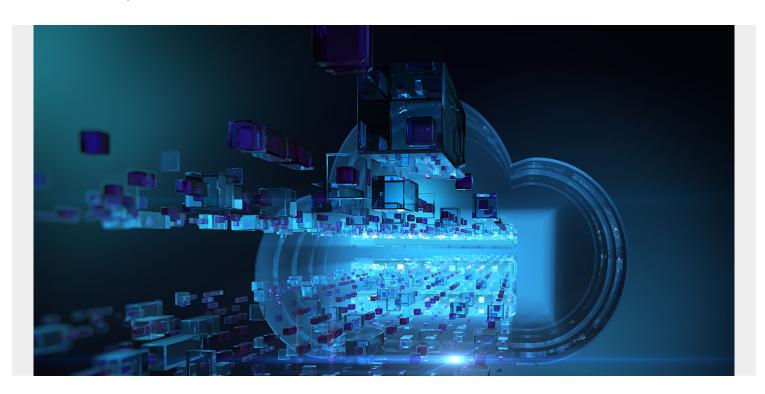# GOODBYE, TAPE: THE FUTURE OF MAINFRAME DATA STORAGE

For decades, tape and virtual tape library (VTL) solutions have been the backbone of secondary storage for mainframe systems. While these technologies serve their purpose, they come with inherent limitations that hinder modern enterprise operations. In an era where speed, scalability, and cost efficiency are paramount, it's time to bid farewell to these legacy solutions and embrace the future: cloud-based object storage, powered by innovations like BMC AMI Cloud Data's new Cloud Data Sets (CDS) feature.

This blog is the first in a series exploring the transformative potential of CDS and its role in modernizing mainframe data storage. Throughout this series, we will delve into the challenges of legacy storage solutions, the innovations that make CDS a game-changer, and real-world success stories from enterprises that have embraced this new technology.

Why move beyond tape?

Tape-based storage methods have remained largely unchanged since their inception in the 1950s. Even VTL systems, introduced as a modern alternative, rely on the same tape-centric architecture, writing data sequentially and limiting throughput. These approaches present significant challenges:

- **Performance bottlenecks:** Tape solutions rely on sequential data access, which limits speed and efficiency. This results in extended backup and recovery times, which are unacceptable in today's always-on business environment.
- **High costs:** Maintaining VTL or physical tape infrastructure involves recurring expenses for hardware refreshes, proprietary IBM® FICON® (fiber connection) licenses, and complicated management requirements.

- **Security vulnerabilities:** Traditional solutions lack inherent immutability, leaving data susceptible to ransomware and other cyber threats.
- **Complex operations:** Managing legacy systems demands specialized skills, which are becoming scarcer as experienced mainframe professionals retire.

Enter Cloud Data Sets: The modern solution

BMC's Cloud Data Sets feature redefines mainframe data management by enabling direct read/write access to cloud object storage without the need for intermediate VTL or direct-access storage device (DASD) staging. This innovation eliminates many of the limitations of traditional solutions while offering transformative benefits:

- **Unparalleled performance:** CDS leverages IBM® z/OS®'s Open System Adapter (OSA) cards and parallel processing to achieve data transfer speeds up to 16 times faster than VTL.
- **Cost efficiency:** By replacing physical and virtual tape with cloud storage, organizations can reduce costs by up to 12x, freeing budgets for other strategic investments.
- **Enhanced security:** CDS provides immutable backups with encryption in flight and at rest, safeguarding data from threats and ensuring compliance with modern data protection standards.
- **Simplified management:** The intuitive GUI and policy-driven configuration make it easy for IT teams to implement and manage CDS without disrupting existing workflows.

The path to modernization

Transitioning from legacy storage to CDS is a strategic move that offers immediate and long-term benefits but requires careful planning. With CDS, organizations can:

1. **Eliminate legacy hardware:** Decommission VTLs and physical tapes, reducing data center footprints and associated costs.
2. **Streamline operations:** Simplify storage management with modern tools and automated policies.
3. **Enhance resilience:** Leverage the scalability and immutability of cloud object storage to protect critical data against evolving cyber threats.

A glimpse into success: Nedbank's journey

Nedbank, a leading financial institution, recently adopted BMC AMI Cloud Data to overhaul its data management strategy. The results? A backup process that once took 48 hours was reduced to just 36 minutes, underscoring the transformative potential of CDS. You can read all about its success with BMC here.

Looking ahead

The future of mainframe storage lies in the cloud. As organizations increasingly prioritize agility, security, and cost effectiveness, innovations like CDS will lead the charge. By saying goodbye to tape, enterprises can embrace a new era of data management that supports both current needs and future ambitions.

Looking to dive deeper into the transformational potential of modern storage solutions? Download our new white paper, *Goodbye, VTL. Here's where mainframe data is going now*, to explore why leading enterprises are embracing cloud-based object storage and how BMC AMI Cloud Data's CDS feature can revolutionize your data strategy.

Are you ready to modernize your storage strategy? Explore how can revolutionize your mainframe operations here.