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## Highlights

- IBM and Panzura value
  - Solution
  - Key features
  - Panzura Freedom — Transform the complex and costly traditional storage model to the cloud
  - Take the next step
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## Benefits:

- Scale to greater-than-exabyte capacity in a single file namespace
  - Gain the economics of cloud with enterprise class performance
  - Use military grade security architecture
  - Ensure reliability and availability that can be greater than traditional NAS
  - Deploy based on your preference for public, private or hybrid cloud
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# IBM Cloud Object Storage and Panzura Freedom

*File access to object data with economics, scalability and durability of private or public cloud storage*

The digitization of the enterprise is putting tremendous pressure on the traditional storage model. The rapid growth of unstructured data represents a significant challenge for most enterprises today. In an environment of restricted or restrained IT budgets, providing sufficient storage capacity and managing it effectively is a difficult and sometimes crippling task.

Do you find that expensive on-premises storage hardware, tight security and availability requirements, remote office locations and mobile employees are creating complex technology challenges? How can you transition traditional IT storage and users who rely on existing resources to a cloud or hybrid solution that is flexible, scalable and simpler to use and manage?

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## IBM and Panzura with a smarter NAS storage model

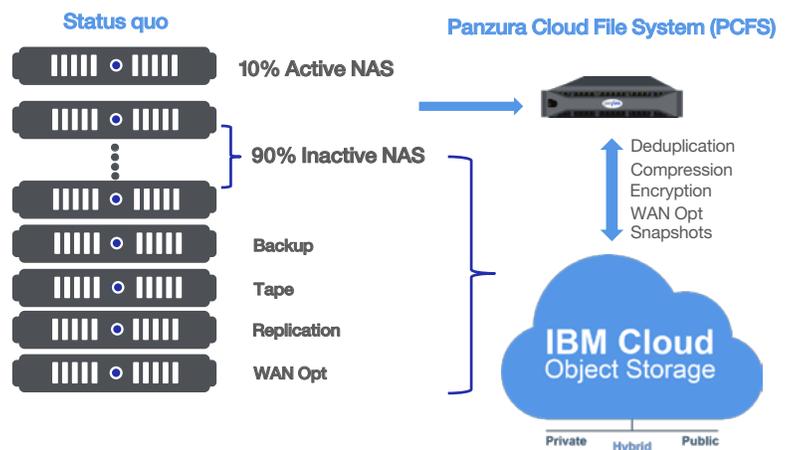


Figure 1: Before and after with Panzura and IBM

## IBM and Panzura value

IBM can help you resolve these challenges with the Panzura Cloud File System (PCFS). Panzura Freedom™ hybrid cloud storage helps you rapidly deploy cloud-based file services with IBM® Cloud Object Storage. PCFS provides global NFS and SMB/CIFS access with Cloud Object Storage that you can use to store, manage and protect all unstructured data. The Panzura Freedom family provides a secure end to end encrypted hybrid cloud storage solution with intelligent caching, deduplication, compression, snapshots and global byte range file locking that is trusted by government agencies.

## Solution

### Choose the Panzura features you need

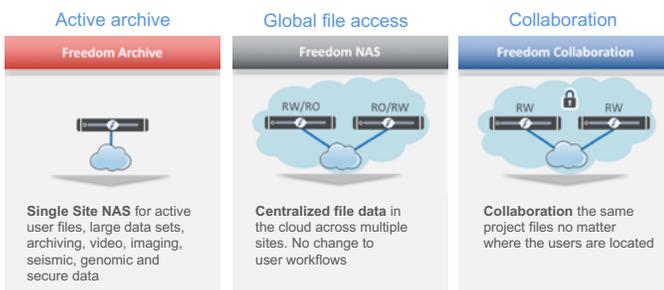


Figure 2: Panzura use cases

## Panzura Freedom Collaboration

The combination of IBM Cloud Object Storage and Panzura Freedom Collaboration™ provides unprecedented performance and scale for the distributed workforce. Patented Panzura Distributed File Locking™ supports locking down to the byte-range level to enable users from different offices to be working in the same file at the same time without data corruption or file versioning. Updates are made in real time so every user always has access to the current version. Users no longer have to reconcile different versions of the same file. Panzura Freedom Collaboration and IBM Cloud Object Storage are powered by the leading scale out distributed file system specifically designed for the cloud. Performance issues that normally plague access to data in the cloud are limited with Panzura technology and across a range of workloads, delivering maximum performance for every application.

## Panzura Freedom NAS

IBM and Panzura offer all the features of an enterprise file system with the economics scalability and simplicity of cloud storage.

Combining Panzura Freedom NAS™ with IBM Cloud Object Storage provides improved cloud economics and local performance for data in the cloud and also assures your data is secured and protected. Panzura builds an intelligent hybrid cloud storage solution with Cloud Object Storage. It consolidates your unstructured data on cloud storage while keeping active data cached close to the users. IT staff will find it behaves like local file servers and NAS, but is based in a cloud data repository and can support hundreds of offices. It's simpler and less expensive than deploying primary storage solutions.

## Panzura Freedom Archive

Panzura Freedom Archive™ with Cloud Object Storage provides hybrid cloud storage tuned for active archive workloads delivering a superior alternative to archiving with tape or local disk. Freedom Archive integrates Cloud Object Storage seamlessly with enterprise applications requiring NFS or CIFS access with a NAS interface to object storage. Unlike traditional archiving to tape or local disk, archiving to Cloud Object Storage maintains online access to data, allowing rapid performant retrieval. Using cloud archiving dramatically improves archiving access and cost. It provides a platform that can scale up or down as needed. It never oversubscribes and eliminates the need for forward provisioning or capacity planning.

Panzura and Cloud Object Storage allow you to take advantage of unlimited cloud capacity and pay as you go economics, saving time and money by eliminating traditional archive solutions.

Ranging from a single site to a full global solution, Cloud Object Storage with an Panzura Freedom Collaboration, NAS, and Archive solutions offer ultimate flexibility in meeting an organization's unique deployment needs, along with simplifying the storage infrastructure and reducing costs.

## The Panzura and Cloud Object Storage architecture

- Multiple Panzura deployment options: single-site to many sites
- Deploys with IBM Cloud Object Storage on-premises and in IBM Cloud

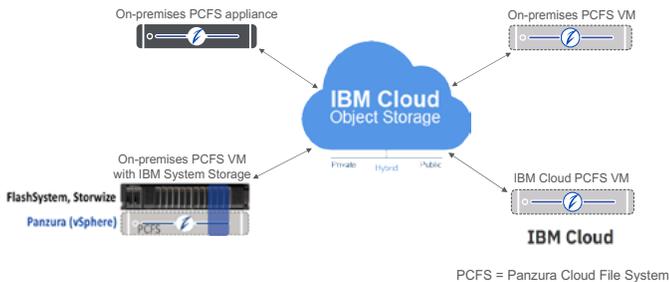


Figure 3: Panzura architecture

## Key features

Protect your storage infrastructure with IBM Cloud Object Storage and Panzura Freedom:

- Simple: Hybrid cloud enterprise class storage with flexibility of deployment.
- Highly available: Up to nine nines availability with always-on storage. Never lose access to data even in a site outage.
- Pay as you grow: Cloud scale that can start small and grow online to exabyte+ configurations.
- Global access: A robust system offering data access anywhere, at any time.

## Panzura Freedom — Transform the complex and costly traditional storage model to the cloud

With Panzura Freedom and Cloud Object Storage, you can:

- Access Cloud Object Storage using standard workstation protocols NFS/CIFS with no change to user workflows.
- Address latency issues associated with cloud storage by caching active data local to the users.
- Gain simple consistent access to the same files across global sites using the an Panzura Cloud File System and global namespace.
- Improve storage use and lower cloud storage costs with global deduplication.
- Use military grade encryption FIPS 140-2 compliant with AES-256 bit encryption, with no keys stored in the cloud ensures your data is secure.
- Eliminate need to manage snapshots on a volume or share basis using Global Snapshots; users can quickly and easily restore files without intervention.

## Delivering flexible deployment options for Cloud Object Storage

With IBM Cloud Object Storage as the backbone to this solution, you gain flexibility in your choice of deployment options. You can deploy on-premises, in the IBM cloud (dedicated or shared deployments) or in combination, which can be a hybrid solution.

## Flexible deployment options for your data

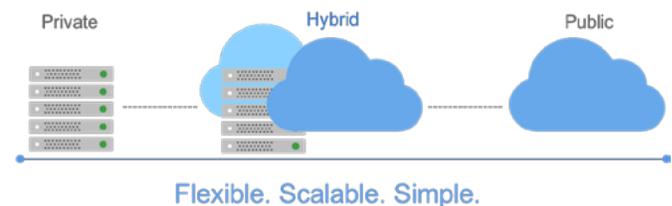


Figure 4: Flexible deployment options for the data with IBM Cloud Object Storage

## A large government agency provides global access to files and decreases costs over USD 12 million

With over 200 locations throughout the country and thousands of users, this government entity was struggling with slow file transfer speeds, inefficient storage capacity, a lack of an easy way to share files, and the absence of cost-effective data redundancy. The ability to access any files from any location and maintain an always-on environment was a key component of this solution.

By adopting IBM Cloud Object Storage and Panzura Freedom, this agency linked its globally distributed servers to a cloud object storage infrastructure. The solution helped it synchronize critical data from its local drives to the cloud in real time and provide faster and more secure access to employees across its global locations. In the event of an outage, employees can access backed-up data and content from the cloud within minutes. Now, with access to a private cloud, the organization has better access to content from virtually anywhere.

As well as reducing the risk of data loss and hard disk drive failure, IBM and Panzura helped the IT team save an estimated USD 12 million in capital and operational costs. This solution also freed budget, and made it much easier to scale capacity in remote locations, helping this agency focus on more strategic tasks and provide better access to data for its users.

## Take the next step

Contact your IBM sales representative or authorized reseller to learn more about how the IBM and Panzura solution can benefit your organization.

Also see our solutions on the IBM solutions pages at [ibm.com/cloud-computing/bluemix/cloud-object-storage-solutions](http://ibm.com/cloud-computing/bluemix/cloud-object-storage-solutions).

## Panzura

Panzura is a market leader in managing unstructured data in the cloud. Panzura Freedom, an intelligent hybrid cloud storage platform, represents a breakthrough in managing the explosive growth in unstructured data, delivering data center performance with the economic scalability and durability of the cloud. The PCFS underpins a Panzura Freedom solution and incorporates intelligent file services backed by 26 patents. Using Panzura, enterprises shift from a traditional storage environment as they consolidate and simplify their storage into the cloud.

Visit [www.panzura.com](http://www.panzura.com) for further information.

## IBM Cloud Object Storage

IBM Cloud Object Storage provides the flexibility, scalability and simplicity needed to store, manage and access today's rapidly growing volumes of unstructured data in a hybrid cloud environment. IBM solutions transform storage challenges into business advantage by reducing storage costs while reliably supporting both traditional and emerging cloud-born workloads for enterprise mobile, social, analytics and cognitive computing.

IBM Cloud Object Storage is built on technology from an object storage leader, Cleversafe®, which was acquired by IBM in 2015. Some of the world's largest repositories rely on IBM Cloud Object Storage. To learn more about IBM Cloud Object Storage, visit: [ibm.com/cloud-computing/products/storage/object-storage](http://ibm.com/cloud-computing/products/storage/object-storage).

## IBM

IBM storage and cloud solutions support the data infrastructure needed to efficiently capture, deliver, manage and protect data with superior performance and economics. Optimizing data storage with IBM helps your business access the right data at the right time, providing the data foundation to propel your organization into the cognitive era with confidence.



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