DATACORE | vFilO

Distributed File and Object Storage Virtualization to Rapidly Modernize & Offload your NAS & File Servers

Ensure your best equipment is dedicated to the files that deserve it while leveraging lower cost resources for the rest

As organizations look to simplify and modernize their complex storage environments, they are challenged by distinguishing between files whose importance demands extra protection and blazingly fast access from the others. Some approaches involve reserving space on the most powerful NAS appliances for critical folders and spreading everything else on file servers where there's still enough room. That's a reasonable approach until you realize how much unimportant material accumulates in these folders just because their content is somewhat related. And then, what happens to these once-critical files when they lose their importance?

Short answer: probably nothing. Once a folder or directory is assigned to a particular NAS/Filer, all of its files remain there for the foreseeable future. And so, the effort and cost to store, replicate, and back up their contents continues until someone decides to archive them, never to be seen again. The result: the capacity of costly NAS appliances is prematurely exhausted and the systems get bogged down.

WHY VFILO SDS?

vFilO™ software-defined storage (SDS) is a next-generation distributed file and object storage virtualization software which provides unprecedented visibility and control over widely-scattered data spread across NAS, file servers, and object stores through a multi-site, keyword-searchable global namespace. It continuously migrates, load balances and safeguards data among on-premises and cloud storage tiers using ML and arbitrage modeling to optimize for cost, performance, capacity, availability and compliance to achieve your individual business objectives.

WHY FILE STORAGE & DATA PROTECTION NEED TO ALIGN WITH BUSINESS VALUE

It is rarely the case that your files are treated according to their business relevance for a variety of practical reasons. Foremost among them is the amount of manual effort and discipline required to continuously adjust and tune data placement as its relative importance changes over time. This problem is further complicated when many independent groups, business units or projects competing for resources can't agree on what constitutes high priority. They all want it fast and well safeguarded, yet accommodating any one of them results in complaints from the others. However, with vFilO, organizations are able to permanently align the way they treat their data with its business relevance.

vFilO's next-generation functionality is facilitated by first detaching the descriptors, properties and permissions of files from where the file contents are housed. In other words, the data about the data (metadata) is kept and managed separately as these parameters presumably change during the lifetime of each file.

Having a uniform access point, also known as a global namespace, enables all users to simply find, access and collaborate on those files, regardless of where they are physically located (on-premises or offsite in the cloud), the protocol used to access them (e.g. NFS or SMB), and the type of physical storage (e.g. NAS, object, SAN).

Pairing a global namespace with appropriate metadata and the automation to dynamically select between

vFilO Next-generation NAS & File Server Functionality:

- Classifies the relative value of a file at a given point in time with respect to the level of performance and data protection expected.

- Automates the adjustment of data protection, performance, and cost characteristics of a file as its value changes over time.

- Separates how one accesses files from where they happen to be stored at the time, or by the level of services they receive through a global namespace.

- Provides an ongoing assessment of the storage resources best suited to fulfill business objectives for responsiveness, availability, compliance, and cost.

- Enables a non-disruptive means of assimilating existing NAS and file servers and then migrating their data when equipment is taken out of service and new technology is substituted in its place.

different storage resources with different SLAs allows you to align your data exactly to your business needs and enables granular data treatment at the file level. Additionally, with vFilO software-defined storage (SDS) solution for file- and object-based data, you can easily apply these principles to each of your file shares, regardless of the equipment they are stored on and how they are currently accessed.

ALIGN YOUR FILE TREATMENT WITH BUSINESS VALUE IN THREE EASY STEPS

STEP 1 **Let vFilO take inventory of what's active and what's not.**
On average, more than 70% of the files haven't been touched in a long time.

STEP 2 **Designate which lower cost storage inactive data should be actively archived to.**
Could be public cloud or on-prem object storage.

STEP 3 **Give vFilO some hints for classifying the value and treatment files should get.**
Based on attributes such as aging, size, ownership, file type.
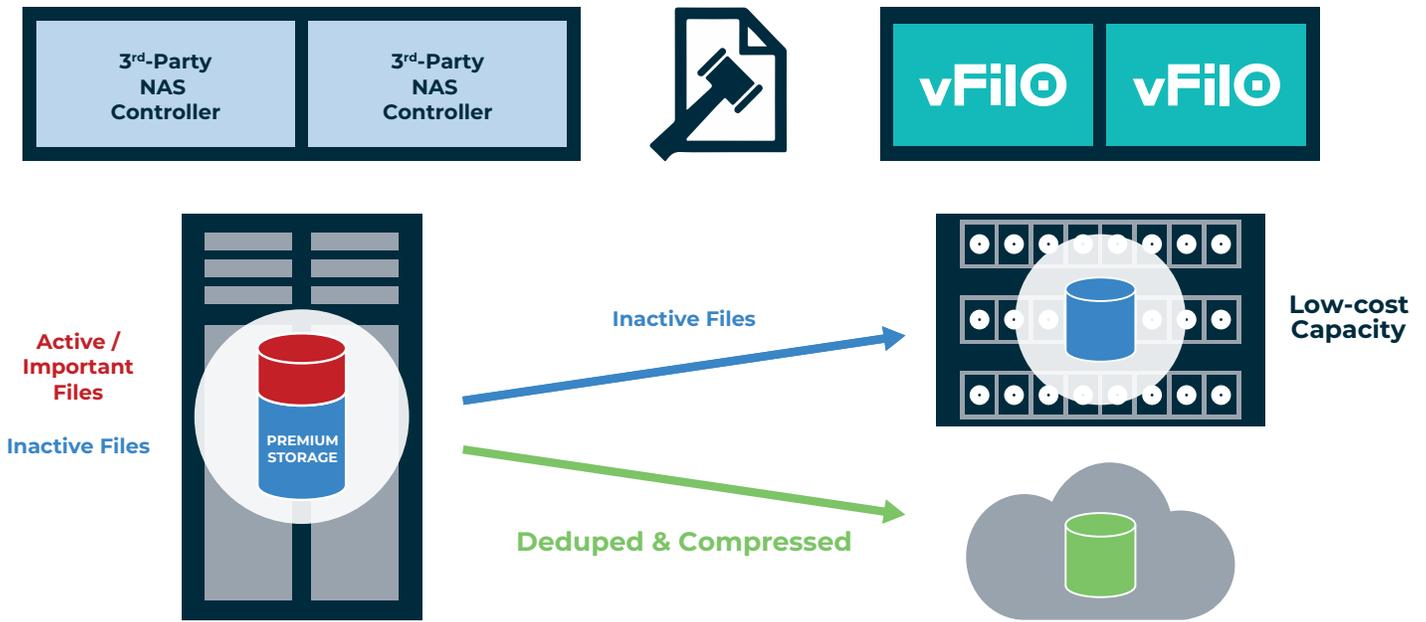
HOW VFILO WORKS

First, the software gathers an inventory of all your files – the scan takes just a few minutes. It then discovers the capabilities of your individual storage resources at your existing locations, both on-premises and in the cloud, by hints you give it, and by analyzing real-time response. During that assimilation, your data in these files will not be touched and they are still accessible from their sources unchanged. This way, a complete catalog of metadata is created about all of your files and objects.

Of course, these also contain the access information, last change date and the like for each individual file. Furthermore, the metadata can also be enriched with additional information like, but not limited to, compliance regulations. Consequently, it is possible to differentiate the business relevance for each file and to take this into account when applying data services to that file, such as replication, snapshots, and recovery policies.

All assimilated files are accessible to the users and applications via the global namespace with the proper permissions granted at the file level. This has the huge advantage that users no longer have to know the exact location of the files / objects because they can now search for all "their" files. Collaboration between multiple people on a file also takes on new dimensions with this approach, as technical limitations (such as access protocol incompatibility, e.g. NFS and SMB) are no longer restrictive.

In addition, vFilO brings a rich and unique set of high-end data services, including automatic copy creation, snapshots, intelligent data placement, load balancing, data migrations on the fly, recovering accidentally deleted files, and more. Based on these data services, the files can be migrated when necessary to the storage resources which best fit your definition of its business value.

* Coming soon
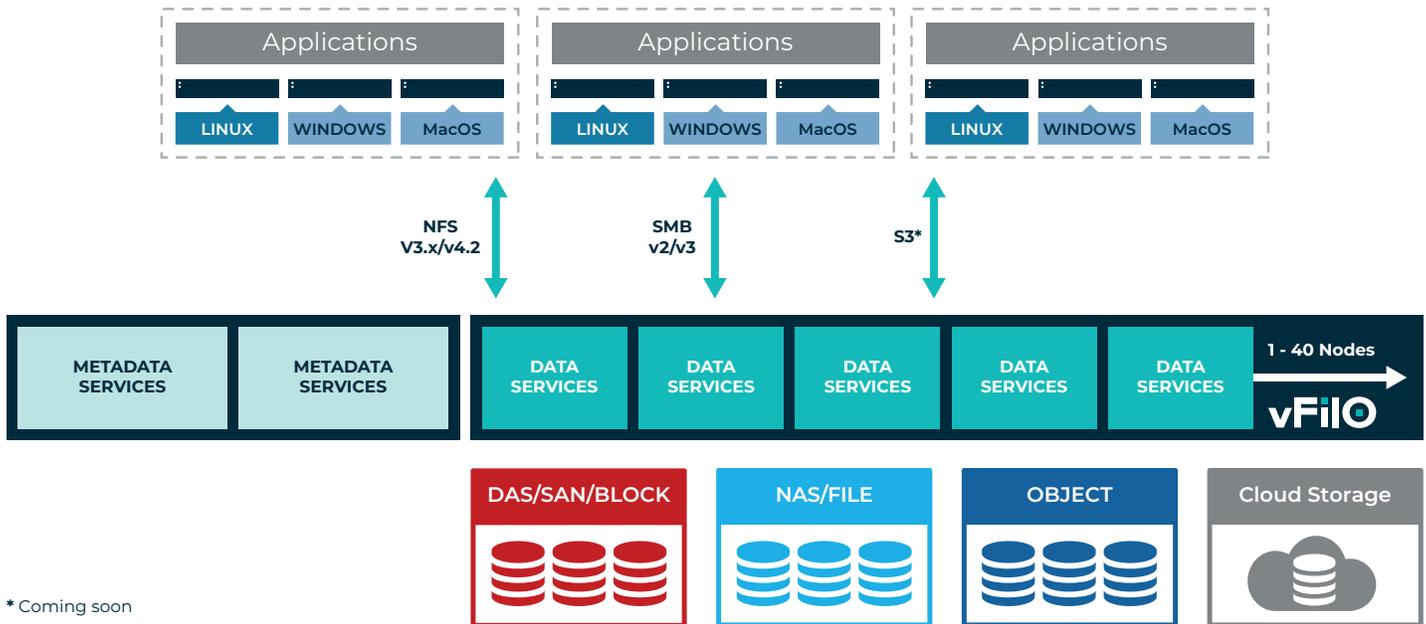
Users can also leverage low-cost, elastic cloud capacity to supplement their existing storage space. Less relevant files can be migrated to the cloud, get de-duplicated and compressed, yet remain fully accessible. Security in the cloud is enhanced with automatic data-at-rest encryption. A further option is to simply scale your resources – supplement existing high-end NAS appliances with lower costs storage alternatives on JBODs and high capacity object stores.

The file level granularity also allows you to choose which files should or should not be under the control of vFilO software. For example, you could exclude file shares from a NAS that form the datastores for your VMware environment, leaving the remaining unstructured data directly accessible by users and applications to vFilO. After the unstructured data are aligned to your business needs, your transactional services also experience tremendous performance improvements because your high-end NAS will be offloaded from lower priority files and can respond faster.

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