PANZURA

Comparing Panzura to NetApp

At Panzura, we're a solution for enterprise-scale organizations frustrated by lack of security, visibility, and control into data. We de-risk your data challenges by helping you know where your data is, how it's growing, who is accessing it, how secure it is and how it's being used.

In this comparison, we take a look at complete cloud data management capabilities, how they work with each solution, and how the differences affect the way you can expect to operate.

PANZURA

The NetApp services compared here are Global File Cache, Fabric Pool and Cloud Tiering.

Strong capability	✔
No capability	✘
Limited capability	▬

Feature	Panzura	NetApp	What it Means for You
Cloud Data Management			
Global Centralized Management	✔	▬	Panzura provides a centralized multi-cloud management view. Solution and use case depending, NetApp may require several different management tools to achieve global centralized management.
Global Data Services	✔	▬	Panzura Data Services is a complete cloud data monitoring and management platform. Holistic data governance provides actionable insights into every aspect of how data is being used, and includes ransomware monitoring, and smart provisioning. Deep search and environmental analytics drive admin productivity and simplify data management. NetApp offers tools to monitor clusters/cloud storage information but doesn't inherently give the ability to globally search, audit and configure alerts for files and users.
Cloud Data Protection and Security			
Active Global Disaster Recovery Architecture	✔	▬	Each Panzura node is a full active disaster recovery site, offering business continuity with sub-minute RPO. By contrast, if one NetApp GFC appliance goes down, active data not serially synced to the cloud is lost – it cannot be accessed or recovered from another location.*
Global and Local High-Availability	✔	▬	Panzura provides dedicated global and local high availability options on virtual machines. Cloud mirroring will automatically failover to a redundant cloud storage provider in the case of a failure of the primary provider, without disrupting any front-end file services. With NetApp, a cold standby can provide HA for their global file system. If the cloud goes down entirely, the file system edge nodes can't collaborate and data not synced to the cloud could be corrupted.*
Global Ransomware Resiliency	✔	▬	Panzura data writes are immutable, preventing data corruption and delivering ransomware resiliency with global sub-min RPO. NetApp has a ransom resiliency strategy using many tools* for detection of abnormal snapshots copies, volume growth rates and loss of storage efficiencies. Recovery time depends on the number of volume-based snapshots.

PANZURA

Feature	Panzura	NetApp	What it Means for You
Global Granular Read-only Snapshots	✓	—	Panzura's unlimited global read-only snapshots can be configured hourly, daily, weekly, monthly and yearly. Each has an independent retention policy, so files, folders or the whole file system can quickly be restored to a given point in time. NetApp's read-only snapshots are volume-, not global file system-based. NetApp manual warns these immutable snapshots can be deleted, and that configuring frequent snapshots requires considerable resource consumption and degraded performance. NetApp does not cache metadata for snapshot directories, causing navigation and listing of those directories to be slow.
Air-Gapped Solution Support	✓	—	Panzura supports dark site architecture - no inbound or outbound connections to/from the domain. NetApp doesn't inherently support air-gapped solution.
Military Grade Security	✓	—	Panzura's military grade AES-256-CBC encryption for data at rest and TLS v1.2 for data in flight prevents third-party and malicious actors from accessing your data. The solution is FIPS 140-2 certified. Secure Erase makes it possible to delete a file or folder so that the contents cannot be restored, even using the most advanced technology available. NetApp's GFC supports SSL for data-in-flight, volume based encryption (NVE) and BitLocker, while Fabric Pool support TLS and NVE. FIPS-140-2 hardware is available at a premium NetApp offers secured disk erasure.

Cloud Data Performance

Feature	Panzura	NetApp	What it Means for You
Global Performance Optimizations	✓	—	Panzura performance optimizations include separating the metadata from data, compression and deduplication, multi-level snapshots, parallel streaming to the cloud, (no need for additional WAN accelerators) and intelligent tiered read caching and prefetching (automatic data movement based on user behavior analytics). NetApp provides compression and deduplication but lacks the full metadata catalog at the cloud-edge that enables intelligent cache/prefetching for fast file access and fast global file collaboration. The file system and Fabric Pool can tier cold data to the cloud and object store, but limitations exist in certain use cases where data writes to an S3 compatible object storage, will be permanently read there.
Accelerated Parallel Streaming	✓	✗	Panzura performs block level translation to object that accelerates parallel streams to the cloud, instead of a serial SMB/NFS stream. NetApp lacks parallel streaming for fast cloud-edge access. Achieving this requires a WAN accelerator or cloud VDI solution to speed up user access file sharing.

PANZURA

Feature	Panzura	NetApp	What it Means for You
Real-time Global Data Consistency	✔	—	Panzura's simultaneous 60-second data syncs to the cloud object store, and full metadata catalog at each node facilitating global file locking with peer-to-peer real time exchanges of new and changed data, result in immediate global data consistency for all nodes. This significantly reduces data risk. NetApp can provide data center data consistency within the cluster only.
Global Scalability	✔	—	Panzura scales globally without impacting immediate global data consistency for existing or future users at any site. NetApp's Global File Cache details maximum limits for total and concurrent edge users, and recommends 50% of those limits to avoid performance issues.
Hyperconverged Persistent Block Storage	✔	✔	Panzura's Cloud Block Store is an infinitely scalable, high performance persistent volume for containers and read-cache for cloud native deployments. NetApp provides Astra for cloud bursting container-based workloads (requires Astra Data Store, Astra Trident, Astra Control Center, Astra Control Services).

Cloud Data Intelligence

Feature	Panzura	NetApp	What it Means for You
Global Search and Audit	✔	—	Panzura Data Services finds any file with a powerful and lightning-fast search portal that reaches across your entire cloud network and integrates seamlessly with CloudFS, as well as other file sources such as NetApp or Isilon. NetApp provides the ability for search and audit but requires a number of apps to accomplish it.
Global Intelligent Tiering and Prefetching	✔	—	Panzura's SmartCache intelligently tracks and tiers hot, warm, and cold file block structures for faster file access. Auto pre-population automatically prefetches and pre-caches files based on ownership changes between nodes in a CloudFS to provide the fastest global collaboration. NetApp uses 3 different tools for tiering and lacks full metadata catalog at the edge that enables intelligent cache/prefetching and global file collaboration for fast file access.
Global Real-time Collaboration	✔	—	Panzura's global file and byte-range locking automatically locks and releases in real-time, allowing geographically distributed users to work collaboratively, without overwriting each other or creating multiple file versions. NetApp GFC centralizes the locks in the cloud. This creates a single point of failure and performance is subject to latency.
Cloud-Native Microservices Enablement	✔	✔	Panzura Data Services turns unintelligible data strings into an easy-to-follow audit history for every single file, inherently enabling cloud-native artificial intelligence, and machine learning services to extract unstructured data for analytics and reports. NetApp uses additional API coded with cloud-Native microservices to allow microservices to directly access object storage.

Feature	Panzura	NetApp	What it Means for You
Multi-Cloud Functionality			
Multi-Cloud Interoperability and Mirroring	✔	—	Panzura is interoperable with many cloud object store providers, both on-premises and in the cloud. As organizations increasingly employ multiple clouds for storage, cloud mirroring helps by eliminating dependency on any one vendor. NetApp is interoperable with many cloud object storage providers but lacks the functionality to replicate the complete file system to another cloud region.
Cloud Data Accessibility and Efficiency			
In-Line Compression	✔	—	Panzura CloudFS uses a lossless compression algorithm to break each file into 128kb blocks – the most granular possible level. Each block is compressed in-line, in memory, as it's created. NetApp allows users to manually configure volume inline or post-process compression. Some volumes can be left uncompressed.
Global Deduplication	✔	—	Panzura's interconnected global file system stops block-level duplication before data gets synced to the object store. Since only unique blocks across all sites are preserved by the file system, data is deduplicated at the 128kb block level before it is ever stored. NetApp deduplicates at the volume level, leaving it possible for the same file to exist in multiple volumes.
Global Namespace	✔	—	Panzura CloudFS is a true global filesystem, using a global namespace without the need to configure volumes, or restructure data to separate it into volumes. NetApp GFC also provides a single namespace, while Cloud Volumes ONTap and Cloud Volume Services use legacy based volume management. Volumes are either local or shared.

This comparison has been compiled using the most up-to-date administration guide and architectural documentation available. Every effort has been made to ensure its accuracy, and it was last updated at the date shown below left.

This document is intended to provide a practical guide to key differences in approach, that affect the way that both solutions work in the real world, from making data available, to making it secure and easy to manage.

We trust you'll find it useful.