Disaster Proof File Storage with Centralized Branch office consolidation

About Athinio

Athinio is in the business of simplifying File-level Data Storage Infrastructure, with software-defined approach delivering data storage, protection, security, file serving and Disaster protection converged with data management and native cloud-integration as a single cloud-integrated NAS solution.

The Business Challenge

Data driven organizations of all sizes have different storage silos where they store various forms of file level storage at disparate file storage systems such as file servers, NAS heads or backup vaults. Employees located at different departments/locations create new data such as design documents, research drawings, diagrams which needs to be centrally stored and shared, protected, managed for long term data governance.

Often CIOs and IT managers struggle with data loss, missed backups, lost data tapes or disasters at sites. IT admins and users needed simpler file storage solutions that automatically protect and manage their data as its business value changes.

- Users need a distributed storage platform that will help distributed employees access store data at a central place. CIOs and IT heads need a centralized storage experience but without storing all data in one place for added data security and disaster tolerance.

- CFOs need a reduced Capex and lower Opex, by reducing the purchases or data storage complexity by outsourcing to a third party without outsourcing control.

- Cost-conscious CIOs now started looking for cloud-integrated file storage solutions that automatically "spill over" to public or private storage clouds but without being locked into a single cloud provider.

Multi-departmental IT environments need tools for various users to access and store data. Such tools include standard protocol level access such as CIFS (Common Internet File System) on windows environments or NFS (Network File systems) on UNIX or Linux environments. Sometimes, various departments may not be in the same LAN, and may be located on the other side of WAN connection, in which case they need easy tools to upload or retrieve files, securely. Other key features that will enable the IT team located at HQ office is to access the file storage as if a local file system, and manage it centrally, for storage migration or capacity scale out. These are pains for every business verticals such as healthcare/medical transcription partners, Technology/research companies.

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Athinio Technical Solution Brief

In order to address the Storage complexity and Disaster tolerance compliance, Athinio has come up with a solution which is unique, robust and cost effective for all kinds of data driven organizations. Athinio addresses the above business challenges using a single file storage platform which radically revolutionalize file storage paradigm from its Universal file storage platform.

The Universal file storage controller (software-only solution) is a distributed, Disaster tolerant Object storage back-end, with easier tools to access the storage for users. Athinio has several international patents pending, around cloud-integrated file storage technologies.

The various employees are located in the same or different LAN. From the same LAN, the central storage is accessible as a large local drive by drive mapping (on windows) or a file system mounting (Linux). For those who are away across a WAN, they access the files using installable software agents or through a browser. With this architecture, individuals need not do any data management and no more copies in the USBs required. All data is centrally stored, and managed by the built-in software, without needing any expensive high end storage system. Athinio platform delivers distributed data access, with centralized management while actual data is stored in a Disaster tolerant, distribute storage vaults.

All files are erasure coded, based on the reed-Solomon dispersal algorithms, and can be distributed with N: M availability redundancies or customer can host low-cost, commodity x-86 storage servers which run Athinio object storage system that can store petabytes of cold data on an active archive manner. Athinio gateway can also be configured manually, where data older than a specified period to be moved to an external disk, which can also be guided by the gateway, with a manual intervention of a support staff, when data access is needed or when data needs to be moved to the tape or external media.

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For distributed data access with centralized management, refer deployment diagram shown below:
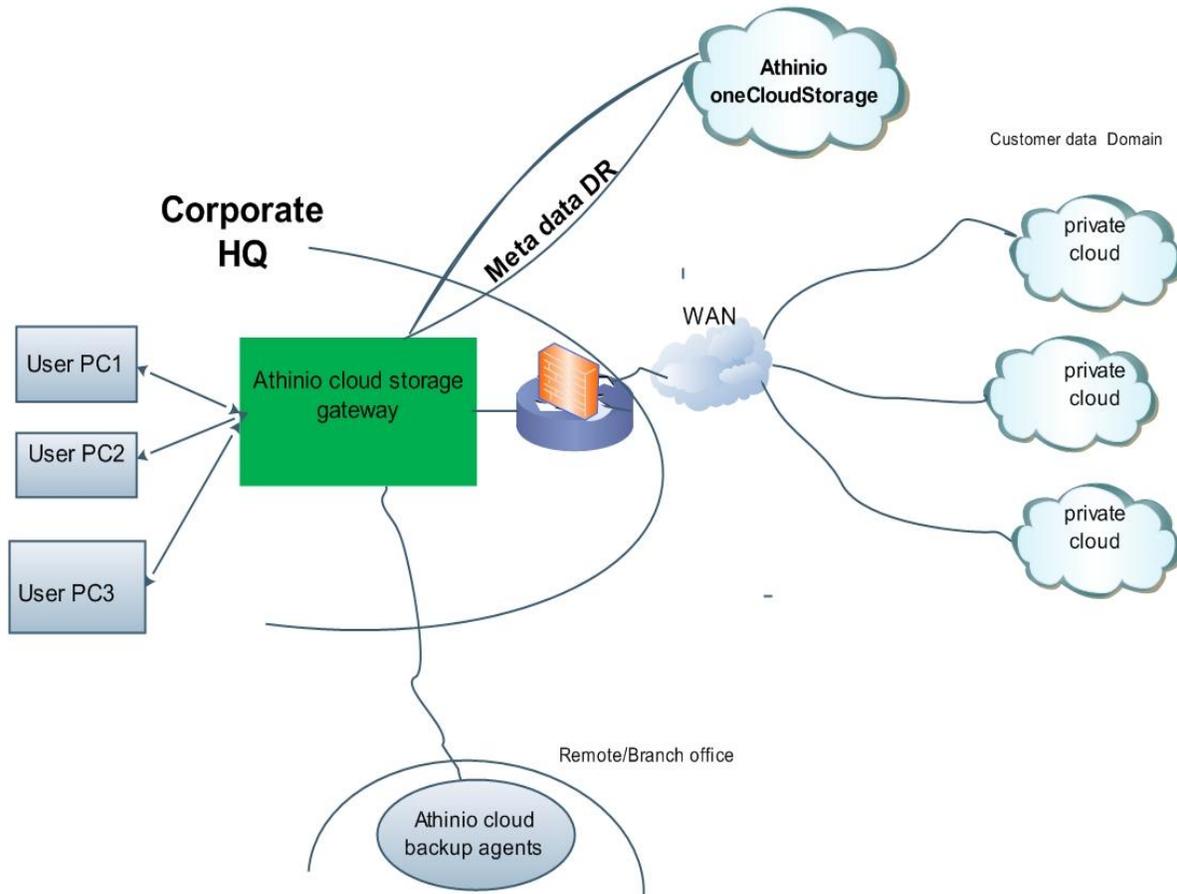
The above diagram depicts distributed data access with centralized management while actual data is stored in a Disaster tolerant, distribute storage vaults.

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Athinio Key Benefits

1) Radically simplified File storage platform needing no separate backup or off-site replication or archival of older data, as it's built-in to the file system itself. Delivers storage, data management and very secure offsite-storage-integration from a single platform.

2) Athinio storage platform has built-in CDP with replication to a DR site.(customer-owned DR sites or Athinio managed DR cloud)

3) Zero data loss, data availability-first architecture, with no single point of failure.

4) Complete investment protection to existing, expensive storage. Athinio solutions can be used as a lower-cost, primary storage for Tier 2 or older file storage. Athinio system can transparently migrate data from existing high end storage box, freeing it from older data.

5) Older Data can spill over to cloud, with un-hackable cloud (private cloud) integration with information theoretical security: Data stored in the private cloud after a key-less encryption and information dispersal. If data is hacked at a single site or two sites, reveal no information. This security cannot be broken by brute force, which is computational. Athinio security is information theoretical without key management issues.

6) Efficient replication or more than five 9s storage availability of big data.

7) Active archive or petabytes of data: Data can be accessed from the Athinio gateway, regardless of the actual location of the data (whether in the gateway itself or in the clouds).

8) Information life cycle management with onPremise-cloud storage migration. Data can be migrated from existing storage systems to Athinio or cloud, with no disruption to any applications.

9) Maximum customer options: Customer can chose a fully onPremise, hybrid cloud or a fully public cloud solution which is simple to install, deploy and use.

Conclusion

With Athinio multi-Data center storage virtualization technologies, File storage market is disrupted that brings radical simplicity and dramatically cost reductions without compromising on security and availability of the stored files. Athinio offers various software components that collect data from even captive storage that doesn't understand standard network protocols and customers will truly be fortunate to keep their digital files, regardless of the location of the data, for a longer period without worrying for hugely expensive and complex scale-out storage systems.