



Rethinking Backup and Long-term Active Retention with Private Cloud Storage

Challenges

- High data volumes make it difficult to keep up with backup and replication windows
- Operational overhead and cost of managing multiple backup copies across multiple data centers
- Long restore times from tape impacts business productivity; only most recent backups are kept on disk
- Data is difficult to access in silos making it challenging to unlock the value and monetize older data
- Public cloud has insufficient security, high latency, long backup windows, additional access and bandwidth costs compared to on-premises data centers

Solution

HGST Active Archive System and Veritas NetBackup delivers a unified private and hybrid backup solution that solves data protection at petabyte-scale and provides instant global access to data anytime, anywhere.

Relentless data growth continues to pressure IT budgets and administrators to find more efficient and effective ways to store and protect valuable data over the long term. At the same time, they are being asked to help the business be more competitive by unlocking the value in their data.

Today's data center is a complex place, evolving over time to meet the needs of a dynamic business. Expanding data sets with shrinking backup windows and recovery objectives are pushing the limits of existing methods. This leads to a higher management effort, cost and difficulties meeting essential SLAs. Many companies have identified legacy backup and archive infrastructure as the main reason for higher operational burden, complexity, and expense. IT organizations facing these and similar challenges are anxious to get on with modernizing their backup and recovery capabilities. As they work through the process, there are important considerations when selecting the right backup and recovery application and the right underlying storage infrastructure.

Enterprises are reluctant to move to the public cloud because they believe they can't get the comprehensive level of security that they get in their physical data centers. High latency, long backup windows, bandwidth costs and missed RTO objectives are barriers to cloud adoption. Larger organizations also require a single point of control and a uniform way for managing the protection of a diverse range of applications. The diversity is made more complex given certain applications are best to run in the cloud.

Cloud-scale Backup Transforms Business

The combined solution of Veritas NetBackup™ and the HGST Active Archive System offers cloud-scale unified data protection to applications running either on-premises or in the cloud. The ability to define a single data protection management policy for different physical and virtual environments greatly simplifies the backup and recovery process. This integrated approach also makes it easy to consolidate fragmented islands of data protection to a single, unified or converged data protection platform, promoting operational efficiency and reducing ongoing operational expenses.

NetBackup and the HGST Active Archive System stores data efficiently throughout its lifecycle. For data that can benefit from deduplication, NetBackup can shrink backups by as much as 99%, reducing short-term retention disk storage requirements. NetBackup lifecycle policies can automate the entire process, managing schedules and retention times. The HGST Active Archive offers on-premises cloud storage is a cost-effective alternative to tape that can eliminate the need for offsite media management (Figure 1).

With the HGST Active Archive System, more data can economically remain on disk-based storage, or retention periods can be extended rather than use slow-to-access and difficult-to-manage tape. Fast access to more data further benefits the business by enabling companies to leverage it to improve decision making, innovation and overall productivity.

Benefits

- **Low TCO:** On-premises disk-based TCO rivals cloud and tape infrastructure for long-term active retention
- **Reduce complexity:** Consolidation of multiple data protection silos simplifies backup operations and data availability
- **Data readiness:** Restorations can be performed almost instantaneously without having to recall from vaulted tape
- **Data availability:** High durability and data integrity keeps data safe and available, global namespace makes data accessible anywhere, anytime
- **Self protecting:** No IT intervention or user impact during unplanned maintenance, automatically self heals, fail-in-place model
- **Predictable performance:** More parallel S3 streams supporting read and write throughput to achieve SLAs
- **Built-in disaster recovery:** Support for geographically dispersed data to help protect against a full data center outage with only one copy of data
- **Multi-Workloads:** The HGST Active Archive System can be used not just for backups, but also for other storage use cases where objects make sense and performance and capacity requirements are a fit

HGST + Veritas Enterprise Backup Architecture

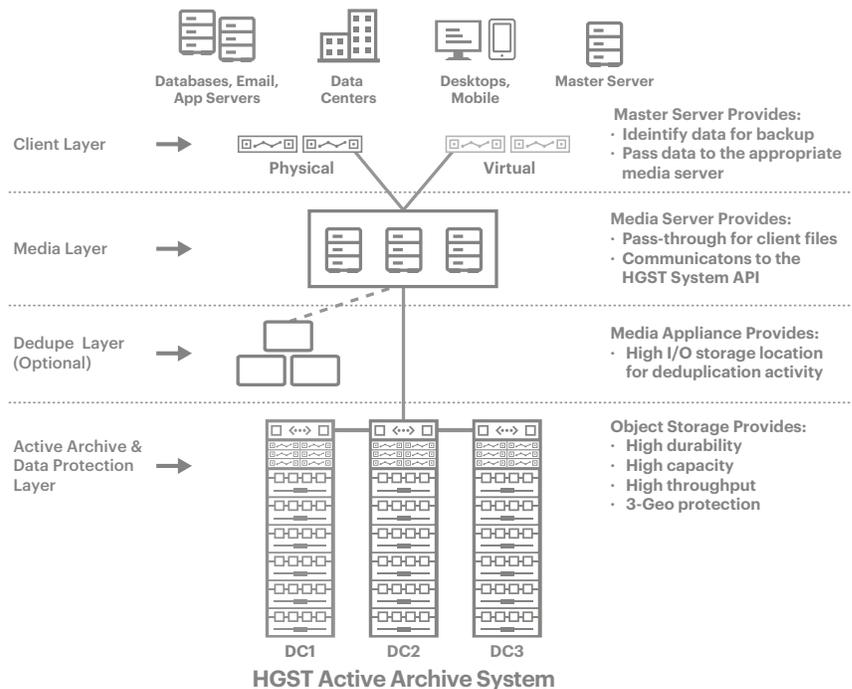


Figure 1. Enterprise backup architecture – HGST Active Archive System and Veritas NetBackup

Challenges with Using Tape

Much of the world's stored data is archived on backup tapes for long-term retention. Enterprises that are using tape to archive and access large volumes of data are facing numerous challenges. Recovery from tape is slow and success can be uncertain. Performance lags and frequent recalling of tape from offsite locations drive up the cost. For any IT organization, tape migration can be a complex and costly process. Advancements in disk drive technology and software-defined storage solutions can support both reactive and proactive needs of the business with reduced complexity and cost.

HGST Object Storage System

HGST Active Archive System is an easy-to-deploy, Amazon S3™-compliant, scale-out object storage solution that can be scaled from 417TB to 2.9PB of usable capacity in a single rack. Leveraging enterprise-class HelioSeal® helium-filled disk drive technology and end-to-end optimization of software and hardware, the system provides the industry's best capacity density. With innovative rateless erasure coding and super-granular data integrity checks, the solution delivers up to 15 nines durability, and the ability to help survive an entire data center outage in a 3-Geo configuration while maintaining a global consistent view and data accessibility from any location.

IT organizations no longer have to weigh the risks of a public cloud against the cost of building an internal private cloud for long-term active retention. Through vertical integration and innovation, HGST delivers a system that rivals the TCO of using cloud or tape infrastructures.

To learn more visit: www.hgst.com/activearchive