PANZURA

DATASHEET

Panzura CloudFS

The global cloud file system for modern data management challenges.

Improve storage cost structures, simplify unstructured data management, enable local-feeling file sharing performance, and add a vital layer of security with Panzura CloudFS.

Panzura® CloudFS™ is a global file system purpose-built to meet the challenges of modern data management. It transforms complex, multicomponent, and often multi-vendor environments into a singular, scalable, and efficient approach to data management. CloudFS provides a single authoritative dataset held in cloud object storage, enabling immediate global data consistency and local-feeling file performance across all locations. With CloudFS, data from all legacy storage instances is consolidated, de-duped and compressed, significantly reducing the overall unstructured data footprint. In that way it addresses cost reduction, risk mitigation, and operational complexity. And because CloudFS data is immutable, the business benefits from an added layer of resilience and security.

Why CloudFS Matters

According to a recent article in TDWI, the continued explosion of unstructured data, along with the prevalence of unstructured data storage on Network-Attached Storage (NAS) systems, amplifies the central data challenge facing modern businesses:

- How to get more value from data, especially data needed for AI/ML-driven innovation, while
- Optimizing storage costs and managing secure, productive file access.

CloudFS offers a proven answer to this challenge, and is game-changing for infrastructure and operations (I&O), data management, and IT security teams. With data durability without replication and granular point-in-time restores for resilience against ransomware, CloudFS not only replaces NAS systems, but associated backup and offsite data recovery processes and storage.
It also provides a single pane of glass for searching and monitoring the entire file network.

Panzura CloudFS radically improves storage cost structures, simplifies unstructured data management, and enables local-feeling file sharing performance anytime, anywhere—all while enabling a vital added layer of security.

CloudFS Use Cases

Data management and I&O leaders are under pressure to realize more value from their organization's data, while reducing storage costs and optimizing workloads for the cloud. For those leaders and their teams, there are four major use cases where CloudFS is transformative.

Use Case 1

Optimizing and rationalizing data center storage and operations.

CloudFS, the heart of the Panzura Platform, helps optimize your approach to unstructured data. Its immutable data storage architecture and replicated cloud object storage cuts the need for additional BC/DR/Backup solutions while adding ransomware resilience, encryption at rest, and data life cycle support. With CloudFS, data from legacy storage instances can be consolidated, deduplicated and compressed, significantly reducing the overall unstructured data footprint.

Use Case 2

Ensuring collaboration across distributed worksites and teams is seamless and secure.

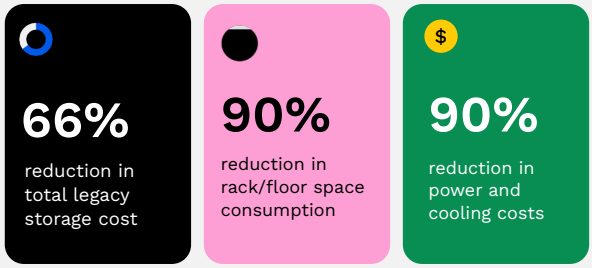
CloudFS is the only global file system with real-time data consistency across all sites. That is, any user opening a file for editing will see the most recent saved changes, regardless of where those changes were made. The CloudFS patented file locking process enables geographically distributed users to work collaboratively and securely, without overwriting each other or creating multiple file versions. And it does so with unparalleled processing efficiently.

Use Case 3

Reducing processing costs associated with data backup and storage.

Many file storage vendors claim to meet the use cases described above. Only CloudFS, with its patented approach to file management, can meet these use cases while sparing processing costs and time. How this is done is discussed in the CloudFS whitepaper found here, but simply stated CloudFS global deduplication provides significant capacity reduction and ensures that all data in the cloud is unique, thus lowering the cloud storage and network capacity required.

Typical savings with Panzura, compared to traditional architectures.



Use Case 4

Enabling significant improvements in business resilience.

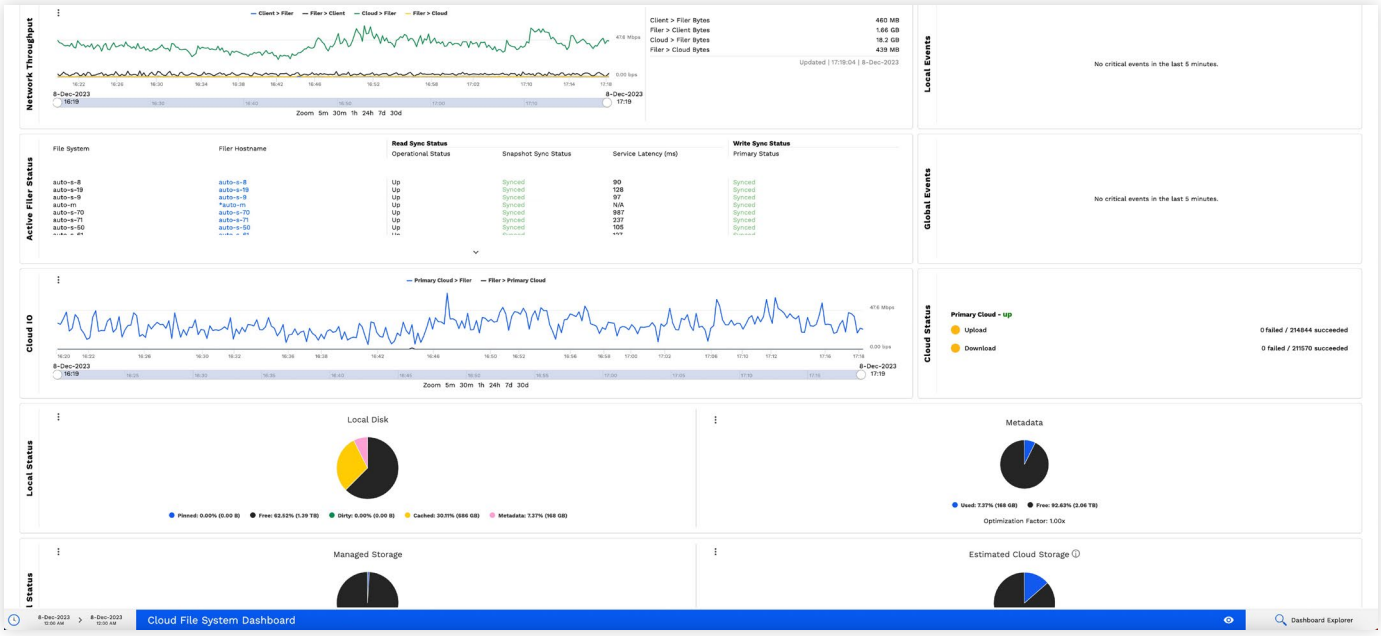
If any of the following are strategic imperatives for your organization, CloudFS offers a proven, scalable solution:

- Accelerating digital transformation while supporting distributed worksites and teams
- Moving workloads to the cloud without rewriting applications
- Reducing your dependence on any one cloud vendor
- Adding resilience against ransomware encryption

CloudFS brings the agility you need for an ever-changing future. And with the average number of monthly ransomware attacks growing 75% between the first and second halves of 2023 in the U.S., and human error a leading cause for the delivery of ransomware payloads (phishing was the most common vector, reported in 41% of incidents), ransomware is a near and present danger for every organization. Your IT security leadership will be very interested in how CloudFS improves security for unstructured data.

CloudFS Capabilities

These major features of CloudFS provide the capabilities you need to radically improve your data center cost structure and securely support data-driven collaboration and innovation.



Global deduplication for massive reductions in storage.

The CloudFS interconnected global file system stops file-level duplication before data gets synced to the object store. Unlike any other deduplication solution, CloudFS embeds the deduplication reference table in metadata, which is instantly shared among all CloudFS nodes. This removes data redundancy across all CloudFS nodes, rather than based on data seen by a single node. Thus, each node in the network benefits from data seen by all other nodes, ensuring even greater capacity reduction—all data in the cloud is unique, driving down cloud storage, and improving network capacity and costs.

Intelligent caching at the edge for local-feeling performance.

CloudFS uses a user-definable percentage of the local storage as an intelligent cache to track hot, warm, and cold file block structures as they are accessed. This form of caching dramatically increases the I/O performance of reads. It reduces cloud object storage access charges by servicing them from local cached storage rather than from external cloud storage. CloudFS also buffers against variations in cloud availability to help maintain consistent read/write response times.

Robust yet easy-to-use administrative and access controls.

CloudFS supports frontline IT, storage, and data security teams in their work with automated reporting, granular role-based access, and a seamless management experience. Policy definition, access controls, audit logs, and more have been designed to make it easy for frontline teams to manage without requiring expert intervention.

Additional capabilities

- Highly scalable 128-bit transactional object file system
- Intelligent read and write caching
- In-band file system Policy Engine
- User managed snapshots
- Extended file system ACLs
- Globally distributed file sharing and locking for SMB
- High availability
- Microsoft Active Directory integration
- Kerberos authentication
- Key Management Interoperability Protocol (KMIP) support
- Global namespace
- Scalable live global deduplication
- Multi-protocol SMB and NFS file services
- SMB load balancing
- Military grade encryption
- Unified SSD, HDD, and cloud storage
- Intelligent LAN and WAN bandwidth management
- SNMPv3 monitoring, traps, and alerting
- Online remote monitoring and support
- High speed parallelized WAN-optimized cloud I/O
- Multiple cloud topologies (public, hybrid, private)
- Real-time cloud storage diagnostics
- Full system recovery from the cloud
- Bandwidth shaping and connection tuning
- API access for management & configuration and monitoring

CloudFS Requirements and Compatibilities

CloudFS is the heart of the Panzura Platform, and requirements and compatibilities for CloudFS are:

- CloudFS requires a virtual machine host for the virtual appliance. This can be VMware, Hyper-V, Nutanix AHV, or in the cloud with AWS, Azure, or GCP.
- CloudFS integrates with Active Directory for seamless permissions and user access to data.
- One or more object stores for CloudFS files. We are compatible with almost all on-premises and cloud object storage, including NetApp, Dell EMC, IBM, Amazon Web Services S3, Azure Blob Storage, Google Cloud Storage, IBM Cloud Object Storage, Dell EMC ECS, Wasabi, Cloudian, and others.
- Panzura Edge is optional but recommended for “anytime, anywhere” access to CloudFS.

Learn more about CloudFS today

See the technical whitepaper for Panzura CloudFS here.

Request a demo of CloudFS.

- Visit panzura.com to schedule your demo, OR
- Click here to complete a form for a demo request.