



# Ultra-Durable, Intelligent Storage for Exascale Computing

Bring more data protection, durability, and scalability to your petabytes with Perifery and Seagate.



## Challenge Summary

Organizations that rely on large amounts of unstructured data are consistently challenged by managing their rapidly growing inventory within constrained budgets. The quest for highly scalable, cost-effective, easily accessible, and future-proof archive and data repository solutions with robust data protection is crucial to ensuring the enduring security and preservation of data. While public cloud services can aid remote work, the expenses tied to frequent data access can be erratic, inefficient, and burdensome to oversee. Storing petabyte or exabytes of digital assets in primary storage is often infeasible and/or unpredictable cost-wise and falls short of the required security standards.

Perifery Swarm combined with Seagate Exos® CORVAULT™ self-healing block storage offers an excellent choice for active archiving, especially when dealing with sizable, growing volumes of data. Complementing this solution is Seagate Lyve Cloud S3 storage, which offers zero API or egress charges, making it truly easy to backup your data and scale as needed whether you're in enterprise IT, high-performance computing, media and entertainment, healthcare, government, or work as a cloud service provider.

This end-to-end solution supports outstanding performance for rapid data access and retrieval and removes the soaring, unpredictable costs associated with primary, offline, and public cloud solutions. It also helps decrease ongoing IT costs by automating data management, simplifying scalability and availability, bolstering data security, and providing self-service capabilities.

Together, Perifery and Seagate empower customers to store, move, and activate data at scale, all while maintaining full data protection, security, and control.



Are you struggling with protecting and providing access to rapidly scaling data sets or enabling distributed content-based use cases? Using tape is cost effective but data is not instantly accessible and tape is difficult to manage. The public cloud often presents the challenge of compounding, unpredictable recurring costs, and the inability to meet local performance and privacy requirements. Do you want to stream content directly from the storage layer to internal employees or external subscribers? Are quick data searches a huge challenge for your organization? Or, do you want to manage thousands of tenants and billions of files across multiple sites?

As the demand for data management and accessibility grows, it can only be managed by active archive solutions that can handle petabyte-scale storage while allowing quick and easy data retrieval. Traditional archival storage systems can be complex and costly, making it difficult for organizations to ensure data access and security.

The combination of Perifery Swarm and Seagate Exos CORVAULT self-healing block storage is designed to help data-intensive organizations deal with increasing volumes of digital assets, unstructured data, security, and regulatory concerns. We provide an active archiving solution that tackles this challenge by incorporating automated data protection measures that ensure data durability and resilience in the face of hardware failures.

Compared to primary storage and unpredictable cloud pricing models, this integrated solution offers a cost-effective alternative that enables organizations to securely preserve data while optimizing storage budgets.

## Seagate Solution

### Exos CORVAULT

Seagate Exos CORVAULT is a high-performing, efficient and durable, multi-petabyte block storage system that is self-healing and brings five-nines availability to scale-out storage for data center deployments. With CORVAULT's built-in breakthrough technologies, data centers experience hyperscale efficiencies, reduced CO<sub>2</sub> footprint and operational expenses, rapid deployment, streamlined data management, and automatic hard drive renewal.

- **Hyperscale Efficiency:** Lower TCO with hyperscale capacity, maximum space utilization, extended life cycles, and less power per petabytes.
- **Sustainability and Cost Savings:** Reduces the carbon footprint of data centers with architectures requiring less compute and networking resources, slashing TCO and e-waste.
- **High Capacity:** Features the latest, most efficient petabyte capacity block storage—with maximum data density—for optimal data center usage.
- **Superior Data Availability:** Provides five-nines data availability, durability, and performance needed to promote reliable data storage.
- **System Data Protection:** Protects data via Seagate Advanced Distributed Autonomic Protection Technology (ADAPT) for rapid rebuilds, storage efficiency, improved sustainability, and reduced downtime.
- **Self-Healing Hard Drive:** Minimizes e-waste, downtime, maintenance, and human intervention by renewing errant drives on demand with ADAPT and Autonomous Drive Regeneration (ADR).
- **Simplicity:** Allows simple installation, configuration, and management with enterprise storage that's like a single hard drive with petabytes capacity.
- **High Disk System Performance:** Ensures continuous data access with responsive low latency performance.
- **Maximum Security:** Self-encrypts data automatically via Seagate Secure™ for maximum protection, reduced privacy concerns, and secure cryptographical erase.
- **Dependable Technology:** Provides a well-designed, reliable data storage solution backed by Seagate's 40+ years of demonstrated data storage innovation, expertise, and supply chain.



## Seagate Lyve Cloud

Seagate Lyve™ Cloud is an always-on mass-capacity object storage platform designed to enable multicloud freedom at the metro edge. With zero add-on charges for API or egress, Lyve Cloud helps enterprises overcome vendor lock-in, unpredictable cloud TCO, and multicloud data management complexity. Leveraging more than four decades of global leadership in storage technology innovation, Seagate's object-storage-as-a-service offering empowers customers to store, move, and activate data at scale—all while maintaining full data security and control.

- **Hyperscale Efficiency:** Lower TCO with hyperscale capacity, maximum space utilization, extended life cycles, and less power per petabytes.
- **Multicloud Freedom:** Transfer data seamlessly across public and private cloud environments without extra charges for egress or API calls.
- **Predictable TCO:** Lower your cloud storage bill by up to 70% with industry leading TCO.
- **Always-on Availability:** Access data anytime without costly delays thanks to best-in-class availability and durability.
- **World-Class Security:** Safeguard your data assets with the most stringent, globally recognized security standards.
- **High Data Resiliency:** Prevent data deletion, manipulation, and data integrity challenges with highly durable and immutable object storage that supports data protection and anti-ransomware strategies.
- **Demonstrated Expertise:** Put your trust in Seagate's 40+ years of global leadership and data storage technology innovation.
- **Frictionless Object Storage Deployment:** Get up and running fast with user-friendly, S3-compatible application integration.
- **Managed Migration Services:** Eliminate data silos, migrate to cloud, and discover new business opportunities with fully managed data migration, media migration, and digitization.
- **Validated Partner Solutions:** Seagate works with industry-leading providers to ensure seamless compatibility between Lyve Cloud and partner solutions and the best possible user experience.

## Periphery Swarm

Swarm software delivers a cost-predictive, S3 cloud-native, on-prem archive solution to preserve, protect, and access your valuable digital assets for reuse and re-monetization.

Deploy Swarm software on your choice of standard x86 servers and storage. Easily mix current and future hardware as new technology evolves or workflows change. And, enjoy the highest levels of security and protection to safeguard your backups from ransomware and other threats, including data loss due to natural disasters and hardware failures.

Certified with leading backup software providers, including Veeam, Commvault, Veritas, and Rubrik, so our solutions will fit right into your infrastructure.



### Media & Entertainment

A content-focused platform enabling secure file distribution access.



### High-Performing Computing

Multi-tenant S3 storage that streamlines collaboration and accelerates time to discovery.



### Healthcare

Scalable medical image archive and patient record management.



### Enterprise IT

Secondary storage platform to eliminate storage silos and manage unstructured data growth.



### Cloud Storage

Operational and workflow efficiencies for private, public and hybrid cloud data storage.



### Government

Safeguard data, ensure data integrity, and meet compliance requirements.

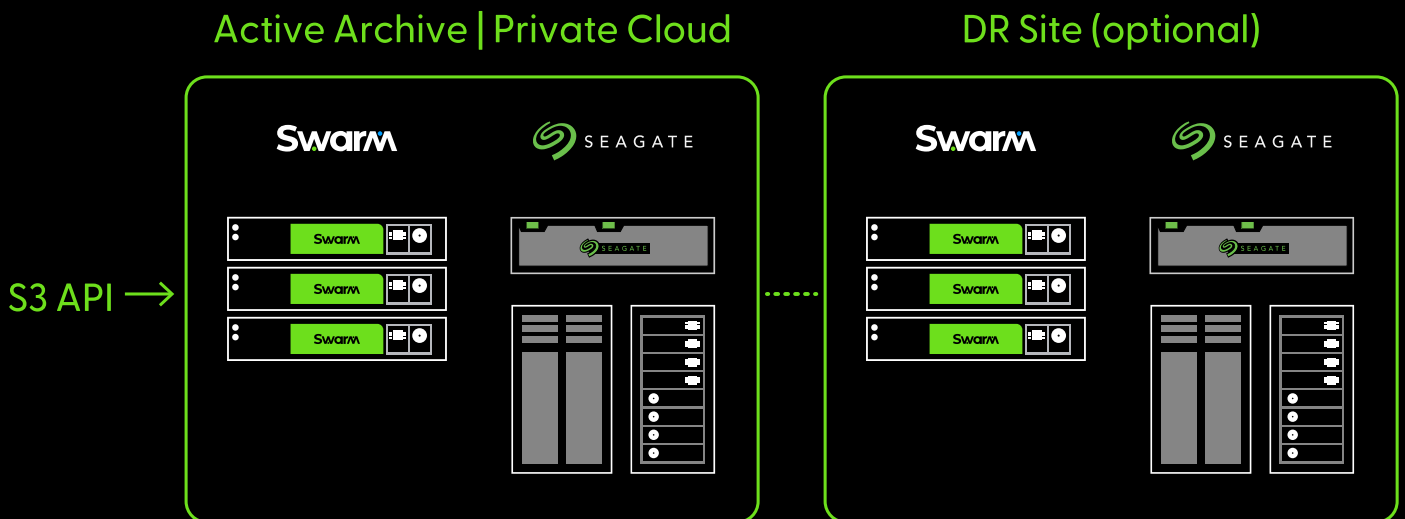


With the most advanced, proven multi-layered security, encryption in-flight and at-rest, immutability, WORM, and automated replication capabilities to ensure that internal or external parties never violate the integrity of your content.

Perifery Swarm offers a range of features that make it an excellent choice for active archiving, especially when dealing with large volumes of data.

- **High-speed data access:** Outstanding performance by utilizing its object-based storage architecture, allowing for rapid access and retrieval of data for demanding workloads.
- **Scalable:** Excels in handling data volumes making it perfect for active archiving where support of petabytes of data, or billions of objects, may be required
- **Cost-effective storage:** Provides an affordable active archiving solution without the soaring costs associated with primary storage and sub-optimal ROI of offline solutions such as LTO.
- **Reduced IT OpEx:** Decrease IT costs by automating data management, simplifying scalability, bolstering data security, and providing self-service capabilities.
- **Metadata-driven search:** For efficient object retrieval even as archived data volume expands over time.
- **Data protection:** Archived data remains protected and preserved as needed through built-in mechanisms such as replication, erasure coding, integrity checks, and self-healing.
- **Integration and compatibility:** Integrates with a range of APIs, such as S3 API, Redfish API, and applications such as Media Asset Managers (MAM), which enable seamless integration into existing workflows.
- **Unparalleled global support:** Unlike many smaller vendors and open-source offerings, Perifery support centers are located around the globe and staffed exclusively by level 3 engineers. Perifery has been honored with the Stevie® Awards Front-Line Customer Service Team of the Year for ten consecutive years.

## Solution Architecture



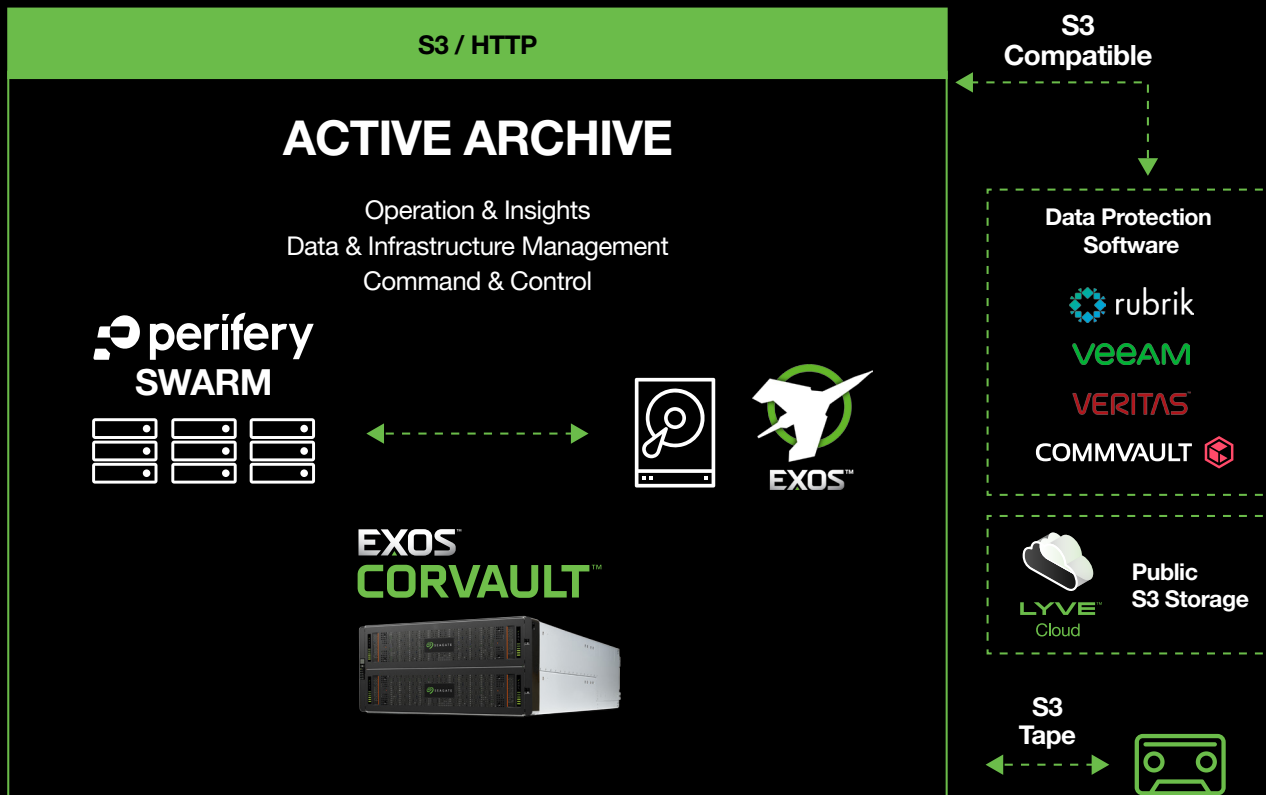
## Total Solution

Together, Swarm S3 cloud-native object storage software, Exos CORVAULT self-healing block storage, and Lyve Cloud deliver solid, long-term data security and protection for mass data. The innovative solution reduces overall administrative costs with intelligent resilience against hardware failures and outages and delivers data durability up to 14 nines.

Complementing the self-healing, petabyte-scale efficiency of Exos CORVAULT, Swarm excels as an active archive solution for organizations looking to manage and access large volumes of archived data, keeping costs under control, ensuring data integrity, and reducing their data center carbon footprint and e-waste. With replication and erasure coding, organizations can protect their archived data long-term and tailor their data-retention policies to meet compliance requirements. Seagate Lyve Cloud S3 storage with predictable cloud storage costs and zero add-on charges complements the total solution with off-site backup and elastic data scale. Enterprise organizations can easily integrate Seagate and Periphery's joint solution into existing workflows and applications using a variety of APIs and applications to store, move, and activate data at scale, all while maintaining full data protection, security, and control.

## Enterprise Data Management Made Easy

Enduser      Application & Web Services      Devices



## Total Solution Benefits

- **Infinite Scalable:** Enables effortless expansion of storage capacity to accommodate petabyte-level data archival.
- **Cost Effective:** Enables hyperscale efficiency to optimize archival costs through efficient, high-capacity storage, extended life cycles, data center space and power consumption.
- **Sustainable:** Reduces the carbon footprint of data centers through architectures that use less compute and network resources (50%), space and power (30%), and reduced e-waste.
- **Data Security:** Includes built-in mechanisms such as replication, erasure coding, in-flight and at-rest encryption, WORM, and object lock/immutability to protect archived data over the long term against cyber threats like ransomware and meet compliance and audit requirements.
- **Integrates Easily:** Compatible with existing workflows and applications using a variety of APIs and applications via S3 and HTTP.
- **Easier Data Management:** Streamlined processes allow organizations to quickly store, protect, and access archive data.
- **Scalable:** Provides flexibility to handle petabyte-level data growth while delivering consistent performance.
- **Secure and Durable:** Automated data protection and robust hardware enable a multi-layered approach for ensuring data integrity with up to 14 nines.
- **Fast Data Access:** Rapid retrieval of archived data without sacrificing responsiveness. Metadata-driven search and retrieval capabilities enable fast access to archived content, enhancing user productivity.
- **Future-Proof:** Supports the growing demands of data-intensive applications while ensuring long-term scalability, compliance, and preservation of critical data assets.



### LOWERS TCO

Shrinks CapEx and OpEx.



### ELIMINATES RISK

Provides 100% business continuity; Enables regulatory compliance.



### SUSTAINABLE

Reduces carbon footprint with architectures requiring less compute & networking resources (50%), rack space & power (30%), slashing TCO and e-waste vs. JBOD deployments.



### IMPROVES PRODUCTIVITY

Manages & organizes data at scale; Unifies data silos.

## Ready to Learn More?

Visit us at [www.seagate.com](http://www.seagate.com)