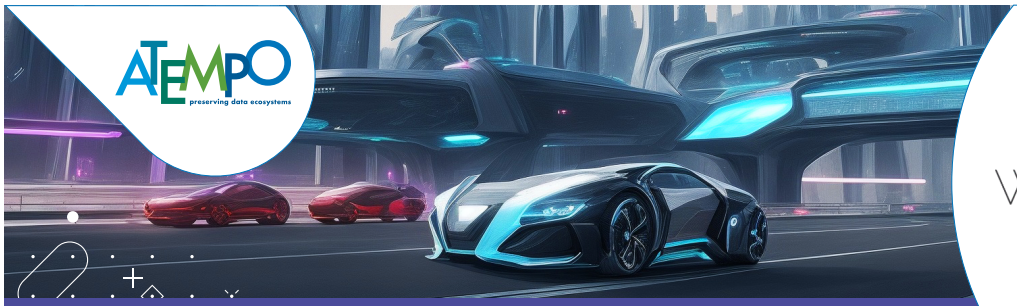


DATA MANAGEMENT SECTOR: AUTONOMOUS VEHICLE/HPC

Petabyte-scale Cloud Archiving of Autonomous Vehicle Research Data

Miria Powering weSystems' Hybrid Data Services between Clouds and Continents

WESYSTEMS

weSystems, a German IT service provider in Europe, specializes in personalized IT, infrastructure operations, cloud, and data security. They foster close client collaboration for tailored solutions that provide a competitive edge to their customers.

INDUSTRIAL PROJECT WITH MASSIVE DATA CONSTRAINTS

weSystems is providing IT and cloud services to a leading European car industry player needing to store and archive for long durations multiple PB of sensitive data created by their fleet of autonomous cars and associated AI systems. The project is spanning multiple locations in Europe and in the US, with the need to synchronize PBs of data between locations, in addition to complying with legal requirements to archive them for 10 to 12 years depending on the data sets.

In this customer project, several specific factors contributed to its complexity on a significant and expansive scale:

- The project involved **handling vast amounts of data**, approximately **2PB of new data** generated each month.
- A requirement to **transfer massive data volumes** across locations to support collaboration and further processing.
- The project required **long term archiving** capabilities while ensuring **rapid data retrieval** at the PB-scale, potentially impacting the project's budget significantly.

SOLUTION

weSystems expertly combines various technologies to provide a tailored ad-hoc solution for this customer:

- The cloud-archive tier selected is Azure. It does a great job of preserving sensitive data at scale for the long duration required in this customer's context, 10 to 12 years.
- To meet the customer's need for retrieving archived data within a 3-month period without financial impact or delay, a central caching system was integrated into the configuration. The cache provides an almost instant retrieval to users in remote locations at no additional cost, a significant improvement over the 48 to 72 hours typically associated with the cloud's cold tier.
- Miria automates data movement by collecting information from different locations and storing it in a cache near Berlin. It manages archiving to Azure and facilitates on-demand data restoration for a crucial three-month period without restoring data from the cloud. Miria's unique flexibility makes it ideal for combining data flows and services in hybrid storage environments.

> *"Miria was instrumental in enabling us to achieve the performance levels and quality necessary for this massive-scale project over two continents. To date, we have effectively archived 30-40PB of sensitive data, and our progress continues."*

Miria's unique flexibility makes it ideal for operating hybrid data services.

" As a provider committed to delivering top-tier, customized IT services, we regard Miria's flexibility as truly unique. Its rich spectrum of data services and versatile operational approaches stand out, allowing us to seamlessly integrate with virtually any file storage platform in our customer's environment."

Stephan BIENEK, Head of Hosting, weSystems

DATA MANAGEMENT | SECTOR: AUTONOMOUS VEHICLE/HPC

MIRIA, A UNIQUE MIX OF HYBRID DATA SERVICES

weSystems' team selected Miria for its flexible and versatile data capabilities, allowing them to build secure, fast workflows tailored to customer needs. To address the specific needs of this customer weSystems is using the following Miria data services:

- **Synchronization:** Miria collects petabyte-scale data sets on each of the source storages at customer locations to consolidate the data to a central location in Berlin via multiple 10Gbit/s dedicated connections across Europe and the US.
- **Archiving:** A second Miria process is collecting the data from the central location in Berlin to archive it to the cloud archive tier, where the data is preserved for 10 to 12 years.

> *"Miria's uniqueness lies in its modular data services and its ability to seamlessly connect with nearly any storage platform. Miria played a pivotal role in the success of our project."*

When seeking feedback from Stephan Bienek, weSystems' Head of Hosting, about Miria's capabilities and how they played a crucial role in crafting a distinctive solution for this project, Stephan emphasizes:

- Miria's **wide storage compatibility** eases data collection on the very diverse customer storage platforms.
- Miria's **versatile storage integration methods**, including CIFS-SMB/NFS mounts and advanced APIs like Miria's FastScan for efficient data protection and synchronization through automated Snapshot differentials.
- The ability **to combine Miria's data services** like building blocks, is unique and simplifies workflows design by mixing data retention and data move as needed.
- The effective collaboration with Atempo's team, responsive to evolving workflows.
- And it was important for this specific customer, the fact that Atempo is a European company, helped weSystems in building a trusting and close-knit relationship.

> *"Gathering data from petabyte-scale storage isn't as simple as browsing a file system for individual files. This approach leads to lengthy scanning delays and slow transfer rates. Miria's FastScan automates SnapShot differential and makes a significant difference, allowing us to achieve our transfer speed goals and delivering the level of service expected."*

BUSINESS BENEFITS

- Network throughput at peak performance
- Modular and flexible solution to combine data services
- Broad choice of supported storage platforms

Consult the Datasheet
https://links.atempo.com/DM-datasheet

Contact an Atempo expert
https://links.atempo.com/DM-contact-us

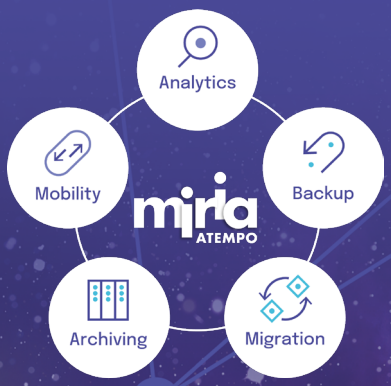
Update: 06/02/2024

PROJECT OVERVIEW

- Multiple PB of sensitive data stored in data centers across Europe and the US.
- Requirement to archive data for 10 to 12 years.
- Frequent retrieval of archived data in the first 3 months after the transfer.

SOLUTION

- Azure serves as the cold archive tier.
- Miria consolidates data from the data centers to a central location where it can be rapidly retrieved for 3 months.
- Miria archives data from the central location to Azure.
- 40PB archived and growing.
- Adding 2PB per month.
- Throughput close to network maximum.



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