

CA 1™ Flexible Storage™

Key Benefits

- **Write backups anywhere you choose**, including disk, physical/virtual tape, and the cloud.
- **Defend against Ransomware** with immutable (unchangeable) volumes.
- **Accelerate encryption time** at the dataset (file) level.
- **Gain confidence** from a z/OS native solution that does not require specialized hardware or software collectors.
- **Compress data files up to 90%** with the hardware compression engine.
- **Achieve instant return on investment** on infrastructure, people, processes, and more.

Key Features

- **Improved recovery time:** Replicated TMCs at a remote location help to more quickly recover the CA 1 TMC to a point-in-time in the event of a local failure.
- **zIIP specialty processor exploitation:** Make all CA 1 workloads eligible to run on zIIP processors when possible.
- **Data compression capabilities:** Leverage zEDC compression technology.
- **Data encryption capabilities:** Exploit the Crypto Coprocessor for file-level encryption. Quantum safe algorithms and IBM Pervasive Encryption support available.
- **Software-based virtual tape system:** Stack virtual volumes and automatic triggers for recalls or tape recycling.

Overview

CA 1™ Flexible Storage™ is a modern approach to storage management that provides secure, cost-effective mainframe data storage options for hybrid IT environments. The solution is designed to simplify and unify storage management strategies and protect z/OS tape data set volumes. It automates day-to-day storage management tasks, enabling the highest level of integrity for storage data, while providing comprehensive protection against the inadvertent destruction of data. CA 1 Flexible Storage enables you to integrate with cloud storage providers, the latest automated tape libraries, and robotics systems. With automated tape management tasks, file compression, data set encryption at the file level, asynchronous multivolume write support, and immutability, it provides the highest level of flexibility and security for your enterprise data. Additionally, CA 1 Flexible Storage does not require any special hardware or software collectors to support the cloud, and has been designed from the ground up to store one or multiple copies of your data anywhere, cost effectively, while protecting against data breaches and ransomware.

Business Challenges

As any CIO would agree, securely defending your data from ransomware and theft is just as important as creating reliable backup archives to ensure smooth business operations. In addition to data security, today's storage administrators face many challenges, including hardware cost reductions, and learning how to leverage existing investments, while meeting company cloud usage mandates for backup and cold storage.

When the freedom to write data to any media of choice is restricted, it can be extremely challenging to ensure your data is highly secure, and very costly for an organization that loses data due to a faulty process or bad actors.

Critical Differentiators

CA 1 Flexible Storage exploits mainframe hardware compression, encryption, and zIIP specialty engines to manage and automate your end-to-end storage strategy:

- True immutable volumes (unchangeable) to protect against Ransomware
- A native z/OS solution that requires no specialized hardware or Linux environments
- Simple Storage Services (S3) support for public or private clouds
- Vendor neutral to avoid being locked into proprietary hardware systems
- Direct hardware compression support reduces file size by up to 90%, which reduces expensive I/O processing
- Immediate sharing of virtual tape volumes to disaster recovery (DR) sites with real-time peer-to-peer feature.

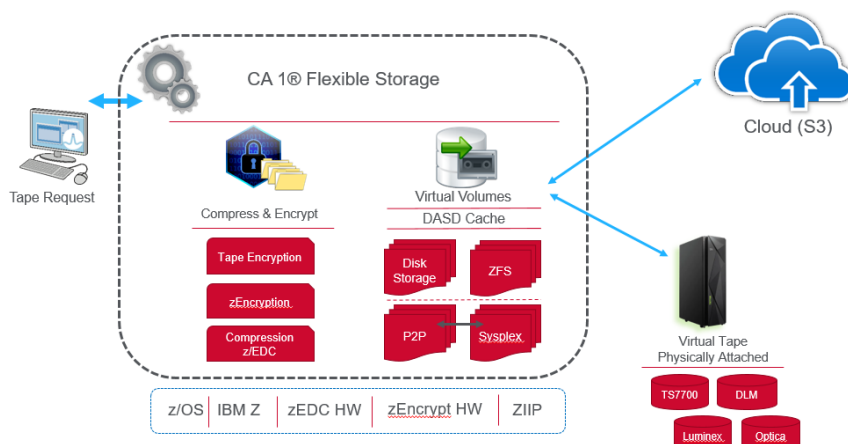
Key Features (cont.)

- **Immediate sharing of tape volumes:**
A peer-to-peer option features real-time tape mirroring and immediate sharing of virtual tape volumes to disaster recovery or remote sites.
- **Low cost commodity device support:**
 - Physical and virtual tape devices
 - Cloud (S3)
 - Advanced devices with Transparent Cloud Transfer (TCT)

Real World Use Cases

- **Maintain insurance against hackers and ransomware** with immutable backups for data restoration or system initial program load (IPL).
- **Verify every user device, while enforcing security policies at the data set level.** Enforce zero trust company policies, and meet audit requirements and government regulations using quantum safe algorithms and file-level encryption.
- **Ensure a golden copy of data is available** when all other recovery procedures fail.
- **Reduce administration, hardware infrastructure and software costs.** Every Petabyte of data backed up to the cloud can save approximately \$1.4M annually.
- **Use Virtual Tape volumes** to improve tape utilization and processing performance with visualization.

CA 1 Flexible Storage Solution Architecture



Solution Overview

CA 1 Flexible Storage stores, controls, and protects z/OS tape data sets and volumes. It automates tape management tasks, while protecting against the inadvertent destruction of tape files. It provides comprehensive tape library inventory and audit tracking, including offsite vaults and utilities for controlling tape and catalog maintenance activities.

The solution includes the capability to replicate the Tape Management Catalog (TMC) from one system or location to one or more remote active data centers by utilizing the replicated copy at a remote location. This helps you resume secure tape processing in the event of a failure with minimal downtime, supporting faster Recovery Time Objective. Storage professionals can more conveniently examine volumes and files from specific backup checkpoints to assist in audits and chargeback processes using an enhanced user interface.

Storage teams can compress and encrypt data to the data set level before writing to a tape volume, enhancing the security of that data. Virtual tape volumes enable improved tape processing performance and allow teams to write a single volume to multiple targets of their choice. This flexible solution provides the opportunity to write to any physical and virtual tape, as well as any S3-supported cloud.

Supported Environments

CA 1 Flexible Storage runs on any IBM mainframe running a release of z/OS that is currently supported by IBM. IBM z15 or later is required to leverage hardware enhanced compression and encryption.

Related Products and Solutions

Vantage™ Storage Resource Management helps maximize the use of your entire Storage Infrastructure.