

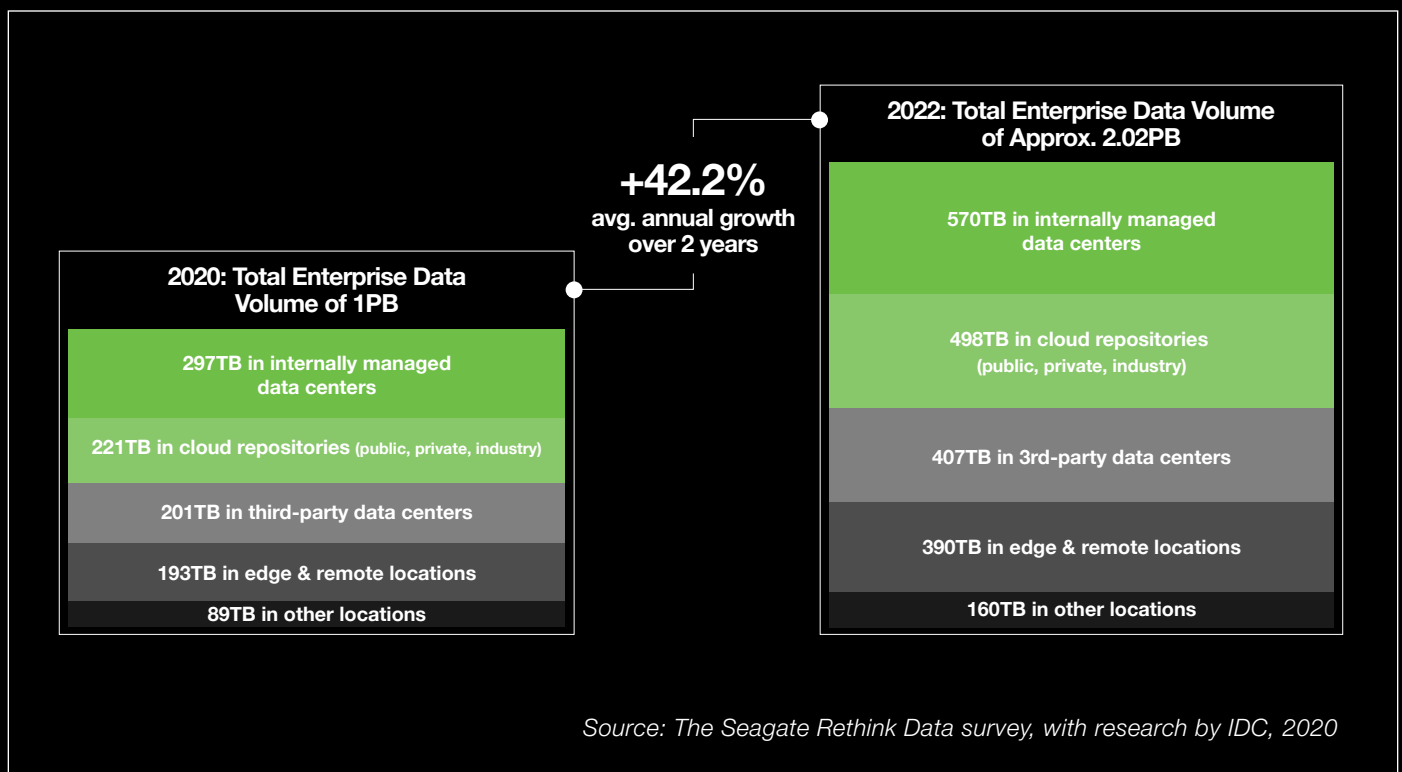


# MODERNIZE DATA PROTECTION, BACKUP, AND RECOVERY

## Introduction

Businesses are becoming overwhelmed by the need to store and retrieve their data, which may live in the core data center, in the cloud, or at the edge of the network. Each location requires careful thought when it comes to data protection, data management, and performance—and the best way to do backup/restore to recover from outages.

The [Rethink Data](#) report from Seagate® shows the results of a global survey conducted by market research firm IDC. A key finding from the report is that enterprise data is growing at 42.2% annually, but only 32% of data available to enterprises was put to work in 2020–2021. That means 68% of enterprise data is not fully leveraged for business analysis and insights that could lead to better business outcomes. And edge data is not fully utilized either, with just 36% of edge data transferred to core data systems in enterprise data centers.



The role of enterprise data is expected to grow in 2022 and beyond, as companies use their data to transform their business. Because it's so vital for business, it's critically important to back up enterprise data—and to quickly restore enterprise data if it is erased because of human error, cyberattacks, ransomware, or natural disasters. Every organization depends on its production data for sustaining its ongoing business—and as the basis for making key executive decisions.

Backup processes have an important role in ensuring data compliance, security, and data governance. The ability to analyze backup data is critically important in a highly competitive world, delivering insights to business units and ensuring data protection—an irreplaceable foundation for an organization's IT infrastructure.



## Backup and Restore Is Evolving

Data is everywhere—at the core, in the cloud, and at the edge. It's in centralized data centers, in colocation sites, and in local business units. But many of the data resources are trapped inside data silos, making enterprise-wide backup recovery more challenging. Customers want to become more efficient at storing, securing, and restoring their data, using best-in-class backup/restore technology. That's why backup and restore systems must evolve, simply to keep pace with the sheer amount of data being generated.

The traditional methods for backup/restore include local on-premises backup devices—such as purpose-built backup appliances (PBBAs) and network-attached storage (NAS)—along with tape drives and tape libraries for archiving. (See Data Device Types section for definitions.)

Over the years, each of these storage technologies have proven they can restore data so businesses can continue their operations—supporting their service-level agreements (SLAs) and recovery time objectives (RTOs) and meeting their business-continuity goals from back when the data was first created.

Now, in a hybrid-cloud and multicloud world, backup/restore itself must evolve to keep pace with new applications, storage technologies, and threats. It must become faster, more secure, more efficient, and more versatile. There is increasing demand for cloud storage that is simple, trusted, and secure. The challenge is to leverage cloud storage resources without running up high costs associated with data transfers into—and out of—cloud services.

### Customers' challenges with onsite data storage include:

- Scaling capacity as needed, up and down
- Managing and maintaining backup data resources, including PBBAs, NAS, and tape
- Reducing costs for backup/restore cycles
- Supporting technology upgrades and data migration
- Preventing interruptions to business continuity
- Risking data loss caused by human error, equipment failure, malware, ransomware, or natural disasters
- Ensuring regulatory compliance data privacy for personally identifiable information
- Preventing data loss from cybersecurity and ransomware threats.

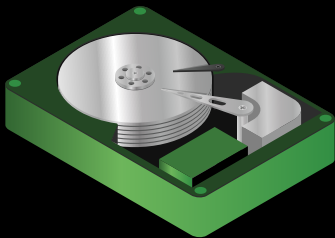


## Data Device Types



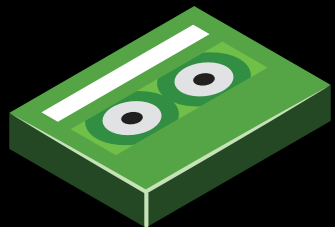
### Purpose-Built Backup Appliances

PBBAs are efficient backup solutions and storage targets. They provide fast access to local backup storage. Typically, they include RAID standards for an added layer of reliability, using data deduplication options for better storage utilization. PBBA backups can be easily scaled to Lyve Cloud S3, freeing local storage capacity on PBBA appliances to back up more of a customer's primary data. Nearline data and data with long retention requirements (e.g. archiving) is stored efficiently in Lyve Cloud. Enterprise data protection software running on a PBBA typically supports data deduplication to efficiently store and transfer backup data in Lyve Cloud S3.



### Network-Attached Storage

NAS systems are widely used, supporting storage and retrieval of data from a centralized location. Secondary copies of production data are often stored on NAS using built-in functions like replication software to propagate a backup to other NAS devices or to cloud storage. With Lyve Cloud S3 storage as a service, customers can scale out their NAS storage for backup purposes, or they can replace some of their NAS capacity.



### Tape and LTO

LTO tape drives and media are used to store backups and to archive data at low costs for long periods of time. The main benefits of tape include its reliability, low-cost media, and ability to air-gap production data, protecting data from change or deletion. Consequently, there's a requirement for ongoing administration, maintenance, and planning for the tape drives and media. Over time, customers are faced with tape generational compatibility challenges and media migrations that allow them to maintain access to archived data. Lyve Cloud is a solution that improves TCO, compliance, and data security, and it simplifies on-premises LTO migration tasks by providing long-term access to data.



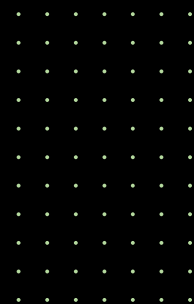
## The Lyve Cloud Solution

Lyve™ Cloud is an S3 object storage solution. This means it can store a wide range of data—and it stores that data as immutable objects which cannot be tampered with or changed. Introduced this year, Lyve Cloud is ideal for the retention of massive volumes of data that must be accessed but not edited. It's an important way to consolidate and retain data stored on multiple tape-archive resources throughout an organization. Object storage is increasingly being used to support data for the purpose of analytic processing, artificial intelligence, and machine learning.

Lyve Cloud can be deployed on premises, off premises, or at a colocation site where it can be accessed rapidly as a backup data repository. Storage administrators can use Lyve Cloud to complement their local backup storage systems. With Lyve Cloud, backup data can be managed by the backup application that is running on customers' backup servers or PBBA products.

This storage-only cloud is complementary to, rather than a replacement for, PBBA local storage solutions. When customers need more capacity to back up their local data, they have the choice to scale their on-premises backup and PBBA solution to Lyve Cloud. They can do so seamlessly, easily, and efficiently without disrupting local data storage.

The data comes from customers' multiple storage tiers, reducing the time and cost of finding and retrieving data. Importantly, customers will gain protection from ransomware attacks. The data sets vital to the customer's business are stored and preserved in Lyve Cloud, and they can be quickly retrieved to support business continuity if and when a ransomware attack occurs. Lyve Cloud immutability protects the data, ensuring end-to-end data integrity for customers who use Lyve Cloud for backup and restore processes.



## A New Form of Backup and Restore

Lyve Cloud bridges the gap between local storage, tape vaulting, cloud storage, and the enterprise data center. Lyve Cloud provides always-on capabilities, world-class security, and a reduced cost profile to data at rest and data in motion. It can be leveraged to store data that is moving from the core to the cloud to the edge in a corporation, government agency, or other organization.

Customers will find that Lyve Cloud fits into their next wave of digital transformation, allowing their distributed data resources to map more easily to compute services in data centers—and in the cloud. By using Lyve Cloud, customers ensure their ability to protect data—and to restore it rapidly in case of on-premises data outages.

Seagate's partnership with Equinix® brings data resources directly to Equinix' colocation data centers in 64 major metros on five continents around the world. Seagate works with a growing ecosystem of independent software vendors that provide software products that complement Lyve Cloud deployments, including Cohesity, Commvault, Equinix, Rubrik, Veeam, and others.

Complexity is a key issue for backup/restore and data retrieval. Most companies have data silos—whether they are located near or far—that hold isolated data resources. Lyve Cloud simplifies data replication and data retrieval by enabling consolidation of multiple data silos into a single backup repository, allowing data to be successfully restored to achieve business continuity.

Key benefits of Lyve Cloud for backup include the following characteristics that preserve business data—and provide rapid restoration of data, as needed:

- **Provides seamless integration and scalability/expansion of on-premises backup solutions.** This gives customers more capacity to scale up their rapidly growing data resources. Lyve Cloud fits with—and is complementary to—customers' hybrid-cloud and multicloud environments.
- **Ensures cost predictability.** With Lyve Cloud, there are no ingress fees or egress fees for data transfer, which supports full backup data mobility. Lyve Cloud can be used for primary and secondary data copies, as well as for air-gapped copies of data.



## PREDICTABLE CLOUD ECONOMICS

Eliminate bill anxiety with simple pricing and long-term predictability, allowing you to scale without limits.

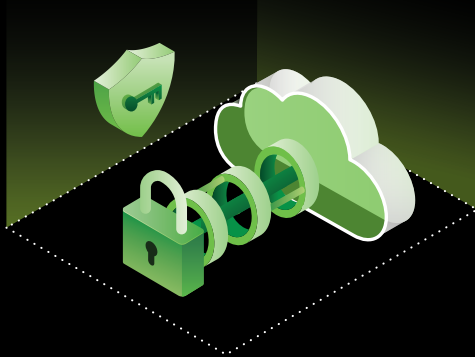


- **Simplifies multi-tier storage architecture.** Lyve Cloud provides a new option for protecting data across the enterprise.
- **Safeguards data.** High availability paired with industry-leading data durability (supporting 99.999% uptime) and encryption ensures data is available when it's needed. Object immutability, when turned on at the S3 bucket level, will protect data against cyberattacks, ransomware, and malware, ensuring that data cannot be changed or tampered with. This will reduce an organization's vulnerability to data attacks, supporting rapid data recovery and a rapid return to normal business operations.
- **Eases on-premises and off-premises data management.** Customers using Lyve Cloud have greater flexibility to back up and restore data on-premises or in the cloud (hybrid cloud or multicloud).

## WORLD-CLASS SECURITY

Safeguard your data with ransomware protection, enterprise-grade identity management support, automatic data replication, and data encryption at rest and in flight. ISO 27001:2013 and SOC 2 certifications demonstrate Lyve Cloud's commitment to the most stringent, globally recognized data security standards.

[Read the White Paper →](#)



## ALWAYS-ON AVAILABILITY

Crafted for high availability, durability, and reliability. Multi-region replication enables data access without costly delays, so your data is always available when you need it.

[Read the White Paper →](#)



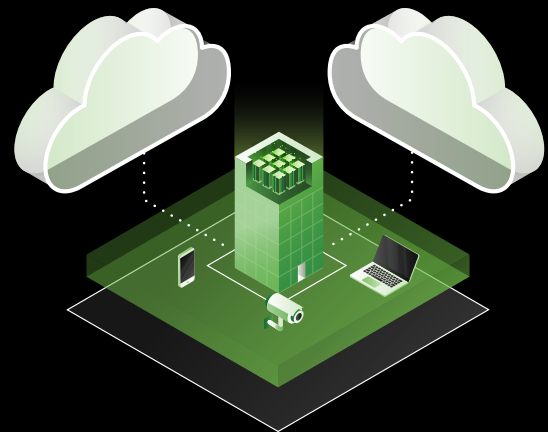
## Business Benefits of Lyve Cloud for Backup and Restore

Customers will find that Lyve Cloud fits their next wave of digital transformation, allowing their distributed data resources to map more easily to a unified data resource that spans the core, the cloud, and the edge in today's hybrid multicloud environments.

- Lyve Cloud reduces costs that are related to moving enterprise data into and out of cloud services. That means data stored in Lyve Cloud will be immediately accessible without incurring any data ingress or data egress fees from cloud service providers (CSPs).
- Lyve Cloud supports customers' hybrid-cloud and multicloud strategies. Customers can use their data without experiencing CSP vendor lock-in that would otherwise tie them to one preferred cloud via specific software tools that are only available on that cloud.
- Lyve Cloud is always-on. Data backups are available when needed without costly delays via a platform that provides industry-leading data durability and world-class security.

## EDGE ENABLEMENT & COMPUTE

Leverage the combined expertise of Seagate and Equinix®—the world's digital infrastructure company—to store and access data at the metro edge. With Platform Equinix®, you get the power of interconnections and choice of compute for your S3 workloads.



## EASE OF MANAGEMENT

Easily manage your data with an intuitive dashboard, accessible consumption metrics, and 24x7 expert support through Lyve Cloud Console.





## Key Takeaways

Given that data can be located on premises or off premises, the way backup/restores are done is increasingly important for customers who want to make more efficient use of their online and offline data resources.

Lyve Cloud supports and extends enterprise data protection strategies. It provides a single, capacity-based pricing tier with no API traffic expenses, no egress costs for moving data, and no bandwidth or network limitations or costs.

Lyve Cloud complements customers' traditional data storage approaches and has the effect of simplifying the tiered storage data that customers currently use. They can consolidate and scale backup data without any additional investments for on-premises storage. This reduces the customer's overall backup TCO and allows customers to use backup data to analyze their business and IT infrastructure holistically.

Lyve Cloud gives customers the power to analyze backup data, to grow their business, and to ensure business continuity. It provides frictionless activation in complex multicloud environments, supporting data mobility and faster analytics for enterprise data.

Customers are finding that Lyve Cloud from Seagate provides a powerful new backup and restore data-protection platform for organizations that truly understand the value of data to improve business outcomes.

## Ready to Learn More?

Visit us at [seagate.com/lyvecloud](https://seagate.com/lyvecloud)

Or [download the brochure](#)

