

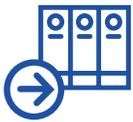
## Panzura Freedom Family™

Combine the economics, durability, and scalability of cloud storage with the performance of flash to solve the challenges of unstructured data growth

The Panzura Freedom Family enables organizations to implement cloud-first initiatives and solve the challenges of unstructured data growth by transforming the complex and expensive traditional storage model to the cloud. The Freedom Family delivers unprecedented performance and scale across all unstructured data workloads. Capable of being deployed across different platforms and on any cloud, the Freedom Family revolutionizes how data is stored, managed, and protected to save organizations up to 70% over traditional storage while increasing productivity and durability.

### Highlights

- **Breakthrough technology with unprecedented performance and scale**
- **Fast, granular snapshot restore at the file system, folder, and file level**
- **Broadest flexibility of deployment on any platform and any cloud**
- **Unmatched data protection designed for the cloud**



### Panzura Freedom Archive

Replace complex NAS systems with a single Freedom instance to reduce or eliminate complex backup and DR processes. You get the unlimited scale and always-on durability of cloud storage, with the performance of local flash storage. IT enjoys simplified processes with reduced costs.



### Panzura Freedom NAS

Consolidate data centers and eliminate islands of storage with Panzura Freedom NAS. Collapse NAS systems across multiple data centers to the cloud and simplify management while reducing costs. Eliminate the costly private network connections and cumbersome replication software of existing, physically separated NAS systems and consolidate all your data to the cloud, while delivering local flash performance for all users.



### Panzura Freedom Collaboration

Enable global users to work together as if they are in the same room with the unique, global distributed file locking of Freedom Collaboration. Only Panzura can offer a globally distributed workforce the ability to work on different parts of the same file, with distributed file locking down to the byte range. This means users can interact on the same file without data corruption.

## The Traditional Model

The exponential growth rate of unstructured data, such as documents, audio and video, creative, Product Lifecycle Management (PLM), CAD/CAM, and machine generated files, has created an overwhelming burden on IT. Managing and using the traditional, on-premise storage model, along with the associated backup and archive, replication, networking, and management is no longer sustainable. The volume of data being created and stored is simply too large, and continuing to use this model will drive CAPEX and OPEX costs beyond control. To try to solve this challenge, many organizations have launched cloud-first initiatives, yet this just shifts the challenge from one of scalability and cost to one of performance and management.

## The Cloud Challenge

For decades business applications have been written to take advantage of the NFS and SMB/CIFS protocols. Applications that use these protocols cannot be easily moved to cloud object storage without significant disruption to standard business processes. Further, while object storage is architected to offer virtually unlimited capacity and scale, the tradeoff is that it offers lower performance than local NAS systems. When combined with the latency that occurs as a result of using remotely located data storage the result is a solution that simply does not meet the needs of enterprises.

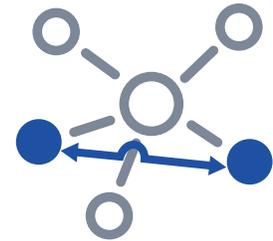
To be a viable storage solution, existing workflows and performance must be maintained or users will revolt. The Panzura Freedom Family solves these challenges with a best of both worlds solution that delivers the performance and compatibility of on premise storage with all the benefits of the cloud.



## Unprecedented Performance and Scale

The Panzura Freedom Family solves the performance problems of the cloud through intelligent caching that stores critical files locally on high performance flash media. As a result, applications experience the same or better performance than local filers can provide. Advanced algorithms monitor both the frequency and recency of data use to cache the most important data for local users. The ability to pin data to cache keeps administrators in absolute control of their data to ensure every user can always get the performance they need, when they need it.

Still, it is not sufficient to simply deliver storage that is capable of high performance. That performance must be maintained consistently over time and under load. To meet this challenge, the Freedom Family is designed to deliver a Quality of Service for workloads. This ensures that as additional users and workloads come online, administrators can monitor, manage, and ensure that critical applications always get the right level of performance. As workloads increase, Freedom Family filers can deliver unprecedented performance and scale to meet application and user demands in both physical and virtual environments.



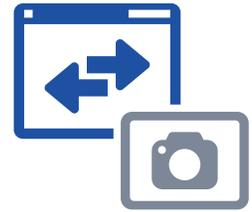
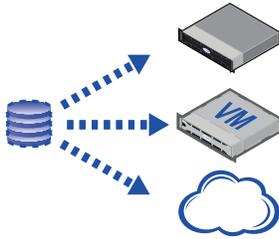
## Expanded Data Center Workloads

The Panzura Freedom Family is uniquely designed to support the latest versions of both the NFS and SMB protocols, while delivering maximum performance for each. Where some solutions focus on accelerating either NFS or the SMB/CIFS protocol, only Panzura can offer maximum performance for both protocols. The Freedom Family seamlessly supports applications that use the latest versions of both protocols without disruption to the organization. In addition to traditional CIFS file sharing, high performance NFS expands coverage for engineering, simulation, imaging, and software development applications. Advanced services such as NVRAM acceleration and intelligent caching, along with patented Panzura SmartCache™ technology, ensure the highest possible performance, across every unstructured data workload.

*Save up to 70%  
by using Panzura  
Freedom to transition  
your storage infrastructure  
to the cloud.*

### Key Capabilities

- Primary NAS storage
- Automated backup
- Cloud data protection
- Global deduplication and compression
- Data archival



## Any Platform, Any Cloud

Panzura gives IT administrators the flexibility to implement the right platform for each site in the enterprise, based on the needs of the organization. Choose from any combination of physical filers, virtual filers running in your ESXi environment, or in-cloud deployment as an Amazon Machine Instance (AMI) or Azure Virtual Hard Disk (VHD).

Panzura keeps you in control of your data with the freedom to use the public or private cloud of your choice. Panzura fully supports any cloud provider that uses object storage including AWS, Azure, Google, Dell EMC, Virtustream, AT&T, IBM Softlayer, and more. Should you need to migrate from one cloud provider to another, the Freedom Family can enable you to do so, completely in the background, without ever impacting users.

Other vendors may try to resell space to you in their cloud account, arguing that it is an easier solution, but this could have disastrous consequences. If data is stored in that provider's account and something should happen to that provider, you will lose your data. The cloud provider will not recognize it as your data and you will not be able to recover it. Panzura always keeps your data where it belongs - in your account and under your control.

## Automated, Centralized Management

The advanced Freedom Family GUI provides a centralized, global view of your entire distributed environment with no single point of failure. A powerful wizard guides administrators through the setup and management process for an installation process that takes only minutes. An intuitive, customizable dashboard provides highly detailed, real-time reporting on your storage environment. Administrators can manage, monitor, and perform upgrades on every Freedom Filer in their environment at once. Through a priority alert center, automated email alerts and health checks can be configured to always keep you up to date with the status and health of your cloud environment. Administrators simplify storage management by automating tasks with a programmable REST API to always keep you in control of your environment.

## Cloud Data Protection

Performing regular data backups has long been one of the most frustrating functions in IT. Between replicated copies, full and delta copies, and archive copies, it is not uncommon for there to be from three to six copies of every piece of data. Each of these copies consumes valuable capacity, requires as much or more management than the original copy, and serves no purpose other than to replace the original should something happen to it.

Taking that burden off of IT administrators, the major cloud providers have built their infrastructure to offer up to 13 9s of durability. By leveraging the combination of multiple copies of data objects along with fully redundant data centers, they can offer levels of durability that would be completely impractical for individual companies to try and match.

The Panzura Freedom Family builds upon cloud durability with advanced data protection and snapshot technology that never impacts performance. Data is protected through snapshots for fast, granular restoration to a known good point in time from the volume, folder, or even individual file level. When combined with the high durability of the cloud, which can be as high as 13 9s, Panzura snapshot technology can completely eliminate the need for legacy backup processes.

## Military Grade Security and Encryption

- FIPS 140-2 compliant
- Data at rest is protected by TLS encryption
- Encryption keys are never stored with the data
- Data is deduplicated before being sent

## Panzura Freedom Family

Freedom Archive	Freedom NAS	Freedom Collaboration
Eliminate backup and DR processes by consolidating data to the cloud	Consolidate data centers and eliminate islands of storage	Enable globally distributed users to work as if they were in the same room
Automated backup with granular recovery and near zero RPO	Automated backup with granular recovery and near zero RPO	Automated backup with granular recovery and near zero RPO
Intelligent caching	Intelligent caching	Intelligent caching
Deduplication and compression	Global deduplication and compression	Global deduplication and compression
Snapshots	Snapshots	Global Snapshots
FIPS 140-2 compliant with AES-256 bit encryption	FIPS 140-2 compliant with AES-256 bit encryption	FIPS 140-2 compliant with AES-256 bit encryption
Database and VMDK archiving	All tiers of storage in one	All tiers of storage in one
Offsite data protection	Global namespace	Global namespace
	Extended access control lists	Extended access control lists
		Global metadata
		File integrity everywhere
		Distributed file and element locking
		Fast sync for large files