miria ATEMPO

For Backup

ATEMPO
preserving data ecosystems

HIGH-PERFORMANCE STORAGE BACKUP FOR FILES AND UNSTRUCTURED DATA

Simplify large volume file storage backups and restore between heterogeneous storages

Some challenges for protecting very large volumes and processing millions or billions of files:

The daily rate of file changes for your storage is no longer compatible with you operational backup windows

Protection costs are much higher if we attempt to reduce service downtime and the I/O impact on your storages

The dependence on 100% mono-vendor solutions and their budgetary impacts
(Snapshots, replications between NAS …)

Costly investments and complex management for storage Disaster Recovery solutions (replicating primary storage, cloud synchronization …)

The complexity and the time required to restore complete storage backups either on premises or from the cloud

4 KEY QUESTIONS FOR A TEAM MANAGING VERY HIGH CAPACITY STORAGE BACKUP:

- How do we successfully perform full backups when even my incrementals already exceed my backup window?

- We have legal obligations to back up our data and I am looking for a powerful and reliable solution for hundreds of terabytes or even petabytes of unstructured data with millions/billions of folders/files?

- How do we restore very large volumes rapidly?

- How can we restore data from one type of storage to another?

Minimize backup windows

Perform regular and efficient backups with successive increments

Restore simply some files or complete volumes including to another storage platform

Adjust performances by simply adding or removing a Data Mover

An open backup and multi-storage solution (cloud, disk, object, tape)

Open solution which also includes migration and synchronization between heterogeneous storage

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- for Backup
- for Migration
- for Data Moving
- for Archiving

UNIL | Université de Lausanne

Michel Ruffieux – Storage and Backup Manager, University of Lausanne (UNIL)

"We have backed up our unstructured NAS data sets based on multi-OS sources while respecting ACLs. Thanks to Atempo, our NFS and CIFS file systems are working in perfect harmony with S3-type storage."

TRADITIONAL NAS AND NDMP BACKUP LIMITATIONS:

- A file by file approach
- Never-ending filesystem scans to identify files to backup (added, modified or deleted) reduce performances and storage availability and actual backups start well after the job launch
- Massive data recovery is very slow due to the absence of parallelization
- NDMP protocol which is designed for tape storage
- Solutions for restoring only to identical storage platforms
- Traditional backup approaches (Full plus Incrementals) are poorly adapted to very large volumes (>100 TB)

THE KEY TAKEAWAYS FOR THE MIRIA FOR BACKUP SOLUTION:

Rapid detection of created, modified or deleted files
The FastScan feature manages a list of added, modified or deleted files. The backup starts very early on and uses very powerful parallel processing which is adapted to all files sizes.

Incremental forever protection
Miria for Backup implements an "incremental forever" technology when the target is an object or cloud storage. The initial backup is a full followed by an incremental forever along with intelligent backup storage management. Miria reconstructs the full to restore on demand.

"Agnostic" solution enables restoration to a different platform
Miria for Backup collects files with their ACLs and adapts their storage in a neutral and open format. During restoration, the data and associated ACLs are formatted for the target protocol and storage.

Optimal Recovery
Native support for Atempo Time Navigation makes backed up data recovery both intuitive and accessible to non-technical personnel. If a few files are required, a simple drag and drop is sufficient. If you need to recover a volume or an entire storage infrastructure, Miria venabe you to recover priority folders or volumes.

TECHNICAL CHARACTERISTICS

COMPATIBLE STORAGES & FILE SERVERS (TO PROTECT)	• NAS and Scale-out NAS: NetApp, Dell/EMC Isilon, Qumulo, Huawei and other NAS with CIFS/SMB or NFS shares • Shared or parallelized storages and file systems: Lustre, DDN, IBM Spectrum Scale / GPFS, Panasas, StorNext, and other similar • Industry-standard file servers: Windows, macOS, Linux, ... supported by our solution • For more details, please consult our Compatibility Guide
TARGET STORAGES FOR BACKUPS	• Miria supports heterogeneous technologies such as hard disk, object storage, optical disk, tape, cloud or combinations of all these
BANDWIDTH AND THROUGHPUT	• Capacity to move data at a very high rate with no parallelization ceiling (saturation of a 10 GB network for example) and limiting the impact on operational constraints • Possibility of fixing dedicated backup windows • Adapted to very large data volumes, numerous small or very large files
ADVANCED STORAGE INTEGRATIONS	• FastScan is an option available for Isilon, GPFS, NetApp storages. (Qumulo in progress). FastScan enables rapid detection and management of added, modified or deleted files since the last backup cycle

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