





High-performance File Sharing with Integrated Archive

Storage capacity and performance demands continue to increase, along with demand for the ability to share stored information easily and efficiently across multiple operating system platforms and multiple geographies. This demand has led to increased popularity of Clustered File Systems.

Based on a SAN infrastructure with separated metadata servers, HyperFS provides an industry-leading solution rivaling others that are ten times more expensive. Now with the integration of QStar software, the solution automatically migrates older and less frequently accessed data from the HyperFS SAN to object storage and other types of archive storage, including cloud or tape, for scalability, re-use and disaster protection. Data in the archive is actively accessible to multiple users.

This solution offers media and entertainment, oil and gas exploration, satellite imaging, and scientific research organizations the opportunity to store, access and manage valuable data more effectively and more economically.

Solution Benefits

- High-performance file access, supporting heterogeneous operating system environments
- Scale-out architecture supports virtually unlimited capacity
- Reduced TCO using Scale Logic RAID and HGST erasure coding
- High-speed through Metadata Controllers and direct block-based access
- Delivers significant storage cost savings using policy-based tiering to object storage or tape
- Support for a range of archive storage technologies including object storage, cloud and tape
- High levels of data security, data integrity and data preservation
- Geographically dispersed HGST object storage delivers highest availability and disaster protection
- · Optional time stamp based partial file retrieval
- Optional mirroring and replication for archive disaster protection



QStar Archive Software

Two powerful QStar software products work together to facilitate data migration from the HyperFS SAN to the HGST Active Archive System, and to actively manage, preserve and protect data in the archive.

Network Migrator is a policy-based data manager that can identify data or assets on the SAN that are infrequently accessed, and can migrate, copy or move the data identified to the archive. The data movement is transparent to the user and does not disrupt workflow or data accessibility. The standard default operation would be to migrate data. This process leaves a small stub file on the SAN, pointing to the new location of the data. If a stub file is accessed on the SAN, automatically a data retrieval process is started. The file would be moved back to the SAN allowing the asset to be used by one or many clients.

QStar Archive Manager becomes the destination for all files migrated by Network Migrator. Archive Manager software can be installed on a Scale Logic Genesis IAP server and creates an archive gateway, allowing data to be archived to the HGST Active Archive System. Genesis IAP and Archive Manager support additional archive technologies including LTO, enterprise tape drives and libraries (with LTFS volume-spanning or optimized proprietary formats) object storage archive systems, and cloud storage. Archive Manager uses a disk cache on the Genesis IAP server to accept data at SAN speeds, then writes data to secure archive media as it becomes available. For more advanced disaster protection, replication or mirroring to other on-site or off-site storage is available. If required, retention management policies can be created to prevent accidental deletion or over-writes of data in the archive. Partial File Retrieval from the archive is also optionally available.

HyperFS SAN and Scale-Out NAS Storage

HyperFS is a scalable, high-availability, global file system supporting both block and file based protocols simultaneously to deliver both high-bandwidth SAN and dynamic, on-the-fly scale-out NAS functionality. HyperFS leverages 15+ years of software development and is optimized for converging, content-centric workflows such as Broadcast, Film & Video Post, VOD, OTT, and IPTV. Thousands of users world-wide rely on HyperFS's modular design and unique capabilities to not only Scale-up storage capacity, but to also scale-out user performance independently, or in concert with one another. Based on TCO, ease-of-use, optimized performance settings, and policy-based storage tiering, HyperFS is quickly becoming one of the leading file systems for the global Media and Entertainment industry. ISV's and OEM's around the world use HyperFS as their trusted, high-performance file system because of its reliability, enhanced data protection, and open systems design approach to leverage today's demanding client operating systems. HyperFS provides a highly reliable SAN infrastructure. Using file system logs, fast FSCK (file system check utilities) and unique default isolation techniques, HyperFS provides a high level of data security. The solution has proven itself in hundreds of installations around the world.

HGST Active Archive for Media and Entertainment

With the growth of digital content, organizations in the media and entertainment industry are having to archive or destroy valuable video, images and content in order to make room for new digital assets. Based on a fully integrated modular architecture system capacity starts at 672TB raw and can be easily scaled up to 4.7PB in a single rack. Designed to easily handle large media files, each fully populated rack delivers up to 3.5GB per second throughput and aggregate available performance scales linearly with additional racks.

Highest Availability with Unbreakable Durability

High data availability and data integrity are essential ingredients for archiving valuable media content for long periods of time. The system offers up to 15 nines durability and can be deployed in a three-site geographically dispersed configuration for the ultimate in availability and DR protection without needing replica copies.

Compelling Total Cost of Ownership

Through vertical integration and innovation, HGST delivers a system that rivals the scale of traditional cloud infrastructure, and at a compelling TCO. Utilizing patented helium-filled hard drives dramatically lowers overall cooling requirements. The breakthrough in cost, simplicity of installation and system management allows resources to be directed to higher value activities.

Simple to Deploy -	Power and network connections are all you need
Cloud Availability -	Survive an entire data center outage with geographic distribution of one copy of data
Highest Resiliency -	15 nines data durability, with the ability to survive a data center outage
Limitless Scale -	Increase capacity and performance in line with data growth
Highest Efficiency -	Highest capacity per square foot and lowest power per TB
Best TCO -	Lowest acquisition cost, power/TB, highest capacity and density



QStar Technologies, Inc. US Phone: +1 850 243 0900 IT Phone: +39 0245 1711 info@qstar.com www.qstar.com



Scale Logic inc US Phone: +1 855 440 4678 www.scalelogicinc.com



HGST US Phone: +1 800 801 4618 International: 408 717 6000 www.hgst.com

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