MIRIA · DATA MANAGEMENT · BACKUP · 01 / 02

miria backup

High-performance backup and disaster recovery for petascale and exascale file storage.

When the daily rate of file changes no longer fits your backup windows, and cutting downtime or I/O impact only drives protection costs up, traditional backup stops scaling. **Miria Backup** runs regular, efficient incremental backups across billions of files, restores with full confidence from a handful of files to exascale data sets, and keeps critical data accessible during a storage incident through an open, multi-storage solution spanning cloud, disk, object and tape.

Minimal backup windows

Successive increments instead of never-ending full scans.

Incremental forever

One full, then increments. Miria reconstructs on demand.

Restore anywhere

Recover to a different storage type, protocol or platform.

Open & multi-storage

One backup solution across cloud, disk, object and tape, with no vendor lock-in.

Key benefits

01 · DETECT

FastScan rapid change detection

FastScan[1] lists added, modified and deleted files without lengthy storage crawling, so backups start very early and run in parallel across every file size.

02 · PROTECT

Incremental forever to cloud & object

When the target is object or cloud storage, the initial backup is a single full, followed only by increments. Miria reconstructs the full to restore on demand.

03 · INTEROPERATE

Agnostic restore to any platform

Files are collected with their ACLs in a neutral, open format. On restore, data and ACLs are reformatted for the target protocol and storage.

04 · RECOVER

Disaster recovery & continuity

Recover selected files, priority folders or whole volumes, and keep critical data accessible while you wait for maintenance or replacement storage.

05 · CONNECT

Open, multi-storage targets

One backup solution across cloud, disk, object and tape. No lock-in to a single vendor's snapshots or replication.

06 · RESTORE

Restore with full confidence

From a few files to petascale and exascale data sets, including to another storage platform, with ACLs intact throughout.

(1) FASTSCAN NOW AVAILABLE FOR LUSTRE AND EXASCALER

MIRIA · WHY MIRIA BACKUP · 02 / 02

Built for the volumes legacy backup can't reach.

The questions every backup manager of high-capacity storage faces, and the limits of traditional SAN/NAS and NDMP approaches Miria is designed to leave behind.

Key questions from backup managers

- ◯ How do I run full backups when **incrementals already exceed** my backup window?
- ◯ Is it powerful and reliable enough for **hundreds of TB** and billions of files under legal retention?
- ◯ How do I back up data held in the **cloud or on object storage**?
- ◯ How do I **restore very large volumes rapidly**, and from one storage type to another?
- ◯ How do I guarantee **continuity of access** to critical data during a storage incident?

Traditional SAN/NAS & NDMP limits

- × Slow file-by-file scans delay the actual backup well after job launch
- × Very slow massive recovery from the absence of parallelization
- × NDMP protocol designed for tape, not modern storage
- × Locked solutions that only restore to identical platforms
- × Full-plus-incremental models that don't scale beyond 100 TB

reduces	reduces	reduces	reduces
Backup windows	**Vendor lock-in**	**DR complexity**	**Restore time**
Daily change rates that no longer fit operational backup windows.	Dependence on single-vendor snapshots and replication, and their cost.	Costly, complex disaster-recovery replication and synchronization.	The time and risk of securely restoring full backups, on-prem or cloud.

> **"We back up our unstructured NAS data sets from multi-OS sources while respecting ACLs. Thanks to Atempo, our NFS and CIFS file systems work in perfect harmony with S3-type storage."**
>
> MICHEL RUFFIEUX · STORAGE & BACKUP MANAGER · UNIVERSITÉ DE LAUSANNE (UNIL)

4 data services, 1 platform

ANY WORKFLOW · ANY FILE STORAGE

Backup	Migration	Archiving	Mobility
Protect file storages from damage and loss; guarantee fast production recovery.	Efficiently migrate data volumes and billions of files between dissimilar storages.	Free up expensive primary storage and ensure data-preservation compliance.	Move files wherever needed and synchronize datasets across heterogeneous storages.