Athinio Storage Migraton solutions for data center consolidation /Cold storage management.

About Athinio

Athinio is a storage R&D house, in the business of simplifying File-level Data Storage Infrastructure, with software-defined approach delivering data storage migration, protection, security, file serving and DR converged with data management and native cloud-integration as a single cloud-integrated data hub.Athinio was incorporated in 2011 and has been steadily release new innovations continuously and is owned by employees by more than 85%. Athinio has long standing partners and has a strong line up of paying customers.

The Business Challenge

Around 90% of the stored data of 90 % of organizations of all sizes need storage relocations due to various reasons. Digital transformations, cloud adoptions, cloud migrations, cold data protection stratgey, data center migrations or simply it could be due to a storage refresh. Storage needs to be moved to clouds or to a new datacenter.In other cases, most of the digital assets are not accessed in the last 6 months! This is called "cold data problem". Such in-active, or data having less business value which cannot be thrown away, cannot be stored in expensive primary storage system due to TCO issues and need to be moved to a lower tier of storage such as tapes manually, to free the space for new data. Athinio storage migration suits solve both of these problems with its family of storage migration suite. Athinio offer its migration suite in two forms, P2P/V2V model and onPrem NAS to cloud model(Active Archive) which are described in the next sections.

P2P/V2V mode.

In this mode, a central GUI will have two migration gateways installed on two data centers which will contact each of source server or VM without installing any agent. (We have agent version migrating data from remote offices to migration gateway in other data management solutions which we can use, if the physical or virtual system cannot share the folder over NAS protocols.). Then each of the server will share the source data folders at drive level. Meta data will then be created at gateway, and will start syncing the files to data staging server in DC2 (refer the following diagram) through the gateway. Gateway is an NFS gateway which understand hot files, and keep on migrating the files non-disruptivel to destination staging server. If any files get modified during the migration, gateway understand that and will be moved to busy files list and will be retried again until all the data in the source have been migrated as well as new data created during migration on an every incremental fashion. Once the full data is moved, gateway in DC2 will start moving the data from the staging server to destination Vms automatically and much faster as its a simple COPY operation. Gateway 2 can also do a data vaidation and migration completion tests after the migration. Athinio p2p migration suite also understand consistent directory level backup, where in

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if any of the files in a folder at any level, gets modified, the entire directory migration is invalidated. This is particulary imperative for cases like custom database servers where a .dbf file and .idx file can be changed in any manner and application-consistent migration is vital for a successful redeployment in the destination server/VM.
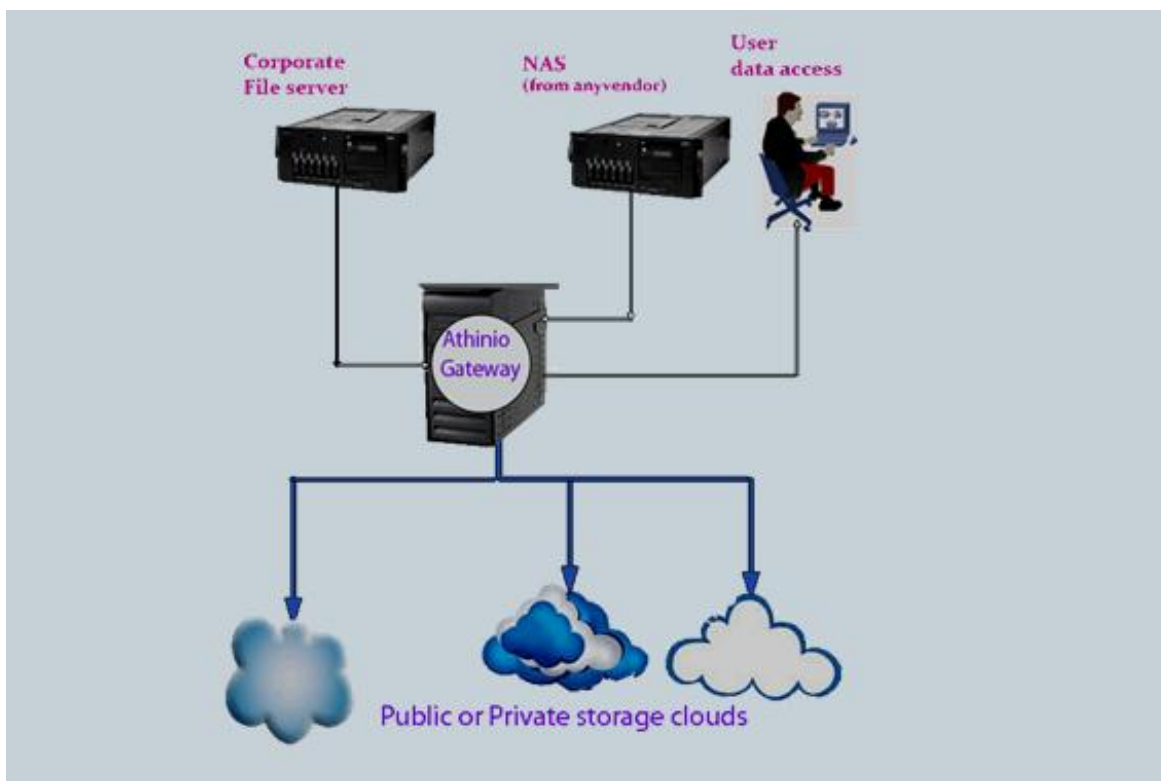
Below diagrom further illustrate the theory of Migration of Physcial or Virtual mahines across DC.
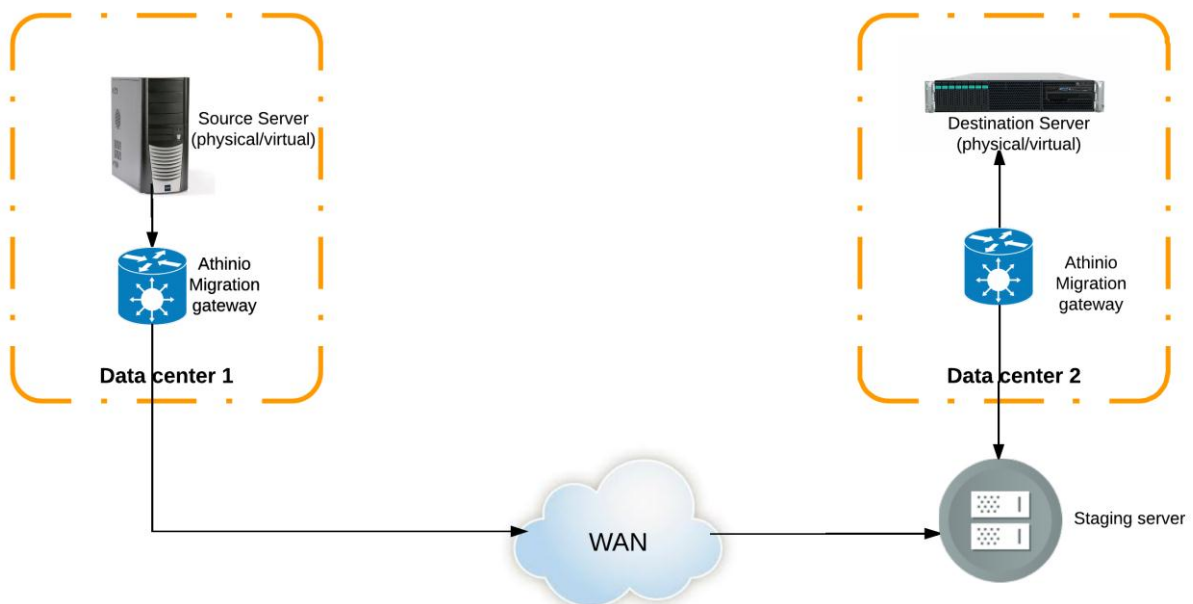
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onPremNAS to Cloud mode

For NAS to Cloud migration for cold data storage management, refer deployment diagram shown below:

The above diagram depicts NAS to Cloud migration for cold data using Athinio Gateway. Athinio gateway contacts the storage box at network storage protocol level (on a completely agent less manner) and migrate the files or simply take a backup version which are driven by the migration policies configured by the customer and moves the files in a dispersed manner across multiple storage vaults (can be private or public clouds).

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Athinio Key Benefits

1) State of the art multi-cloud data dispersal(reed solomon erasure coding) – granted US patent US9128626 delivering hack-proof, secure and vendor-independent cloud storage integration.

2) Application consistent, continuous incremental migration experience with intermediate staging servers in the destination which can also function as a local backup vault.

3) Support hot files, incremental migration and total control during the migration process.

4) Successful migration test can determine the data in destination server is fully intact and data can be migrated while destination VM is down thanks to staging servers in the destination DC.

5) In case of onPremise to cloud migration, Un-hackable cloud integration with information theoretical security: Data stored in the 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) Migrated data is available on file system access as if file was never moved at all.

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

8) Software-defined, multi-cloud storage migration: All storage and data management is fully controlled by the software, as opposed to a custom hard-ware.

9) Maximum customer options: Customer can chose a fully onPremise or a hybrid cloud solution.