

SOLUTION BRIEF

Data Management + Multi-PB Storage

Benefits

- Economically achieve optimal price/performance for multi-petabyte environments
- Meet stringent security and compliance requirements by deploying a high-security airgapped solution
- Satisfy corporate policies for longterm preservation of data on tape storage

Complete, on-prem data management for multi-petabyte environments

As data sets grow into the multi-petabyte range, the challenge for most organizations moves beyond infrastructure scalability to data lifecycle management, sustainable cost, and security concerns. With further analysis, the issue in most cases is the continued compounding effect of infrequently accessed data. For these cold-archiving use cases, a tiered approach to tape may be necessary; however, the need for data movers or hardware security module applications can quickly offset the cost/benefit of moving to tape. The solution is leveraging Caringo *Swarm* Intelligent Data Management with FUJIFILM *Object Archive* software.

High-performance access and analysis

Caringo *Swarm* is an intelligent data management solution that utilizes object storage technology to provide an on-prem, Amazon S3-compatible platform for data protection, organization, and search at scale. *Swarm* is available as software that runs on any x86 server or that can be delivered as a complete hardware and software solution. Unlike other disk-based object storage solutions, *Swarm* includes robust data and tenant management functionality available via a web-based UI or API. Additionally, *Swarm* can set policies to transfer data for backup and disaster recovery to any service or device that supports the Amazon S3 web services interface.

Key Features of *Swarm* / FUJIFILM *Object Archive* solution

- ✓ Provides a complete, on-prem S3 object storage solution for all data lifecycles (active through cold)
- ✓ Combines the low cost per TB of tape with the intelligent data management of *Swarm*
- ✓ Seamlessly integrates external cloud and tape storage for hybrid deployments



Cold storage and cost savings

FUJIFILM *Object Archive* software enables object storage on magnetic tape thanks to Fujifilm’s newly developed open format, OTFormat, specifically designed for object data. Tape technology is a proven, low-cost solution to long-term storage of petabyte-class data, given the high-cartridge capacity, scalability, and low energy consumption of tape systems. Tape consumes up to 87% less energy than disk and produces up to 87% less associated CO2 emissions. Tape system TCO is typically up to 86% less than disk.¹ By using the Amazon S3 web services interface, FUJIFILM *Object Archive* seamlessly integrates with the Caringo *Swarm* Intelligent Data Management platform.

Self-contained and secure

The combined offering from Fujifilm and Caringo can be deployed as a complete, on-prem object platform for hot, warm, and cold storage or as a self-contained object storage solution. Additionally, the solution can be set up in an air-gapped fashion with no external access, for secure deployments. The utilization of Enterprise Identity Management, token-based authentication, and object versioning functionality can be used to add additional layers of protection from unauthorized access or a malicious attack.



About FUJIFILM Recording Media

Beginning in 1934 as Japan’s pioneering photographic film maker, Fujifilm has leveraged its imaging and coating technology to become a global presence known for innovation in healthcare, graphic arts, optical devices, highly functional materials, and data storage. FUJIFILM *OBJECT ARCHIVE* software makes hybrid cloud storage, cold data archiving, and increased data security environments a reality for object storage by enabling S3-compatible API and modern data tape. Now data centers can easily improve scalability, security, and decrease costs. Additionally, the tape-inclusive subscription model provides predictable storage spend and can be recognized as an operational expense.

About Caringo

Caringo was founded in 2005 to change the economics of storage by designing software from the ground up to solve the issues associated with relentless data growth. Caringo’s flagship product, *Swarm*, decouples data from applications and hardware providing a foundation for continued data access and analysis that continuously evolves while guaranteeing data integrity. Today, Caringo software-defined object storage solutions are used to preserve and provide access to rapidly scaling data sets across many industries by organizations such as NEP, Science and Technology Facilities Council (STFC), Argonne National Labs, Texas Tech University, Department of Defense, the Brazilian Federal Court System, British Telecom and hundreds more worldwide.

¹ See “Reducing Data Center Energy Consumption and Carbon Emissions with Modern Tape Storage”, November 2020.