# LUMINEX
### ENLIGHTENED | STORAGE

## OneBeacon Insurance Improves Mainframe Tape Security and Reliability with Luminex's Channel Gateway™

Customer privacy and security are paramount at OneBeacon. When their customer data policies were updated with stricter security requirements, OneBeacon's Storage Team reviewed their mainframe tape environment and determined that they could provide policy compliance and improve overall tape operations with Luminex's Channel Gateway mainframe virtual tape solution.

OneBeacon Insurance Group, Ltd. (NYSE: OB) offers a range of insurance products sold through select independent agents, regional and national brokers, and wholesalers. The company's businesses include 14 subsidiaries covering insurance needs in government, health, auto, financial, maritime and educational sectors.

As one of the oldest property and casualty insurers in the United States, OneBeacon traces its roots to 1831 and the Potomac Fire Insurance Company. Today, OneBeacon's specialty insurance businesses are available nationwide.

## Customer Challenges

OneBeacon's new privacy and security policies required all physical tape data to be encrypted before it left OneBeacon's custody. This would add significant cost and management overhead to an already aging, inefficient and error-prone physical tape environment for the mainframe.

If the data center could eliminate physical tape and use virtual tape with deduplication and replication over the WAN to a DR site, OneBeacon could improve its data security while eliminating many of the headaches caused by physical tape. The transmitted data would remain in OneBeacon's custody and would only include deduplicated segments of files that are not legible or usable by would-be data intrusions.

Until recently, OneBeacon Insurance had backed up its mainframe data, generated by its IBM zSeries mainframes, with a traditional, older physical tape infrastructure comprised of 32 IBM 3590 tape drives and two IBM B18 VTS'. Not only was this infrastructure costly to maintain, it also presented a number of backup and recovery challenges that needed to be addressed, including mislabeled or malfunctioning tapes, robotic and tape drive malfunctions, and reliance on a third-party to transport and warehouse tape cartridges.

The mainframe administration team frequently experienced problems with the tape drives and had to perform tape reruns, a time-consuming and frustrating task. Daily, sometimes hourly, file recoveries were problematic and required valuable time from IT associates. Most importantly, the team was beginning to lose confidence in the ability of their existing tapes' ability to recover all critical data in the event of disaster or system-level issue.
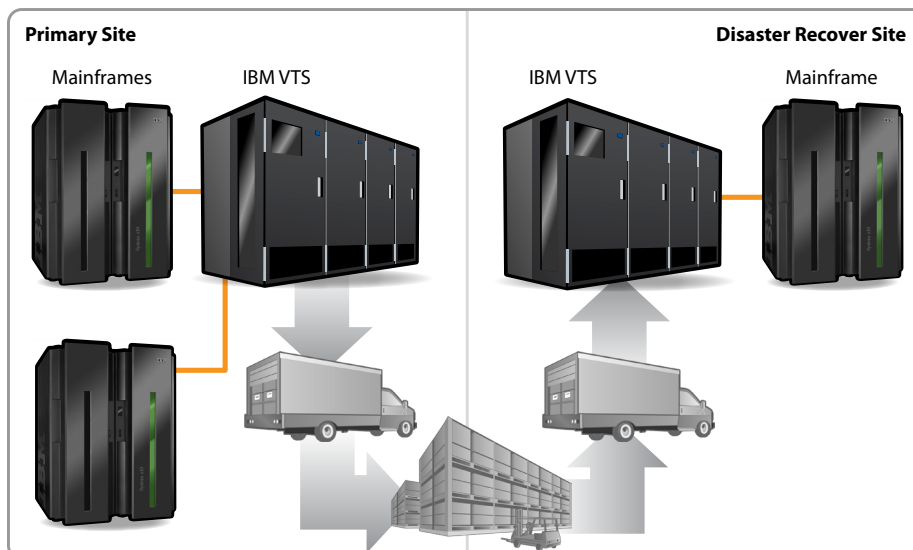


**Primary Site**

Mainframes　　IBM VTS

**Disaster Recover Site**

IBM VTS　　Mainframe

**Figure 1. Previous mainframe tape environment with IBM Tape and Virtual Tape System, offsite tape vaulting and third-party tape transport.**

## Key Highlights

**Industry:** Insurance

**Location:** U.S. Headquarters, Canton, MA

**Business Profile:** One of the largest casualty insurance companies in the U.S.

### IT Environment

- Three IBM zSeries mainframes running seven LPARS
- Legacy IBM Tape and Virtual Tape System (VTS) Infrastructure
- FICON channel connectivity
- SunGard disaster recovery (DR) services

### Backup Software

- IBM DFHSM
- Innovation Data Processing FDR

### Challenges

- Changes in data security policies would require expensive, complex tape encryption and key management overhead for continued physical tape use
- Aging tape infrastructure unable to meet backup and recovery requirements
- Frequent tape failures
- Traditional overhead costs of physical tape: maintenance, offsite storage, media and shipping fees

### The Solution

- 5 Luminex Channel Gateway virtual tape units, three at the production site and two at the DR site
- 2 deduplication storage systems, one at the production site and one at the DR site for the mainframe environment

### Business Benefits

- Improved tape data security by eliminating third party transportation
- Reduced costs for tape-related expenses
- Reduced data storage and network bandwidth requirements
- Simplified business recovery plan for the mainframe
- Improved RPO & RTO

### Competitive Challengers

- Replicated IBM tape and VTS solution

### About Luminex

Luminex is a leading developer and provider of disk-based mainframe virtual tape products and technologies. Luminex Channel Gateways allow mainframe enterprise users around the world to take full advantage of the benefits of Modern Mainframe Virtual Tape to eliminate or reduce physical tape, improve RTO and RPO, lower capital and operating costs and improve data security. With the LUMINEX Channel Gateways, enterprises can now have a single backup and recovery program for their mainframe and open systems data.

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According to Steve Hodges, Storage Team Manager at OneBeacon Insurance, "Tape was the biggest barrier to an effective disaster recovery solution. We were always questioning if we had all the tapes or whether something had fallen through the cracks. Vaulting physical tapes for DR just isn't a fun thing to do."

After factoring in the substantial ongoing costs associated with supporting the tape infrastructure, which included tape media, offsite storage and shipping fees, OneBeacon Insurance knew that it was time to reassess its approach to backup and recovery.
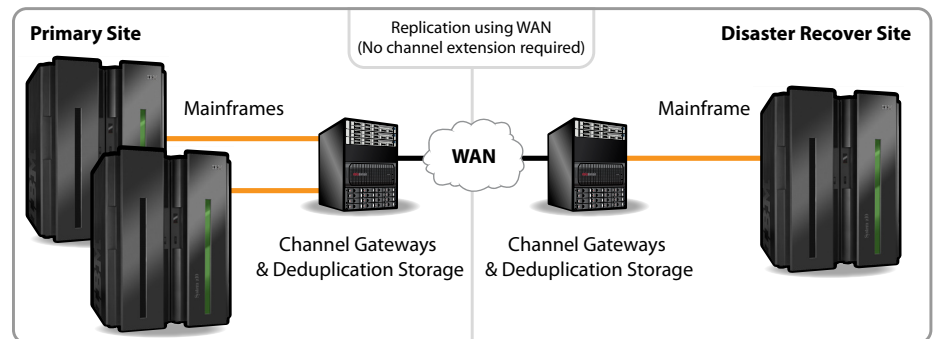
## Luminex Channel Gateway Solution

After exploring a number of different alternatives, OneBeacon Insurance made the decision to implement the Luminex Channel Gateway mainframe virtual tape solution. OneBeacon Insurance installed three Luminex Channel Gateways with deduplication storage at the production site in Canton, MA and two Luminex Channel Gateways with deduplication storage at the "mirrored" DR site located at SunGard in Philadelphia, PA.

Luminex Channel Gateway software emulates mainframe tape drives. When the Luminex Channel Gateway receives a tape volume from the mainframe, it streams the data straight to disk, leveraging the compression benefits of inline deduplication storage. In addition, Luminex provides its proprietary DataStream Intelligence™ to help maximize deduplication rates of the backup data.

As a result, mainframe tape data security was improved by making WAN-based replication cost-effective and secure, thus eliminating third parties from the "chain of custody".

With the Luminex Channel Gateway in place, the mainframe system at the production site is now backed up to a deduplication storage system. The data is then replicated via a WAN to a second deduplication storage system at the DR site at SunGard, where another Channel Gateway and mainframe system also reside.



**Figure 2. New mainframe virtual tape environment with Luminex Channel Gateways, deduplication storage and replication to the DR site over a private WAN.**

## Business Benefits

Using the Luminex mainframe virtual tape solution has enabled OneBeacon Insurance to successfully meet its customer data security and DR goals, delivering continuous availability and a considerably improved recovery window.

Steve Hodges remarked, "The ability to replicate has solved so many of our problems. Previously, we were always worrying if we had all of our tape media accounted for. Now, every single virtual tape we create is automatically replicated to our DR site. There's no way that we can miss anything."

By ridding itself of tape handling and administration, OneBeacon Insurance has also reaped significant cost savings by eliminating tape media costs, offsite storage services and shipping fees, staff tape management time, and the growing service costs for the tape infrastructure.

"Eliminating tape handling is a very nice thing," continued Steve Hodges. "With the replication capabilities that we now have, all of the tasks we had to do before, such as sending physical tapes offsite for DR, have gone away. We now have an error-free environment."

Additionally, OneBeacon Insurance has been able to reduce its physical storage requirements by implementing the Luminex Channel Gateway solution. Hodges cites more than 114 TB of backup data which has been compressed to about 13.8 TB, nearly a 90% savings in utilized disk space.

"The IBM tape system was a hefty piece of equipment. Comparatively, we're currently storing our backups on the Channel Gateway-attached storage, which only takes up a few rack units," noted Hodges.