CLOUDIAN

QSTAR® TECHNOLOGIES

Cloudian and QStar Deliver a Broadcast & Media Archive for High-value Digital Assets

Digital assets in broadcast and media environments can generate revenue for decades, but if they become damaged or lost, they are either impossible or very expensive to recreate. Ensuring the long term security of these high-value assets is essential. Cloudian and QStar Technologies regard data security and easy access to data as key requirements for organizations wishing to safely use their assets. These days, the ability to easily scale archives to accommodate larger volumes of data necessitated by 4K and 8K resolution equipment is also paramount.

Solution Highlights

- Easy deployment

- Scalable to hundreds of petabytes across regions

- Dynamic data tiering to Amazon S3, Glacier and S3-compatible clouds

- Leverages industry-standard hardware

- Efficient data protection with compression, replication and erasure coding

- Encryption for secure data storage

- Comprehensive multi-tenant services & QoS

Solution Overview

Cloudian and QStar simplify the integration of self-managing, self-healing storage into existing Media Asset Management (MAM) environments. QStar Archive Manager software provides a NAS-style archive gateway to Cloudian HyperStore's S3-based object storage platform. Archive Manager can be installed on physical or virtual Windows or Linux servers and connects via S3 to Cloudian HyperStore. Using either MAM software or standard file system search engines, assets can be easily located and retrieved to primary storage for re-use. Archive Manager tightly integrates with any MAM using FIMS (Framework for Interoperable Media Services) -based web service APIs. Enhanced functionality such as partial file retrieval or retention management schemes can be added through Archive Manager.

Cloudian HyperStore offers a media preservation system that is both highly scalable and protected through multi-site, geo-distribution. HyperStore is a highly fault-tolerant storage solution at a cost that is comparable to a tape archive. An added and critical benefit unique to HyperStore is that objects can also be optionally tiered to Amazon S3, or Glacier, or any other S3 cloud. This allows data to be preserved without additional investments in storage hardware.
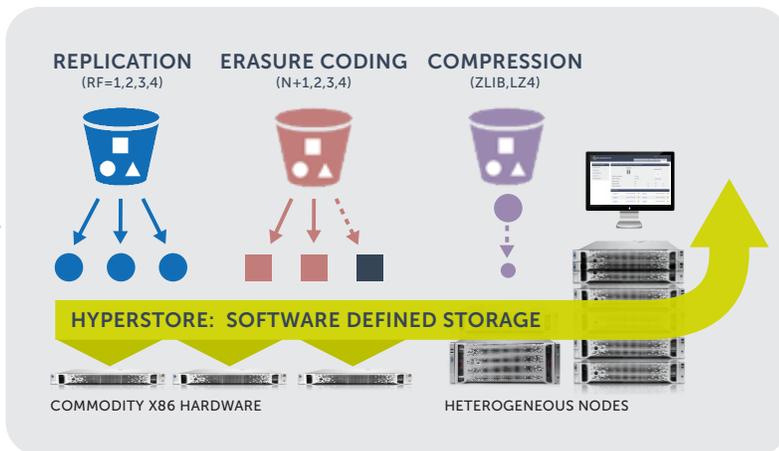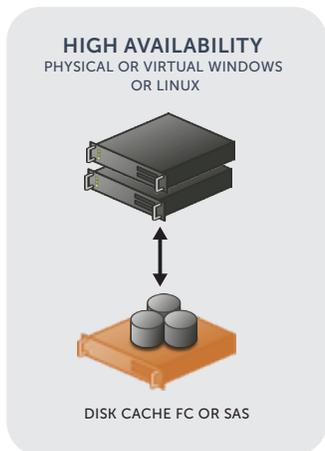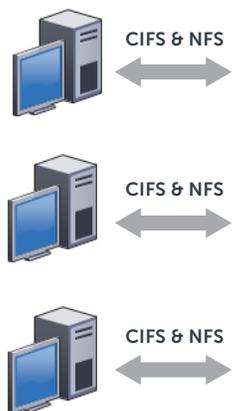
Deployments can span multiple data centers and include optional tiering to S3 clouds for those assets that are very infrequently accessed. Cloudian HyperStore constantly monitors itself for hardware and site failures, taking automatic corrective action in order to prevent data ever being lost. HyperStore uses erasure coding and compression to reduce the amount of raw disk required in any archive environment and gives users the ability to "dial-in" relevant levels of data security applicable to their specific environments.

Cloudian HyperStore

Cloudian provides enterprise-grade storage solutions for private and hybrid clouds. Its flagship product, Cloudian HyperStore®, is an S3-compatible storage platform that enables scalable, secure, and cost-effective hybrid cloud storage solutions. You can deploy HyperStore as software to be implemented atop your existing storage infrastructure, or as a fully integrated rack-ready appliance. Both deployment options

Cloudian and QStar provide self-managing, self-healing storage in existing Media Asset Management (MAM) environments; optional data tiering to any S3 cloud makes long-term storage easy.

deliver multi-data center storage with no constraints on data size, unlimited scale, optional data tiering to any S3 cloud, and support for all S3 ecosystem applications (400+ and growing).

QStar Archive Manager

QStar offers performance and cost flexibility with unlimited scalability. Active Manager software can be easily integrated with an organization's network environment and can be installed on physical or virtual servers using Windows or Linux operating systems. It integrates seamlessly with popular digital asset management and media asset management systems, providing simple access to Cloudian HyperStore, without API support.

QStar's Archive Manager software creates an Active Archive gateway for Cloudian to provide a quick and easy method of archiving any file-based archive content. The software presents the archive as a network share or mount point. Using standard network protocols such as CIFS or NFS, creative users, editors and administrators can easily store, search and retrieve data within the archive. In

addition, completed digital content from production, post-production, mastering, transcoding or distribution can be archived, freeing up capacity on primary storage for new content. QStar software then uses the Cloudian S3 API to move content across the LAN or WAN into the Cloudian HyperStore object-based storage solution – all transparent to applications.

QStar software allows retention periods to be set, converting data into a secure read-only format for a set period of time. Data can be automatically removed at the end of this period, allowing the re-use of this capacity for new content. Multiple retention periods can be created to support different data sets to meet varying business needs. Additionally, QStar software can independently replicate data to multiple sites and to other archive technologies, to LTFS tape, for example.

For digital content already stored on SAN or NAS primary disk systems, organizations can create policies using QStar Network Migrator software, which automatically migrates content to QStar Archive Manager, and then to the Cloudian object-based dispersed storage system.

For more information, or to try Cloudian HyperStore, visit **www.cloudian.com.**