

## TAPELESS MAINFRAME SOLUTIONS

### Luminex's Channel Gateway X (CGX) and HPE Storage – High Performance Virtual Tape with up to 16 Gb/s FICON Connectivity

MODERN Mainframe Virtual Tape solutions from Luminex with HPE storage allow mainframe data centers to eliminate or reduce physical tape while improving all aspects of tape operations, including batch processing, HSM/archiving, and backup and recovery. There is no higher performing solution available on the planet.

Physical tape continues to demand more resources and maintenance costs from mainframe data centers. Floor space and energy requirements, repeated operator interventions, end-of-life support, off-site shipping, lost and failed tapes all converge to challenge already constrained IT resources, budgets and business critical disaster recovery planning.

### Seamless Solution

CGX presents HPE storage systems as standard mainframe tape devices. The solution is truly application transparent, requiring no changes to your existing tape applications.

To further simplify the transition, Luminex's tape migration tools and professional services are available to migrate your current physical and/or virtual tape volumes to the new solution, while retaining the original VOLSERS.

### Performance and Scalability

Up to 16 Gb/s, high speed FICON connectivity is combined with high performance storage from HPE to improve read and write times for all mainframe tape operations.

The solution provides unmatched scalability that grows with your needs. It is simple and non-disruptive to add more Channel Gateways to increase your throughput or add more HPE storage to increase your capacity.

### Improve Backup and Disaster Recovery

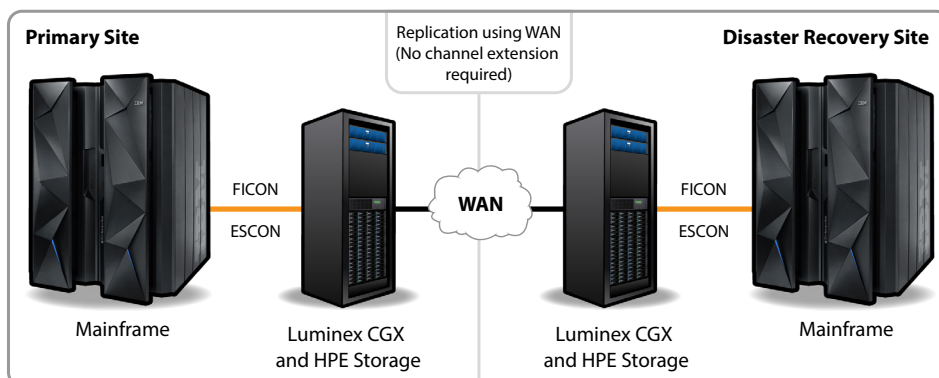
CGX eliminates the cost, risks and limits of physical tape. With the solution's Remote Replication feature, virtual tape data is quickly replicated to remote disaster recovery sites for faster and more convenient disaster recovery testing, vastly improving disaster recovery plans and preparedness. No more lost or damaged tapes and no more waiting for tapes to ship. And because backup windows are dramatically shortened, more frequent full volume backups become practical.

### Solution 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 MLO to ML2
- Secure, Reliable and Immediate Disaster Recovery
  - Tape volumes are available both locally & at DR site
  - Recovery at DR site is immediate – no waiting for physical tape retrieval

*"After implementing the Luminex/HPE solution for Mainframe Virtual Tape, we successfully completed multiple disaster recovery tests, with greater ease and simplicity. We have completely eliminated physical tape use and its associated costs. Our full volume backups are so much faster that we have eliminated the need for incrementals."*

IT Manager,  
Government Financial Agency



Typical CGX-HPE Disaster Recovery configuration using replication over a WAN

### Additional 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 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 and efficiently exchange data and share workloads between z/OS mainframes and distributed systems
- **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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## Channel Gateway solutions have been chosen by mainframe data centers of all sizes and industries

With reliable, high performance virtual tape, mainframe data center planners are:

- Re-thinking and re-tooling tape backup and DR strategies
- eliminating costly and cumbersome physical tape
- realizing greater performance and better SLA's

### The MODERN Advantage

Channel Gateway Modern Mainframe Virtual Tape solutions remove the limitations and liabilities of physical tape and offer the scalability, compatibility and performance that data centers demand:

- Throughput and capacity are scalable from the entry-level to high-end mainframe environments
- z/OS, z/VM and z/VSE operating systems are supported
- All major tape applications and tape management systems are supported
- For HSM, reclaim CPU cycles by skipping ML1, migrate directly from ML0 to ML2
- Supports 4096 devices per FICON channel
- All tape volumes are stored and secured by RAID data protection
- Luminex tape migration tools and services are available
- Luminex Tape Monitoring and Allocation Control System Software (TMACS) is available for complex device allocation and steering
- Solutions are backed by our Worldwide 7X24 Customer Support

### Are you ready to rethink?

**Tapeless backup** – Backups are stored on local, highly available disk.

**Network-based backups and replication** – Remote network-based backup and replication is practical and cost effective.

**RTO** – Online disk-based storage dramatically improves Recovery Time Objectives.

**RPO** – Recovery Point Objectives are far superior with backups remotely replicated in parallel and within minutes.

**Enterprise quality** – Installed and in-use at major and mission critical data centers.

### Channel Gateway at a Glance

The Channel Gateway enables mainframe customers to channel attach industry leading and proven enterprise storage solutions. The Channel Gateway supports both FICON and ESCON channel connectivity and existing mainframe backup software simply sees the Channel Gateway as a recognized mainframe tape device. No software changes are required.