingest rates
- Manages removable volumes to optimize performance, minimize volume access delays, and reduce library and drive operations
- Performs pre-emptive priority processing of transaction-oriented, time-sensitive requests
- Stages data from alternative storage (for example, tape) to the performance buffer for faster access
- Supports look-ahead queuing to satisfy current requests for a mounted volume
- Retains the most frequently accessed volumes in a library device to keep them readily available
- Promotes high availability, data protection, and load balancing for better performance by duplexing (copying) data to separate libraries and media types
- Reports system statistics graphically with a GUI-based performance monitoring tool

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Keeping Data Available and Accessible

StorHouse/SM provides file management features to ensure high availability and accessibility for all StorHouse data. For user data, these features include the capability to:

- Create backup copies of files automatically on any StorHouse-managed media to provide data redundancy
- Group files in logical collections called file sets to enhance performance, use space more efficiently, and set storage limits
- Migrate data from the performance buffer to other storage layers as access requirements diminish to keep storage costs aligned with the value of data
- Relocate a file or all files stored on one or more volumes to ensure availability if a volume becomes degraded
- Retain files by application so that each type of enterprise data remains available to satisfy industry-based compliance and regulatory rules
- Stage file extents, or units, on demand from alternative storage media (for example, tape) back to the performance buffer for faster access (see Figure 2)
- Replicate selected data electronically between StorHouse systems for additional backup options and enhanced business continuance
- Access a duplex, or second copy, of data for reading or for load balancing requests across multiple libraries if the primary copy becomes unavailable.

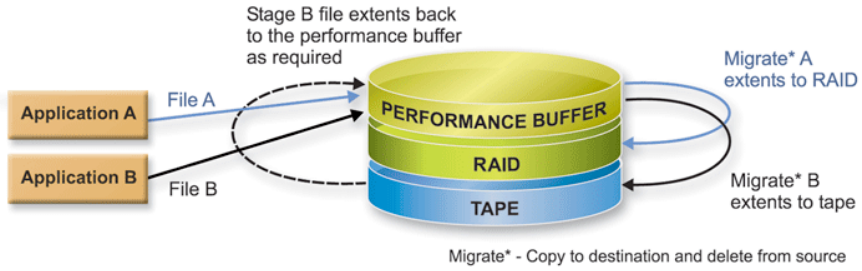

Figure 2: File Staging

StorHouse/SM protects critical system files by shadowing directory information on a second magnetic disk. In the unlikely event that primary and shadowed directories become corrupted, the software re-creates them from checkpoint files, directory extraction files, or information physically stored on data cartridges.

For More Information

For more information about how StorHouse/SM can protect and manage your critical enterprise data, or to learn about other SGI products, contact an SGI sales representative, or e-mail your questions to http://www.sgi.com/sales/askarep.html.