

## LTFS Archiving Solutions for File Systems and NAS



Data growth is unprecedented in today's data centers. File systems continue to expand with new data and data requiring retention for years. This puts increased pressure on storage managers to stay on top of storage utilization and backup operations. Archiving less active data to a lower cost archive environment can reduce costs, free space in production systems, and shrink backup operations. However, the question has long been, "How do I know which data to archive?" Now you can easily identify and migrate this little used data to archive storage automatically and based on policy. You can maintain transparent access to your data, even after it has been archived. This solution is enabled through the pairing of QStar Network Migrator and QStar Archive Manager software with Oracle's StorageTek archive portfolio.

### NETWORK MIGRATOR

#### **QStar Network Migrator**

*Automatically move static data from primary storage to lower cost archive storage. Optimize storage utilization and drastically reduce backup operations.*

#### **QStar Network Migrator**

Network Migrator uses advanced policy management to monitor and automatically migrate less frequently used files from distributed servers to a central archive. Regardless of the physical location of the files, they remain fully accessible across the network from their original local file systems. Retrieving the file is as simple as it was before migration.

A combination of file attributes can be used to control which information is selected; file creation, modification and last accessed date, file owner, file size and file extensions. The use of high and low water marks trigger the beginning and end of migration; alternatively migration can be started at preset intervals. Once initiated, data is migrated to the designated secondary storage device. A separate policy can be created to manage file archive retention dates; files can then be released for managed or automatic deletion at the end of their lifecycle.

### ARCHIVE MANAGER

#### **QStar Archive Manager**

*Create a NAS disk interface for LTFS tape archives. A disk cache provides a constant metadata view of all archived data and ensures the ability to write to the archive at all times.*

#### **QStar Archive Manager for LTFS**

Easily scalable to multiple petabytes, QStar Archive Manager software can manage and archive a massive amount of data to archive storage technologies such as LTFS tape. The flexible software can be installed on servers using a range of operating systems including Windows and Linux.

QStar Archive Manager creates an 'Active Archive' by virtualizing archive technologies, presenting the archive as a network share or mount point, by using CIFS or NFS standard network protocols. As the archive is presented as a file system, users and applications can easily search, find, and retrieve data directly from the archive, without the need for administrator intervention or an API.



## Solution Highlights

### Reduce Costs

- Save up to 80% on storage costs by moving static data to Oracle's StorageTek tape
- Optimize use of primary storage
- Reduce backup storage requirements and shrink backup windows

### Simplify Management

- Automated management through policy-based controls for data movement, retention, and protection copies
- Transparent file access enabled through file stubs

### Reduce Risk

- Simulate policies prior to implementation in production environments
- Support encryption, data integrity, and digital signatures
- Achieve 24/7 data access with Oracle's StorageTek libraries and drives

## Selecting an Archive Format

Both digital tape and disk are leveraged in archive environments, but the mix between digital tape and disk is evolving. Over the past several years digital tape capacities have grown rapidly while increases in disk capacities have slowed. Today Oracle StorageTek offers the highest capacity digital tape on the market with an 8.5TB native capacity while disk capacities are around half of that. Additionally, disk systems consume more power and are refreshed more frequently than tape, leading to a high total cost of ownership for disk-centric archives. A recent Clipper Group 9-year archiving study concluded that disk costs 26 times more than a digital tape based solution<sup>1</sup>. These changes in the storage market have disrupted archive deployments and organizations are increasing their tape investments for archive.

## Oracle's StorageTek Archive Portfolio

Oracle's market-leading StorageTek portfolio is engineered for archiving. Customer data is secure with the world's highest capacity StorageTek T10000D tape drive, offering data integrity validation, linear tape file system (LTFS) support, and built-in encryption. Oracle's StorageTek tape libraries offer 24x7 availability, the highest performance, and scalability options to support entry to enterprise customers. Combining StorageTek hardware with StorageTek Tape Analytics simplifies tape management and provides the lowest total cost of ownership for archival storage.

With QStar solutions, you have access to the StorageTek T10000 enterprise tape drives, as well as midrange LTO tape drives. QStar software has been tested with Oracle's StorageTek SL8500 modular library, the world's leading big data digital tape library, as well as the midrange StorageTek SL3000 modular library, and the entry StorageTek SL150 tape library.

## Oracle and QStar Advantages for File Archive and NAS Environments

Gain control over file system data. The QStar and Oracle StorageTek solution for file archive and NAS environments can help you significantly reduce costs, simplify management and reduce risk.

Reduce costs by automatically migrating rarely used files from primary storage to an archive environment that utilizes tiered storage. This frees up space in the production environment and limits the amount of data requiring protection from a backup environment. Within the archive environment, utilizing tape provides the lowest total cost of ownership for archiving data.

Simplify management with automated data management and transparent file access. QStar software allows you to set policies based on any combination of file attributes to manage data movement, retention and copies. Data is automatically migrated from primary storage, yet file access is still transparent to the end user through use of file stubs. QStar has integrated with NetApp's FPolicy to allow for transparent migration of data from NetApp environments into the archive.

Reduce risk through innovative security and availability features. QStar policies control data retention, security, and deletion. Prior to implementing a policy, QStar provides a simulation that illustrates the policy action effects. In order to ensure you always have access to your data, Oracle's StorageTek products have the highest level of availability on the market and offer support for WORM, data integrity validation, and proactive health reporting.

## CONTACT US

For additional details on QStar Technologies, please visit: [www.qstar.com](http://www.qstar.com)

For additional details on Oracle's archive solutions, please visit: [www.oracle.com/goto/tape](http://www.oracle.com/goto/tape)