Active - Active File Services with PeerGFS™

HIGH AVAILABILITY IN FOCUS: ADVANCING ACTIVE-ACTIVE FILE SERVICES

Introduction

Building systems that are resistant to disruption can be difficult, not to mention expensive. The critical nature of data means that it must remain highly available and accessible, in order to keep businesses fully operational.

System outages that relate to limited or no access to data, create the opportunity for data loss to have massive consequences across all business sectors.

For organizations the need to architect highly available Active-Active file services is mission critical, especially when the impact of these disruptions cannot be tolerated.

Today's Challenges

Today's always on world requires always on storage infrastructure. This challenge has increased in complexity and urgency as data has continued to grow at an accelerated rate. This data growth has resulted in data access and organizational workflows having to become more resilient to continue to operate.

Hosting large amounts of highly available data is challenging, and these types of challenges only increase with the need to spread data across multiple data centers and locations.

Additionally, when considering infrastructure deployments concerning availability and disaster recovery capabilities, IT leaders need to consider cost, RTO (Recovery Time Objectives) and RPO (Recovery Point Objective) criteria.

When disaster occurs, causing systems to go offline, it becomes hugely important to any organization to resume operations as fast as possible without affecting productivity and experiencing data loss.

Not only should today's systems automatically reroute users and applications when disaster occurs, but the data should be readily available as when required.

Achieving true Active-Active high availability

In many organizations, metro technologies are implemented that provide asynchronous write to dual storage systems. This approach confirms data as written, once committed to both locations, to maintain exact replicas. But these approaches bring considerable costs in terms of infrastructure, NAS hardware requirements and personnel for administration. Additionally, only one site of any metro solution will always be maintained as read / write only while the system is operational.

Cloud Gateway products aim to achieve these objectives via a consolidated hybrid approach and require unstructured data migrations into their proprietary file systems and hardware. Additionally, they are also susceptible to unpredictable Cloud costs as the amount of unstructured data surges, this starts to impact RTO and RPO objectives.
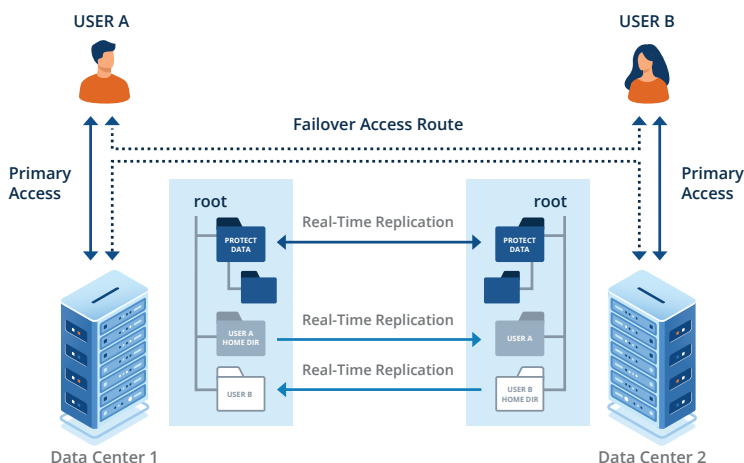
Introducing PeerGFS

PeerGFS™ is an enterprise software solution that enables customers to create a modern distributed file system across multi-site active-active NAS systems. Unlike legacy replication and data protection technologies that create active-passive systems where the passive system is only useable during an outage and failover event, active-active systems allow continuous access to systems in a distributed global way. PeerGFS™ customers benefit from high availability with automatic failover across distributed data centers with near zero RPO and RTO. With the additional benefit of facilitating failover as well as load balancing on their most business critical data.

How PeerGFS Works

▶ Synchronize file servers and/or Enterprise NAS storage systems between cloud-zones/cities or countries for disaster recovery capabilities.

▶ Combine cross-platform replication with a global Microsoft DFS-Namespace for enhanced resilience in case of failover.

▶ Synchronize two or more locations to accommodate failover and provide mobile or traveling users fast access to their user data.

▶ Promote near zero RTO and RPO capabilities, while having a usable Disaster recovery location to aim with load balancing and failover requirements.

USER A   USER B

Failover Access Route

Primary Access   Primary Access

root   Real-Time Replication   root

PROTECT DATA   PROTECT DATA

Real-Time Replication

USER A HOME DIR   USER A

USER B   Real-Time Replication   USER B HOME DIR

Data Center 1   Data Center 2

Key Features

Real-time
Replicate user profile data changes as soon as they occur - Reduce your RPO/RTO to Near-Zero.

Delta-Level Replication
Only synchronize changed blocks of a file across WAN links – reducing network congestion.

Resilience and failover
Provide Fast system failover for those users and systems that require it the most.

DFS-N
Manage and provision namespaces to create a seamless administrative experience.

Cross platform integration
Our Real-Time-Replication Engine works with all major Storage Platforms (Vendors), like Windows, NetApp, Nutanix, Dell EMC.

Cloud-backup
Native Support for Multiple Object Storage Systems (Cloud / onPrem) for additional backup.

Benefits

High Availability
Synchronize multiple data centers, or just two servers/clusters, to realize Active-Active high availability and minimize RTO and RPO.

Increased efficiency
Maximize the availability and usability of your storage platforms by no longer having to host standby expensive systems waiting to become active.

ABOUT US

Since 1993, Peer Software has developed data management solutions that address unique challenges related to data synchronization, backup, and file collaboration in multi-site (WAN) environments.

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