

Fast backup with flexible recovery for unstructured NAS data

Challenges of NAS backup and unstructured data

The world of network attached storage (NAS) has changed over the years. One of the things that has changed is the scalability that you can now achieve through your production NAS devices by exposing network file share (NFS) or server message block (SMB) protocols for these workloads. As such, unstructured data is currently measured in petabytes and continues to grow exponentially.

Today, NAS is used much more widely including in applications, large unstructured data sets and virtualization.

Unstructured data is the data that we create as users every day. This includes documents, presentations, graphics, etc., as well as the massive amount of data that devices in the Internet of Things (IoT) are creating every second.

Unstructured data and NAS challenges:

- **Sheer growth:** The number of files and folders in storage being driven by unstructured data growth.
- With this unstructured data, **much of the files are rich** (video, graphics, etc) and are growing.
- **Businesses are keeping data longer** for reasons beyond just recovery, including regulations and compliance.
- As unstructured data is generated by users and devices every moment of the day with **limited to no oversight**, the growth goes unchecked.

While NDMP was created to tackle unstructured data, its structure is not optimized for the massive amounts of unstructured data we see in the world today.

- NDMP technology was created in 1996 to solve problems with unstructured data.
- The Network Data Management Protocol (NDMP) is a rigid structure that often only allows a FULL data dump, which may have worked with the with data sizes of the 1990's, but it doesn't work today.
- In 2010, NDMP was deemed "end of development".

Yet many backup vendors still require NDMP!

Why Veeam for your unstructured data?

- **Faster incremental backups on commodity hardware to deliver scalable protection for unstructured file data through innovative changed file tracking.**
- **Flexibility to store your unstructured NAS data on cheaper storage with the ability to easily tier to the cloud.**
- **Full spectrum recovery options that range from entire share recovery to address complete hardware loss or NAS migration, point-in-time share rollbacks to quickly recover from ransomware attacks and file-level recovery with global search for day-to-day operational restores.**

NAS backup in Veeam Backup & Replication

Veeam® Backup & Replication will modernize and simplify the protection of unstructured file data and file servers at scale. It brings powerful new capabilities that bring flexibility to NAS data protection and recovery and greatly reduces storage costs and improves recovery times.

At Veeam, our NAS backup mission was clear.

- **Make NAS backup simple, yet powerful** with the ability to quickly protect your unstructured data through a simple wizard-driven approach and to process petabytes of data as fast as possible.
Build a flexible solution that will meet workload needs and requirements across multiple NAS and file server offerings. This includes flexible options for backup and recovery with granularity of your choice.
- **Reliability is key**, not only to protect massive amounts of data but also to provide data consistency and efficiency.



Differentiation

Flexibility

There are many types of NAS systems with many protocols and versions being used to present unstructured data. With Veeam Backup & Replication NAS backup, we can protect not only SMB and NFS shares but also Windows file servers and Linux file servers.

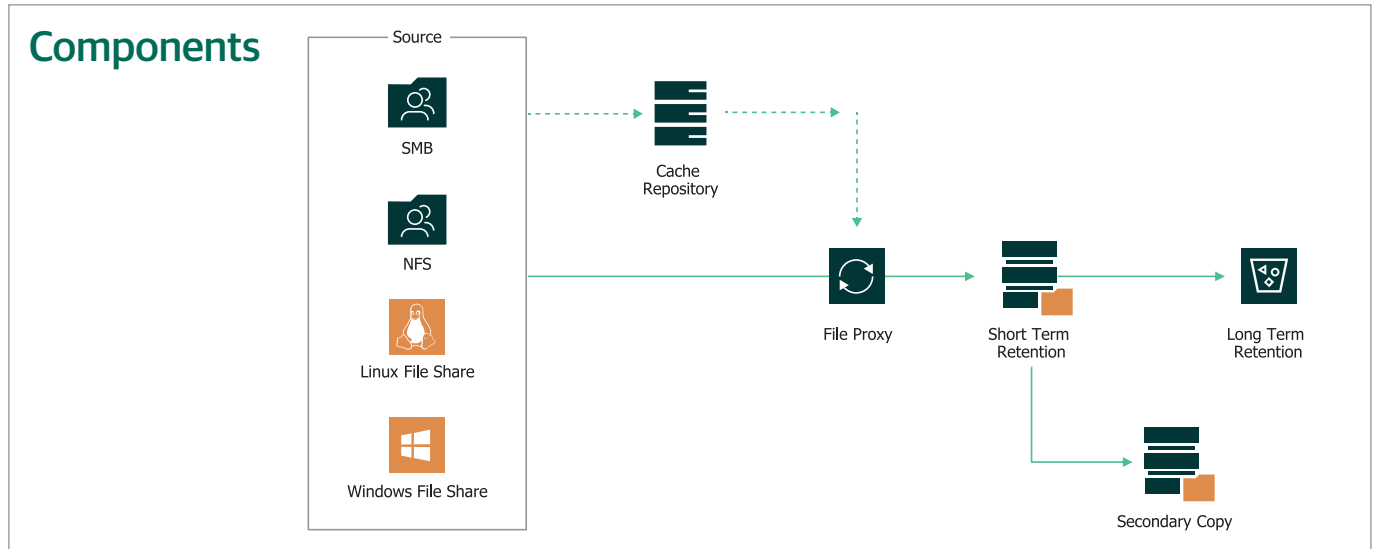
Changed file tracking

The unique functionality that Veeam Backup & Replication NAS backup brings to these challenging NAS environments is changed file tracking. This functionality enables you to perform fast incremental backups of our NAS environments, allowing you to easily achieve backup objectives.

Snapshot friendly

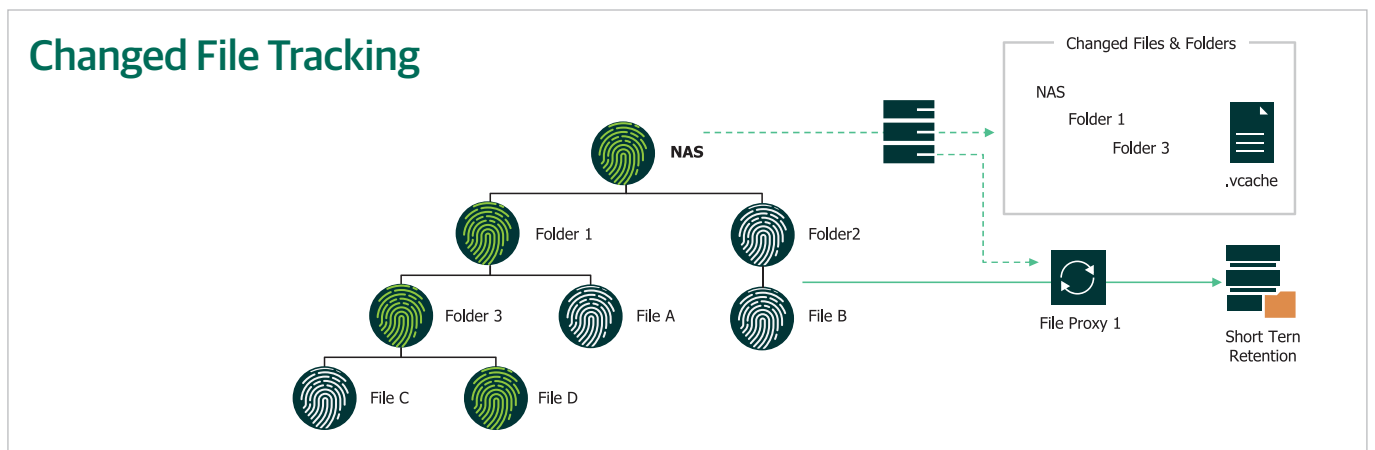
One of the advanced backup capabilities we are delivering in Veeam Backup & Replication is the ability to perform flexible backups directly from storage snapshots created by enterprise-grade NAS devices on either primary or secondary storage. This gives you even more ways to further enhance the performance and speed of NAS backup.

How Veeam NAS backup works:



The first component to mention are **file proxies**. File proxies are the muscles that allow for throughput of data from source to target. They're scalable and software-defined with no requirements for new hardware or dedicated appliances to achieve scale.

The key differentiator is **changed file tracking**, which maintains the footprint of the source file share and is stored in something we call a **cache repository**. This **cache repository** keeps track of all objects that have changed between each backup, resulting in ultra-fast backup processing.



When it comes to storing backups, NAS backup supports the same range of different backup repositories as our image-based backups, including scale-out backup repositories.

But, since we're focusing on unstructured data backup in our NAS engine, we wanted to ensure the ability to tier off older file versions onto cheaper storage types such as deduplication devices or object storage. This methodology provides the ability to keep a short-term retention close

to the production data set for days. Then, to meet with regulations and retention demands, you can leverage the public cloud for longer-term retention and archival.

Veeam Backup & Replication NAS backup also has the ability to store an offsite copy of your NAS data. This can be for a completely different retention period, with a separate encryption key for added security. It can also be used as a disaster recovery (DR) option when it comes to recovering unstructured data.

Recovery capabilities

Restore entire share

This option is most useful when there is a complete loss of your file share or a major outage. When this happens, this option allows for a complete restore of the latest version of all files either back to the original location or to an alternate location with security and permissions intact.



Entire share

Rollback to a point in time

Quick rollback gives you the ability to roll back to the last-known good configuration or backup. This means that any modified file since the last backup can be reverted. The example here would be a ransomware attack and the encryption of a file share. This option would allow you roll back to the last good backup before the ransomware attack occurred.



*Rollback to
a point in time*

Restore individual files and folders

Designed to be simple with similarities to file-level recovery from image-level backups, this restore type provides you with the ability to restore individual files and folders either by overwriting the live system or keeping both copies. Easily choose specific restore points with additional visibility to see all available file versions, making the selection of versions you wish to recover a simple and flexible task.

Summary

There could not be a better time to take advantage of a better NAS backup that's faster, stronger and smarter than ever before. Learn more about NAS backup [here](#) or download the [What's New document](#). Start a free trial of Veeam Backup & Replication now to take advantage of this and the 150 other amazing new enhancements!

About Veeam

Veeam® is the leader in backup solutions that deliver Cloud Data Management™. Veeam provides a single platform for modernizing backup, accelerating hybrid cloud and securing your data. Our solutions are **simple** to install and run, **flexible** enough to fit into any environment and **always reliable**.



*Individual files
and folders*



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