

Connecting Mainframes to Object Storage using Model9 and MinIO

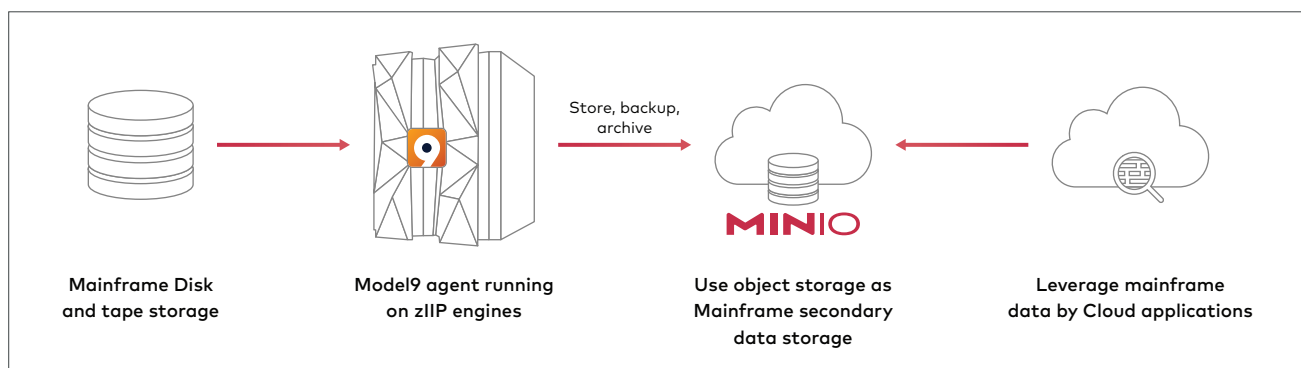
Modernize your infrastructure by connecting legacy functions like mainframe backup, archive, recovery and space management operations to high-performance, cloud native object storage.

In modern enterprises, mainframes power transactions, serve as the system of record and support an entire ecosystem of their own - creating a unique set of challenges for IT departments:

- Expensive, proprietary hardware, such as tape systems and VTLs, tape-management software, and the staff with the experience to manage them.
- Massive, batch-oriented operations, such as backup, archive, and DR, that have outgrown tape and virtual tape storage architectures, driving cost and operational issues.
- Inability to access mainframe data in a timely fashion (if at all in the case of some silos), rendering the data useless for real-time requirements in business intelligence, compliance reporting and analytics.

These challenges are driving demand for high-performance architectures that enable these legacy systems to remain operational while transforming the way the data is managed, accessed and stored. This allows data centers to modernize while simultaneously reducing costs as they retire these expensive, proprietary mainframe secondary storage systems.

- Modernize backup, archive, and DR operations with a flexible, scalable object-storage architecture designed for on-prem architectures.
- Lower TCO by replacing tape systems, VTLs and tape-management software with performant, cost effective object storage.
- Save 50% or more on MSU consumption by offloading data management processing to zIIP engines.
- Leverage mainframe data for value-added business intelligence initiatives and analytics



The Model9-MinIO Solution

Model9 and MinIO have partnered on a powerful, scalable and cost-effective cloud-based object storage solution for data centers that operate mainframes. The solution has two primary components:

- Model9's cloud data management software. This software runs on the mainframe's zIIP processors, providing cost-efficient storage, backup, archive, and recovery functionalities with an easy-to-use interface that requires no object-storage knowledge or skills.
- MinIO's high-performance object-storage server. The software-defined server provides petabyte and exabyte scalability for backup, archive, DR, and big-data analytics operations. It runs on Intel-based infrastructures and is compatible with all major public and private cloud providers, including AWS S3.

Model9 turns MinIO's high-performance, low-cost object storage into a mainframe-ready, cloud-based storage solution, allowing enterprises to eliminate outdated, costly tape and VTL systems.

The joint solution allows IT operations to move massive mainframe data archives, such as regulatory data or medical records, to cost-effective, cloud-based object storage. In addition, it provides quick, universal access to valuable historical and statistical data – previously available solely as "cold" storage, and readable only by mainframes – for use in analytics, or in profit-oriented business intelligence initiatives.

The cloud-based object storage can be used to economically store and retrieve vast amounts of data - at speeds of up to 180 Gbps.

The Model9 architecture consists of a zIIP-eligible agent running on z/OS and a management server running in a Docker container on Linux, z/Linux, or zCX. The agent reads and writes Mainframe data

from DASD or tape directly to MinIO over TCP/IP using DFDSS as the underlying data mover. Other standard z/OS data management services are also used by the agent, such as system catalog integration, SMS policy compliance, and RACF authorization controls. Compression and encryption are performed either using zEDC and CryptoExpress cards if available, or using zIIP engines.

For more information, visit

<https://model9.io/solutions/minio>