

The Sky is the Limit for Off-Site Storage and Archiving

Securing business and mission critical data off site is an essential part of every IT operations plan and compliance with Sarbanes Oxley (SOX), SEC, HIPPA and other regulations require companies to comply with long-term retention policies using off-site data storage, with periodic data integrity checks, security and management.

Most mainframe data centers have relied on off-site vaults, remote disaster recovery (DR) sites and physical tape media to secure a second or third copy of data off site for recovery, archiving and/or compliance. Of course, some of these companies have transitioned to a virtual tape strategy using remote replication between the production and DR site, **however none of the preceding options offers the global access to data, managed services and the usage-based pricing model of cloud storage.**

Cloud storage will lift companies above the limited, single DR site approach. It enables enterprises of all sizes to leverage geographically dispersed data centers to access their data. Disk storage, updates, maintenance and periodic technology refreshes are included, so the customer's IT resources are free to focus on other priorities. For added protection, data is encrypted before being stored in the cloud, it is accessible by the client and only the client.

Save Money, Ensure Better Access, Secure Your Data, and Meet Compliance Goals

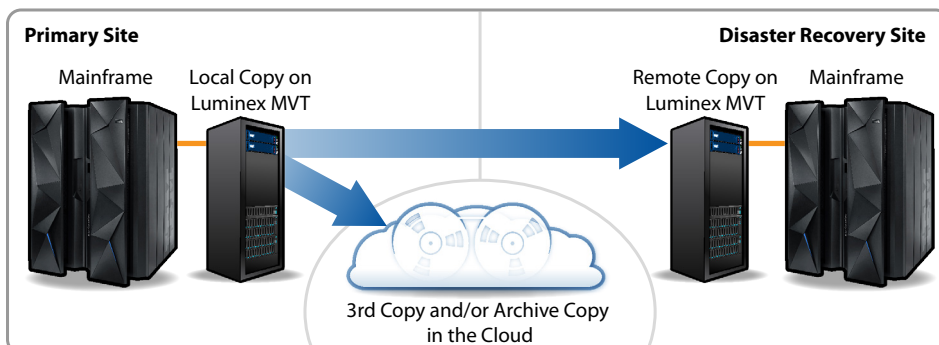
- OPEX financial benefits
- No CAPEX for public cloud options
- Usage based pricing
- Technology refresh
- Managed services
- Reduced data center storage footprint
- Save on environmental costs
- Access via globally distributed data center
- Application transparent
- Guaranteed QoS levels
- One flat monthly rate
- Integrated encryption at rest and in-flight

CloudTAPE Solutions using Cloud Storage

With CloudTAPE, mainframe data centers are freed from their reliance on remote tape vaults and the cumbersome process and high cost associated with packing, shipping and storing third copies or archive copies of data off site on physical tapes.

CloudTAPE solutions are connected to the mainframe's ESCON or up to 32 Gb/s FICON channels and emulate 3490 or 3590 tape drives, so existing tape applications can be used without change. The solution is application transparent. When tape data is sent from the mainframe, it is encrypted and compressed by CloudTAPE in a single operation. The data is then replicated to a remote disaster recovery site, or stored in secure and geographically dispersed cloud storage, or both (see figure below).

The solution is ideally suited for tape use cases such as archiving or third copies of data which have the performance characteristics of write once – read seldom and typically have a local and/or remote copy.



Typical configuration for third copy/archive, including remote replication to DR site

SOLUTION BENEFITS



Better Access

- Access to an archive or 3rd copy of tape through globally distributed cloud storage data centers, at any time
- Change once, available globally
- 7X24 data availability and support
- Guaranteed QoS levels

Save Money

- Eliminate the cost associated with physical tape infrastructure, media, shipping and off-site storage for vaulting
- Usage based pricing
- No CAPEX cost for public clouds
- One flat monthly rate
- No maintenance or technology refresh costs

Totally Secure

- Eliminate security issues related to physical media
- Multi-level data and physical security
- Encrypted at the ingest, in-flight and at rest

Compliance

- Geographic dispersal of archive data
- Restrict or enable storage in countries of your choice

No changes

- Non-disruptive to existing tape applications and datacenter operations

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
- **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.

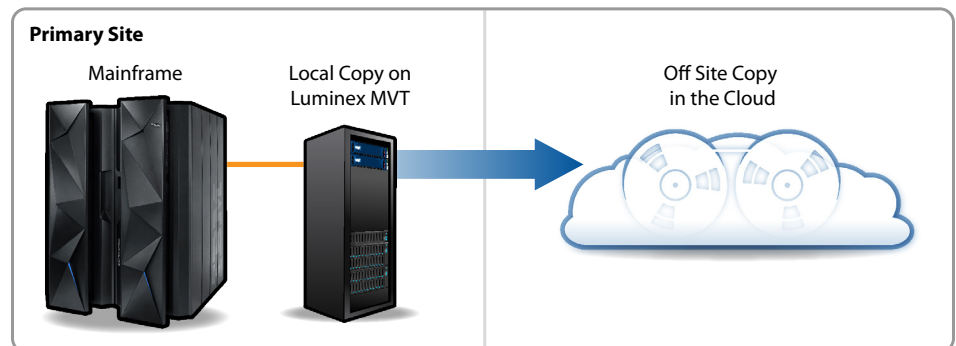
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CloudTAPe is a fully-managed service which offers multi-level security, reliability and redundancy. The cloud storage data centers (nodes) are strategically located worldwide to optimize access and maximize data availability. The nodes are capable of handling billions of files, which means data can be written to one location and provide access to any one or all of the storage nodes.

Now the world's leading companies can take full advantage of the cloud across the entire enterprise, including mainframe tape data storage by using CloudTAPe solutions.

CloudTAPe also offers a simple and cost-effective solution for remote storage and redundancy without the cost or constraints of managing an internal or 3rd party remote infrastructure (see figure below). The ability to access data from any location provides enterprises with unprecedented flexibility to recover, relocate or consolidate operations.



Typical configuration for remote storage and redundancy without a dedicated DR site

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 enterprise storage solutions. 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.