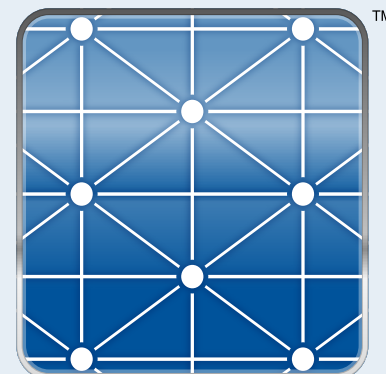


True Continuous Availability

The largest and most complex mainframe enterprises require the highest levels of availability, typically employing redundancies for compute, connectivity and storage. These configurations can require the acquisition of duplicate components that largely remain idle and contribute nothing to “fair weather” operations. Should a failure occur, these systems initiate a failover process to resume operations, sometimes requiring the entire infrastructure to “flip” between primary and secondary configurations that can temporarily affect users. Though high availability configurations are a step toward the goals of business continuity, they suffer from limitations in scalability, efficiency and performance without achieving the ultimate goal, continuous availability.

To achieve continuous availability, Luminex Synchronous Tape Matrix (STM™) leverages the modular design of Luminex Channel Gateway X (CGX) mainframe virtual tape controllers 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 controller from the storage system, there is no longer a need for a “primary” and “secondary” configuration; any CGX can service host I/O for any 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

- Resilient architecture instantly and automatically adjusts to multiple failures without interruption
- Scalable
 - Performance
 - Capacity
 - Redundancy
- Seamlessly integrates with other Luminex solutions for mainframe virtual tape

Solution Benefits

- Continuous Availability
- Easy to Implement
- No Host Scripts or Policies Required
- All components contribute to operations day-to-day, not just during failure events
- Modular design ensures investment protection

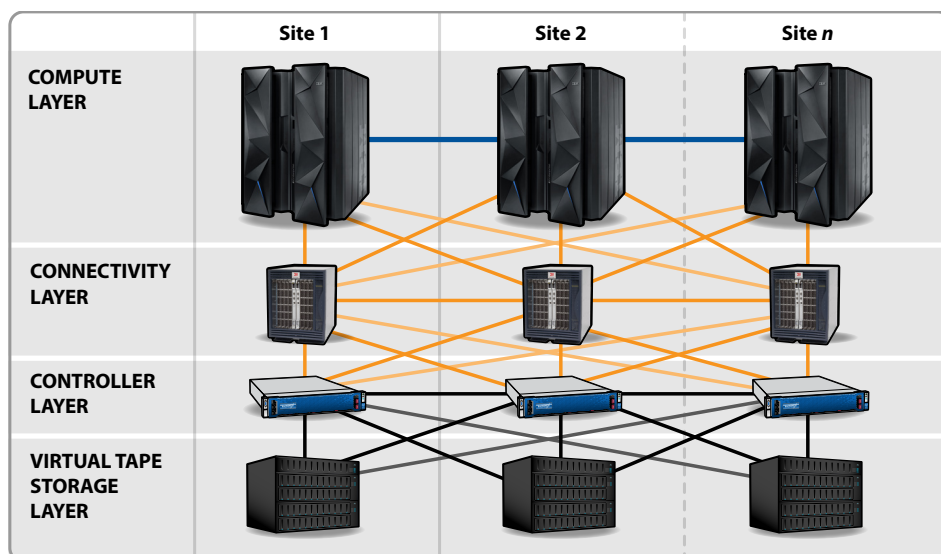
Active-Active Operations Without Compromise

- No downtime from failover or restore processes
- No idle components to buy
- Data is always available for I/O
- Easy to implement, no host scripts or policies required
- No limitations for throughput, capacity or degrees of redundancy
- Supports dissimilar storage systems & compression/deduplication technologies

Efficiently Scalable

STM provides unprecedented configuration options, ensuring that the exact solution is available for every enterprise's needs. Each layer of each site can be scaled independently to satisfy specific requirements, eliminating the need to purchase bundled components from multiple layers, such as controller and storage bundles. Independent scalability also eliminates capacity and throughput limitations without limiting the number of synchronous copies of data.

The active-active capabilities of STM eliminate the need to procure, install and maintain redundant, yet idle, components. Active-passive configurations can require twice the investment for twice the number of components, half of which do not contribute to day-to-day operations. In contrast, all components in STM's active-active architecture service daily operations as well as provide continuous availability.



Simplified STM configuration with n-sites. Sites can be local, in a campus or within metro link distances.

Additional Options

- **Complete MVT Solutions**
Internal and external storage available for a complete, all-in-one mainframe virtual tape solution
- **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.

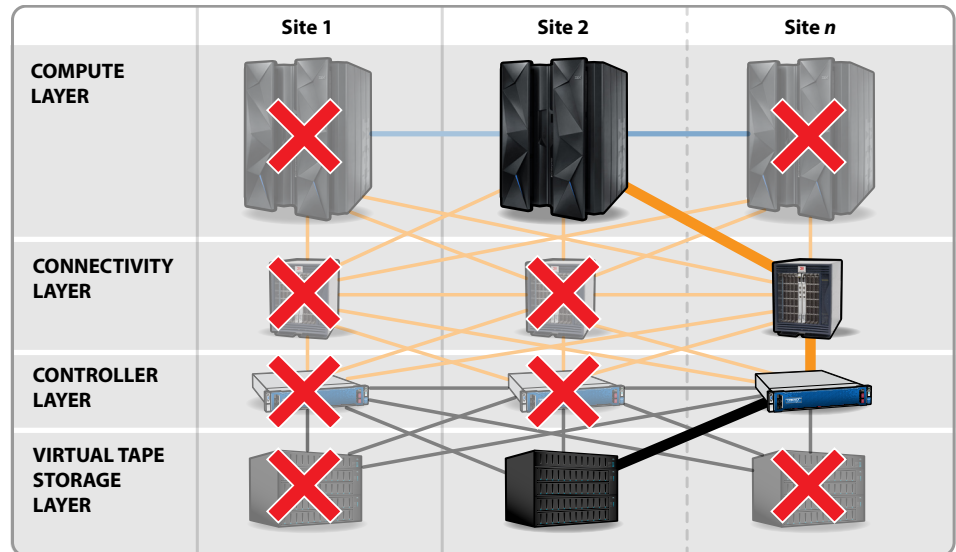
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Resilient, Not Just Redundant

STM provides a resilient mainframe tape infrastructure that instantly and automatically adjusts to the most devastating failure scenarios without interruption. Multiple failures and even severed connectivity between sites will not cause mainframe I/O activity to cease.



Operational STM configuration with multiple failures across layers and sites.

As soon as failed components are replaced, STM automatically begins the process of regaining the configuration's full resiliency potential. CGX controllers return to servicing I/O's while storage systems are re-synchronized.

Security and Cloud-Storage Ready

STM implementations include built-in compatibility with Luminex's comprehensive family of MVT options. Large enterprises deploying STM can optionally implement data security and cloud-based tape archiving solutions from Luminex.

CGSafe provides encryption and key management at the VOLSER level, rather than at the disk level, ensuring that data remains encrypted for all local or wide area network traffic, including replication. CGSafe can optionally integrate into an existing key management infrastructure for a single-point-of-management.

CloudTAPE replaces the infrastructure required to service, package, ship and warehouse archive data stored on physical tapes, with always-accessible, full-managed cloud-based storage. CloudTAPE allows mainframe enterprises to store archive data in globally distributed cloud storage data centers with the ability to restrict or enable storage or accessibility within specifically selected countries. And, as a managed service, all maintenance and technology refreshes are included in a flat, affordable, usage-based monthly rate.

