LUMINEX™
MODERN MAINFRAME DATA SOLUTIONS

# MVT
## MAINFRAME VIRTUAL TAPE AND CO-PROCESSING PLATFORM

The feature-rich Luminex Mainframe Virtual Tape (MVT) platform is best known for its innovative and extensible architecture. This architecture enables industry-leading data protection and performance, including continuous tape availability, VOLSER-level replication monitoring and non-disruptive Push Button Disaster Recovery testing.

MVT implementation is facilitated by Luminex tape migration tools and professional services, enabling many of the world's leading enterprises to quickly and painlessly upgrade their tape operations to MVT.

### Expect More from Virtual Tape:
*Protect, Manage and Leverage Mainframe Data*

- Off-Host HSM Recycle
- Multitenancy Management
- Cloud Storage Enhancements
- Mainframe Data Integration Capability

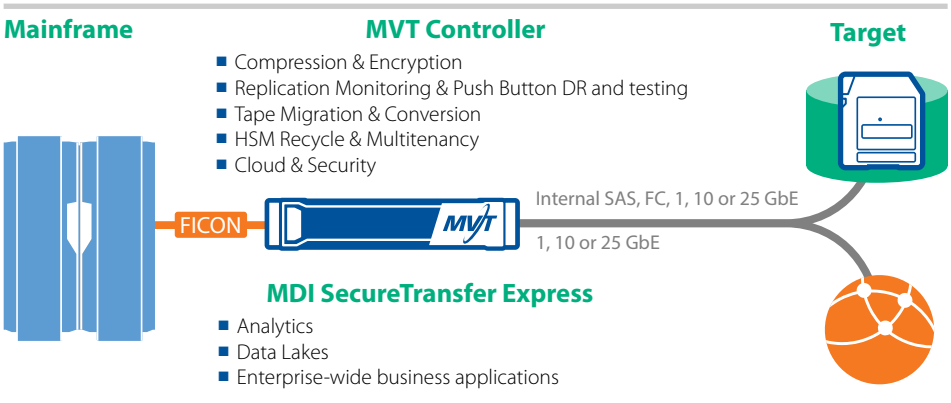
MVT™

## Data Protection & Management

With MVT, data protection functions have been enhanced using the latest cloud storage options and complemented with more tape management features, such as Off-Host HSM Recycle to offload mainframe workloads and save CPU cycles. MVT also offers additional workload management capability through new multitenancy views.

## Do More with Mainframe Data

Most companies need enterprise-wide data sharing, for analytics, decision making and general business operations, so they're seeking ways to overcome the data sharing challenges frequently experienced between mainframes and non-mainframe environments. MVT provides a secure, fast and efficient data transport method, with its Mainframe Data Integration SecureTransfer Express, for data sharing between these two often siloed environments.




## Off-Host HSM Recycle with MVThsm

MVThsm shifts capacity optimization, normally achieved by the HSM recycle process, to the MVT tape infrastructure itself without mainframe CPU cycles for tape reads/writes or HSM Catalog Data Set (CDS) updates. MVThsm collects a list of expired data sets and creates space-efficient clones of the affected VOLSERs by pruning the expired data. The process keeps the same VOLSER names and data set block IDs, allowing tape storage capacity to be reclaimed without the need to update the HSM CDS using expensive

## Solution Features

- Complete mainframe virtual tape solutions starting at 2U, scaling to PBs
- 32 Gb/s FICON
- Push Button DR testing & recovery
- Continuous availability for tape
- Off-host HSM Recycle
- CloudTAPE with Air Gap
- Multitenancy management
- MDI Ready
  - SecureTransfer Express
  - Integrated, extensible data transfer & co-processing platform

## Customer Benefits

- Extends virtual tape to mainframe co-processing and data transfer
- Improves performance and availability for all tape operations
  - Simplified DR testing and recovery
  - Continuous availability without failover procedures or host software/management
- Offload mainframe processes:
  - Repurpose CPU cycles for mission-critical workloads
  - Postpone mainframe and storage upgrades
  - Simplify data transfers using "Tape as an API"
- Protect against ransomware with CloudTAPE
  - Air Gap provides programmatic immutability
  - Works with public/private clouds and other object storage systems

## MVT Options

- **Synchronous Tape Matrix™ (STM)**
  True continuous availability for mainframe virtual tape
- **MVThsm™**
  Off-host HSM recycle to optimize tape capacity without MSUs
- **Luminex Replication**
  Improve your disaster recovery plan with remote replication to one or more DR sites with replication monitoring
- **RepMon™**
  Replication monitoring and auditing at the VOLSER level
- **Push Button DR**
  Disaster recovery and testing with "push button" ease
- **CGSafe™**
  Encryption and key management
- **CloudTAPE™**
  Replace physical tape archives and/or third copy backups with always available, geographically dispersed and secure cloud storage
- **MVT Vault™**
  Cost-effective virtual tape vaults for remote, off site storage
- **P2V™**
  Off-host conversion of 3490 or 3590 physical tapes to virtual tapes for remote, off-site archives
- **Tape Migration Software and Services**
  Seamlessly transition physical and virtual tapes with exact copies of original VOLSER numbers and labels
- **LTMon™**
  Integrated, centralized management from the mainframe console

### About Luminex

Luminex serves as a trusted advocate helping enterprise customers protect, manage, and leverage corporate data assets by developing and delivering high quality, innovative technology solutions.

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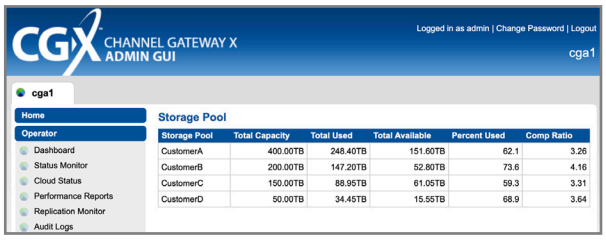
mainframe MIPS. By off-hosting capacity optimization, the process can be run more frequently, enabling existing MVT users to postpone tape storage upgrades and allowing new MVT users to fit existing workloads into smaller configurations.

## More Multitenancy Capability

As Global and Regional Systems Integrators expand their presence and capability for mainframe outsourcing, hosting and disaster recovery, the need to manage tape systems for multiple tenants has also increased. In-house and insourced IT management, and the departments they serve, require similar capability for storage allocation, management and charge-back.




MVT provides the flexibility and features needed to accommodate these multitenancy requirements with separate administrative views, monitoring and alerting for data center owners and individual tenants. Owners can see all tenant information, they can execute operational commands, see historical and real time statistics, assign capacity quotas, view support logs, alerts and much more. Tenants can only access information assigned to them by the data center owner.

## CloudTAPE Option

CloudTAPE was the first technology to enable mainframe data centers to archive tape data to the cloud (CY2012). CloudTAPE appears as a standard tape to the mainframe, offers off-host encryption, transparent data movement and uses proven Luminex Replication to interface with object storage (ex. Hitachi Content Platform, NetApp StorageGRID) and other cloud storage solutions, whether on-premise, public or hybrid. Luminex Replication Monitor and the CloudTAPE Dashboard provide reporting for replication status, cloud storage status, versioning and tape metadata at a VOLSER level.

MVT expands the CloudTAPE capability with the latest data protection methods, seamless support for cloud storage tiering and versioning capability from cloud storage providers, such as AWS and Azure, creating a virtual air gap for even greater data protection.

## MDI SecureTransfer Express

Data sharing between mainframes and distributed systems is a strategic imperative and an operational requirement for companies that need to incorporate mainframe data in enterprise-wide analytics, business operations and big data technologies to produce better business outcomes. However, many companies resort to using unsecured FTP methods for data and file transfers or TCP/IP-based products that require expensive mainframe CPU cycles to execute.

MVT includes a SecureTransfer Express license for securely sharing mainframe data with distributed systems, without the mainframe MIPS impact that FTP and other TCP/IP-based managed file transfer products produce. SecureTransfer uses the same trusted FICON I/O channels for host-side connectivity that are also used by mainframe DASD and tape subsystems.

All Luminex mainframe data solutions are available with pre and post-sales professional services, which are delivered by the industry's top Subject Matter Experts.