

Oracle Hierarchical Storage Manager

As data volumes and storage infrastructure expand to handle the explosion in file-based information, companies are struggling with the resulting management complexity. Designed to address the challenges of rapid data growth, Oracle Hierarchical Storage Manager (Oracle HSM) streamlines data management processes to help organizations save time and money. Policy-based storage tiering, comprehensive data protection, and data archiving combine with automatic data management based on the business value of information to help reduce storage cost and complexity.

SHARE, MANAGE, AND PROTECT FILE DATA WITHOUT BREAKING IT BUDGETS

KEY FEATURES

- Scalable file system with policy-driven archiving functions
- Automated data migration across multiple storage tiers
- Fully integrated CIFS service for Windows interoperability with Oracle Solaris 11
- Automated Data Integrity Validation (DIV) feature
- Horizontally scaled data mover servers
- Import and export data in LTFS format
- OpenStack Swift interface enables object storage

KEY BENEFITS

- Save money with a policy-based solution that puts the right information on the right storage at the right time.
- Gain control and simplify storage management with storage tiering, archiving, and data protection.
- Improve access to business information throughout the data lifecycle.
- Reduce backup windows and minimize vulnerability with a solution that continuously archives file data.

Simplify Storage Management

Putting the right information on the right storage can save money over time. Oracle HSM software actively manages data between storage tiers to let companies exploit the substantial acquisition and operational cost differences between flash, disk and tape devices.

Oracle HSM software provides an abstraction layer between applications and underlying storage tiers. Applications remain unaware of the physical location of data. As information is written by applications, it is automatically and transparently placed on the most cost-effective storage—based on specified retention and retrieval policies—to align storage and archiving costs with business priorities and ease the management burden.

Improve Access to Business Information

Oracle HSM software provides ready access to data throughout its lifecycle. Managed files appear to exist in the topmost directory of the storage hierarchy, no matter where they actually reside on physical storage. When a file is accessed, Oracle HSM retrieves data from the storage tier with the fastest response time. In addition, previously hard to access data can be moved into tiered storage controlled by Oracle HSM, keeping costs manageable while providing quick data access.

Share and Scale Data

Data management infrastructure can be optimized by combining Oracle HSM with Oracle's StorageTek QFS advanced file system. Together, these technologies provide a complete data management solution with integrated file services, higher performance capabilities, file sharing, and robust scalability.

- Simplify the configuration, management, and monitoring of file systems.
- Archive data in an open format to ease future access and avoid vendor lock-in
- Use OpenStack Swift to archive data on tape

For Microsoft interoperability, Oracle Solaris 11 includes fully integrated CIFS. The Common Internet File System (CIFS), also known as SMB, is the standard for Microsoft file sharing services. The Oracle Solaris CIFS service provides file sharing and MS-RPC administration services required for Windows like behavior for interoperability with CIFS clients.

Ease Administration

Administrative inefficiencies disrupt progress and delay results. Oracle HSM includes a wide range of features to simplify the configuration, management, and monitoring of file systems. With a Web-based management portal, enhanced monitoring and diagnostics, and role-based access control, Oracle HSM software provides a powerful, easily managed, cost-effective way to archive, access, and protect critical data over its entire lifecycle.

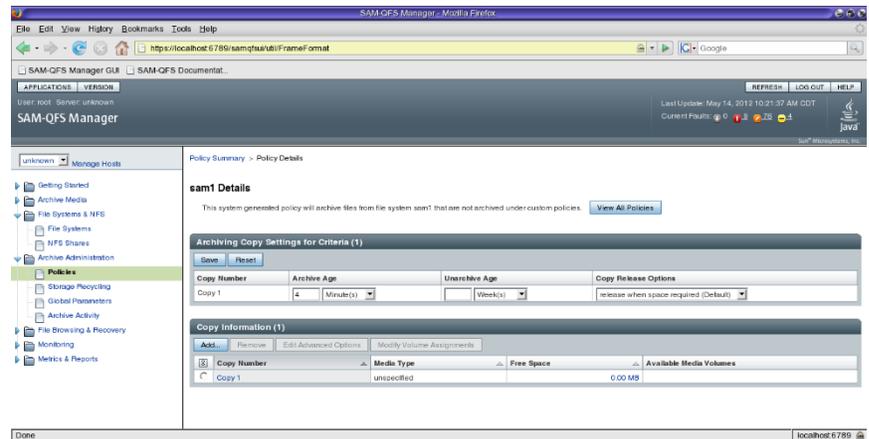


Figure 1. Screenshot of web-based management portal

Administrators can grow or shrink file systems online, and software deployed in shared environments can be upgraded with no downtime, keeping data available even when configuration changes are ongoing.

Archive Data for the Long Haul

With Oracle HSM software, data can be archived using an open format to ease future access and avoid vendor lock-in. Oracle HSM creates storage “containers” that map fully to the industry standard UNIX tar format for file encapsulation. Any tape or disk archive generated by Oracle HSM can be independently read and restored—even without the software—thanks to the open format.

Physical disk and tape media have finite useful life spans that are typically much shorter than the overall lifetime of the data contained on them. Maintaining access to this vital data is key. Oracle HSM provides application transparent migration between media during hardware replacement cycles to dramatically simplify the process of moving to newer media technologies.

SERVICES

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Oracle's StorageTek T10000C and T10000D tape drives as well as LTO5 and LTO6 tape drives support the Data Integrity Validation (DIV) feature to provide end-to-end protection of data during a transfer. A checksum can be generated by the Oracle HSM software, and will be stored with each record on tape. This can be checked by the tape drive on any future read, or with an independent verify operation that can be run without the added overhead of sending data to the host. By creating policies these data integrity audits can be automated. The software can also be configured to create new copies of data automatically if a data error is found, giving the archive the ability to not only self-audit but also self-heal.

Engage the Storage Experts

Oracle service professionals can help address storage challenges by delivering integrated services and solutions that optimize and manage storage performance over the life of data. Oracle's world-class service and customer care can help companies rest assured that technology investments are protected and that the business can respond to change.

Oracle experts can also help pinpoint opportunities to reduce costs, mitigate business risk, and better leverage information assets. Oracle's consulting and managed services offer clear and simple solution choices that address regulatory compliance, storage growth, resource management, and scalability challenges. Oracle's dedicated storage service professionals can help companies gain and sustain measurable results with reliability and flexibility.

Go with a Storage Leader

Oracle continues to develop innovative storage systems and software that safeguard data, accelerate access, and reduce the cost of storing and managing data. By taking advantage of advancements in Oracle HSM software, companies can gain control of storage assets, deliver faster access to business information, and simplify administration while reducing costs.



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Hardware and Software, Engineered to Work Together

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