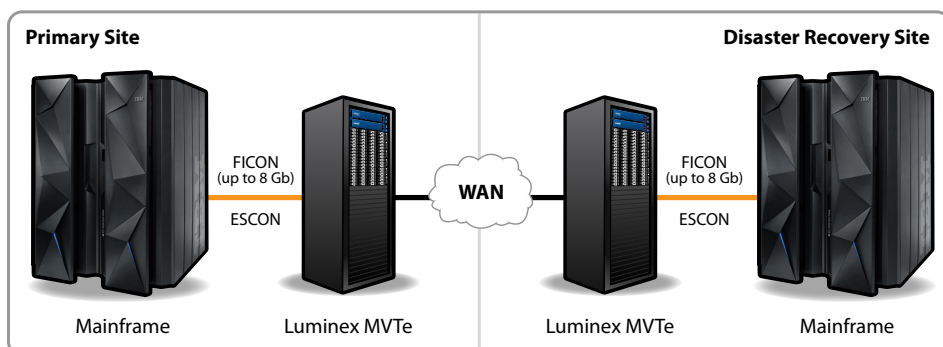## Enterprise-Class Virtual Tape with Extraordinary Options

A Better Fit Makes a Better Solution

Luminex Mainframe Virtual Tape (MVTe™) solutions offer the long term reliability, resilience and performance that enterprise customers demand for their mission and business critical mainframe tape operations. MVTe also expands the possibilities of mainframe tape use with innovative, industry leading options to enable continuous operational improvement and greater access to the enterprise's most valued data, including:

- Non-Disruptive DR Testing and VOLSER-Level Replication Monitoring
- Continuous Tape Availability Using Synchronous Mirrored Writes
- Luminex Tape Migration Software and Services
- Secure Archiving to Enterprise Cloud Storage
- Data Sharing with Big Data Distributed Systems Environments

CloudTAPE READY

Primary Site / **Disaster Recovery Site**

FICON (up to 8 Gb) / ESCON / WAN / FICON (up to 8 Gb) / ESCON

Mainframe / Luminex MVTe / Luminex MVTe / Mainframe

Typical production and disaster recovery configuration using replication over a WAN

MVTe base configurations support up to 8Gb FICON connectivity and provide 3490 or 3590 tape emulation, so existing tape applications are supported without change. The base configuration is complemented by several innovative options, which provide distinct advantages:

Non-Disruptive Disaster Recovery Testing & Replication Monitoring

Since the primary value of replicating virtual tape data is the ability to access it in the event of a disaster situation, MVTe offers replication monitoring (RepMon™) at the VOLSER level and a Push Button DR option to quickly and simply implement DR mode for an actual or test event. By selecting "DR Start" from the GUI, the MVTe at the disaster recovery site will prepare a DR environment allowing read/write activity, without affecting the original data, and all without stopping replication from the primary data center.

Continuous Tape Availability Using Synchronous Mirrored Writes

Luminex Synchronous Tape Matrix (STM™) leverages the modular design of MVTe control units and enables synchronous mirrored writes to multiple storage systems, creating a storage layer, while providing host I/O capabilities from any available storage system within the layer. By abstracting the control unit from the storage system, there is no longer a need for a "primary" and "secondary" configuration; any MVTe control unit can service host I/O for any MVTe storage at anytime. This allows operations to continue, without interruption, even in the event of multiple component failures across all layers of computing, connectivity and storage.

Solution Features

- Complete mainframe virtual tape solution in a compact form factor
- 3490 and 3590 tape emulation
- Up to 8 Gb FICON (ESCON also available)
- Seamlessly scales throughput and capacity from entry-level to high-end environments
- No changes to existing applications required
- No physical tape required

Customer Benefits

- Improves performance for all tape operations
- Significantly improves Recovery Point Objectives (RPOs) and Recovery Time Objectives (RTOs)
- Eliminates cost of storing, handling, transporting & managing tapes
- Eliminates recurring maintenance costs of tape libraries & drives
- Significant reduction in datacenter requirements for:
  - Floor space
  - Electrical usage
  - HVAC requirements
- For HSM, reclaim CPU cycles by skipping ML1 and migrate from ML0 to ML2
- Secure, Reliable and Immediate Disaster Recovery
  - Tape volumes are available both locally & at the DR site
  - Recovery at the DR site is immediate – no waiting for physical tape retrieval

MVTe Options

- **Synchronous Tape Matrix™ (STM)**
  True continuous availability for mainframe virtual tape

- **Luminex Replication**
  Improve your disaster recovery plan with asynchronous remote replication to one or more DR sites

- **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

- **Mainframe Data Integration (MDI)**
  Securely share and transfer data between mainframes and distributed systems environments

- **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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Tape Migration and Conversion Solutions

Luminex recognizes that for many data centers the transition from the old tape environment to the new virtual tape solution will require tape migration software and services. Luminex is currently the only major mainframe virtual tape vendor that directly provides its own tape migration tools and services and near-seamless, fully secure migration with virtually no impact to enterprise operations. With this solution, the original tape volume serial numbers and historical information are retained after cut-over to the new virtual tape environment.

For data centers with 3490 and 3590 archive tapes stored in remote warehouses or physical tape vaults, preserving access to archive data remains dependent on aging physical media, manual handling and shipping, and maintaining tape drives long abandoned by their manufacturers. Luminex P2V can convert these archives, on demand and off-host, from physical to virtual tapes, then replicate them remotely over a WAN to other Luminex virtual tape solutions.

Secure Access to Cloud Storage

MVTe's CloudTAPE enables storage of infrequently-accessed and long-term retention data, such as archives or additional copies of tape data, in always available, geographically dispersed and secure cloud storage. CloudTAPE's support for major providers allows enterprises to leverage their existing, trusted cloud storage services to archive mainframe data and take advantage of economies of scale.

Data Sharing with Big Data Distributed Environments

With Luminex Mainframe Data Integration (Luminex MDI™), an extensible platform is available to leverage the mainframe's channel I/O interface to securely share and transfer data between mainframes and distributed systems environments. The platform is built on a modular, highly customizable architecture that enables limitless implementations for data integration and secure managed file transfer workflows.
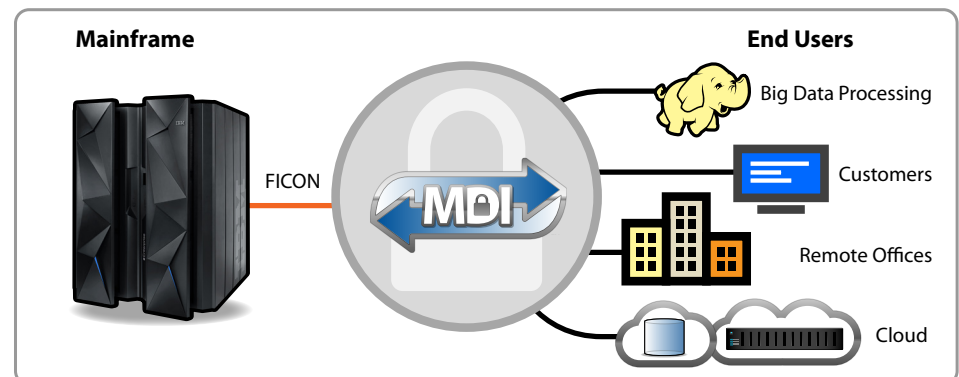
MDI provides secure, efficient access to mainframe data for use by distributed systems applications

Its Not Just Virtual Tape… but Mainframe Data Solutions from Luminex

With MVTe, customers get all of the enterprise-class capabilities and services needed for long term data protection and operational success, with the extraordinary options needed to leverage mainframe tape data for valuable business insight and competitive advantage.