## Enterprise-Class Replication, Testing and Reporting Suite

Luminex Replication provides comprehensive disaster recovery and archive solutions to tapeless mainframe data centers, with surprising ease of use.

As data centers make the transition to tapeless environments, the traditional method of cataloging, packing, shipping and warehousing physical tapes is being replaced with more efficient and cost-effective IP-based replication to remote sites. Luminex Replication extends this potential with more options for where, when and how mainframe tape data is made available, as well as VOLSER-level monitoring and disaster recovery and testing at the push of a button.

### Comprehensive Tape Data Availability, Made Simple

- **Immediate** and continuous replication over IP
- **Flexible** replication policies
- **RepMon**: Monitoring, logging and auditing at the VOLSER level
- **Push Button DR**: Fast, easy and non-disruptive DR testing
- **CloudTAPE**: Replication to Cloud and object storage
- **Transparent** tiering and recall
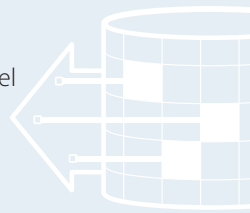
In contrast to shipping physical tapes off site on a daily or weekly basis, Luminex Replication continuously transmits tape data to DR, ensuring that even the most recently written data is protected and available at the recovery site. Enterprises can now meet and improve backup windows, service level agreements (SLAs) as well as RPO and RTO requirements with minimal operator intervention and without the costs and risks of handing valuable data off to a third party for transit or vaulting. With tape data always available at DR, testing times are reduced, allowing for more frequent and/or extensive testing events. Additionally, recovery and testing success is improved since there is no risk of missing, mislabeled or damaged physical tapes.

Flexible policy configurations allow selective replication at the tape range and/or device range (logical library) level, so only the required data is replicated.

For enterprises that require a third copy of tape data, multi-site replication provides "one-to-many" and "cascading" replication options. With one-to-many replication, tape data is sent directly to one or more local or remote sites, minimizing latency between second and third copies. Cascading replication minimizes network bandwidth at the production site by sending replicated "second copy" data from DR to a third site. Both options work automatically without operator intervention.
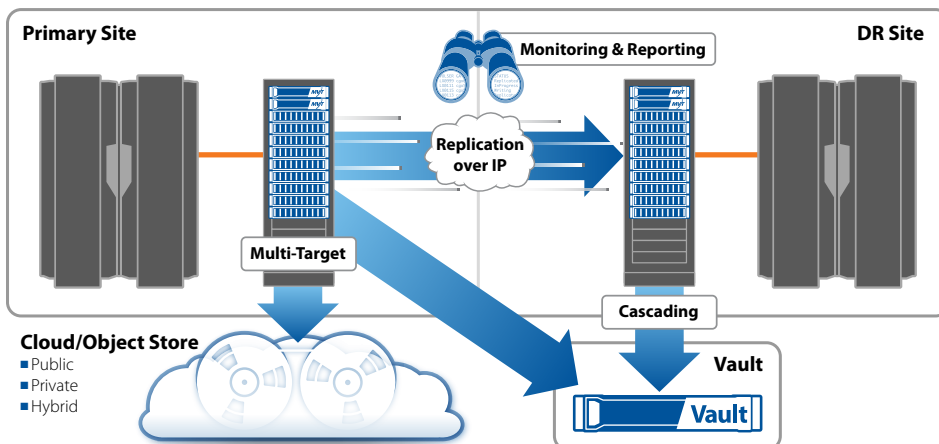


*Luminex Replication provides multi-target and cascading replication to a variety of targets with flexible policies to serve the needs of any size mainframe environment.*

## SOLUTION FEATURES

### Flexible Replication Policy Options

- **Number of Copies**
  - One-to-One
  - One-to-Many
  - Cascading
- **Replication Targets**
  - MVT/CGX
  - MVT Vault
  - Cloud Providers
  - Object Storage
- **Methods**
  - On unload of written tape
  - Selectively, from a single VOLSER to a mainframe managed list
- **Tiering**
  - Selectively move tape data to other sites, leaving "stubs" to free up local capacity while providing transparent recall from remote storage
  - Supports tracking and recall for Cloud or object storage systems' internal tiering

### Replication Monitoring

- Real-time VOLSER-level replication status display
- Replication logging for performance and disaster recovery auditing
- Email alerts with "point in time" replication status logs
- Monitor replication from multiple local or remote clients
- View status of volumes stored in the Cloud or object storage

### Push Button DR Testing

- Simple implementation, from a GUI or mainframe console
- Non-disruptive DR testing
- Save or discard read/write DR test data

## Additional MVT Options

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

- **MVThsm™**
  Off-host HSM recycle for ML2 without the MSUs

- **CGSafe™**
  Encryption and key management

- **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

- **MDI SecureTransfer Express™**
  Offload managed file transfers for greater security, speed and reliability, all as easily as writing a tape

## 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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## CloudTAPE

In addition to replicating to other Luminex MVT, CGX and Vault solutions, Luminex Replication provides Cloud and object storage compatibility with its CloudTAPE feature. This feature is ideal for data centers seeking to replace physical tape archives and/or third copy backups with always available, geographically dispersed and secure Cloud storage.

## RepMon: Replication Monitoring

RepMon provides real-time VOLSER-level replication monitoring and logging for disaster recovery auditing and performance reporting. The GUI runs in any modern browser and offers filtering and sorting by VOLSER, gateway and replication status, allowing operators to gather information efficiently in real-time or from log files. RepMon can monitor multiple MVTs, and multiple RepMon clients can monitor the same MVT. In the event of a connectivity or replication error, RepMon can provide email alerts with "point-in-time" replication status logs.



### CloudTAPE Dashboard

When replicating data to the Cloud or object storage, Luminex Replication can provide additional data about the disposition of the remote VOLSERs. These storage targets can offer internal tiering for added cost savings, and versioning features that help provide programmatic immutibility, or an "air gap," for virtual tape backup data. CloudTAPE Dashboard enables storage managers to see, at the VOLSER level, where tapes are stored within those systems, the number and date of versions, and other metadata necessary to govern data stored outside of the mainframe's native ecosystem.



## Push Button Disaster Recovery & Testing

Since the primary value of replicating virtual tape data is the ability to access it in the event of a disaster situation, Luminex offers the 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 MVT 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. The same process can be achieved with simple commands from the mainframe console.

Once recovery is achieved, or testing is complete, read/write activity can be saved for auditing, applied and replicated back to a restored primary data center, or wiped clean for the next testing event.

## Luminex Mainframe Virtual Tape (MVT) at a Glance

Luminex MVT solutions are based on Channel Gateway X (CGX™) control units, which enable mainframe customers to leverage industry leading and proven disk-based enterprise storage solutions as virtual tape. CGX 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.