

# Virtual Tape Replication Multi-Vendor Panel Discussion - LUMINEX

Arthur Tolsma  
*CEO*  
Luminex

# Discussion Points

## Why Replicate Virtual Tape?

- Reduce physical tape in daily operations
- Improve disaster recovery capabilities
- Eliminate physical tape security risks
  
- Disk-based virtual tape replication achieves these goals
  
- Deduplication can be useful to reduce WAN bandwidth and may be essential for the project to be cost-effective
  
- Operational choices include whether to replicate all tape data, or just backups?

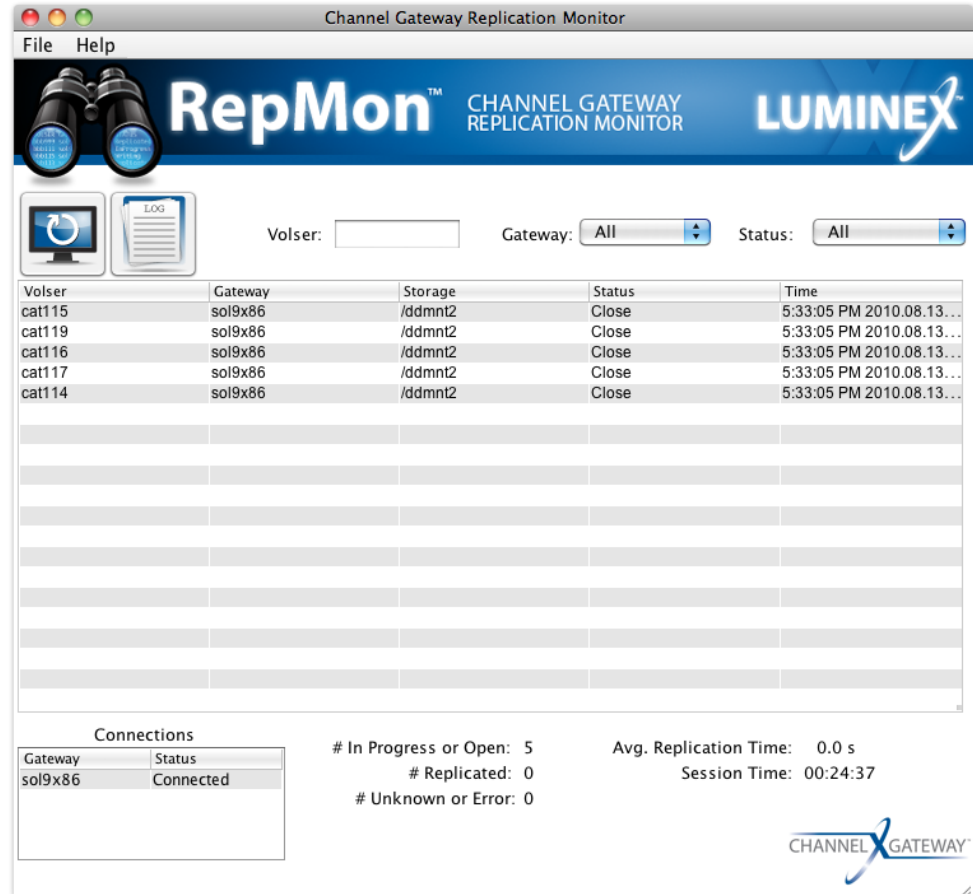
# Discussion Points

## Focus on the Goal – RECOVERY

- The purpose of backup is for RECOVERY
- How current is my data? (RPO)
  - Getting data offsite quickly is important
  - Knowing what data can be recovered at the DR site and what data can't is important
  - ONLY Luminex provides the capabilities and insights to address this issue in a practical way - RepMon
- How fast can I recover it? (RTO)
  - No vendor can match Luminex Channel Gateway FICON recovery speeds
- Can I test Non-disruptively?
  - YES, with Luminex Channel Gateway

# RepMon: Replication Monitor

- Identifies Write and Replication Status of Mainframe Tape Volsers
- Identifies if virtual tape data at DR is still consistent with the primary datacenter
- Provides visual and audit capabilities to confirm when backups reach DR



Channel Gateway Replication Monitor

File Help

**RepMon**™ CHANNEL GATEWAY REPLICATION MONITOR **LUMINEX**

Volser:  Gateway:  Status:

Volser	Gateway	Storage	Status	Time
cat115	sol9x86	/ddmnt2	Close	5:33:05 PM 2010.08.13...
cat119	sol9x86	/ddmnt2	Close	5:33:05 PM 2010.08.13...
cat116	sol9x86	/ddmnt2	Close	5:33:05 PM 2010.08.13...
cat117	sol9x86	/ddmnt2	Close	5:33:05 PM 2010.08.13...
cat114	sol9x86	/ddmnt2	Close	5:33:05 PM 2010.08.13...

**Connections**

Gateway	Status
sol9x86	Connected

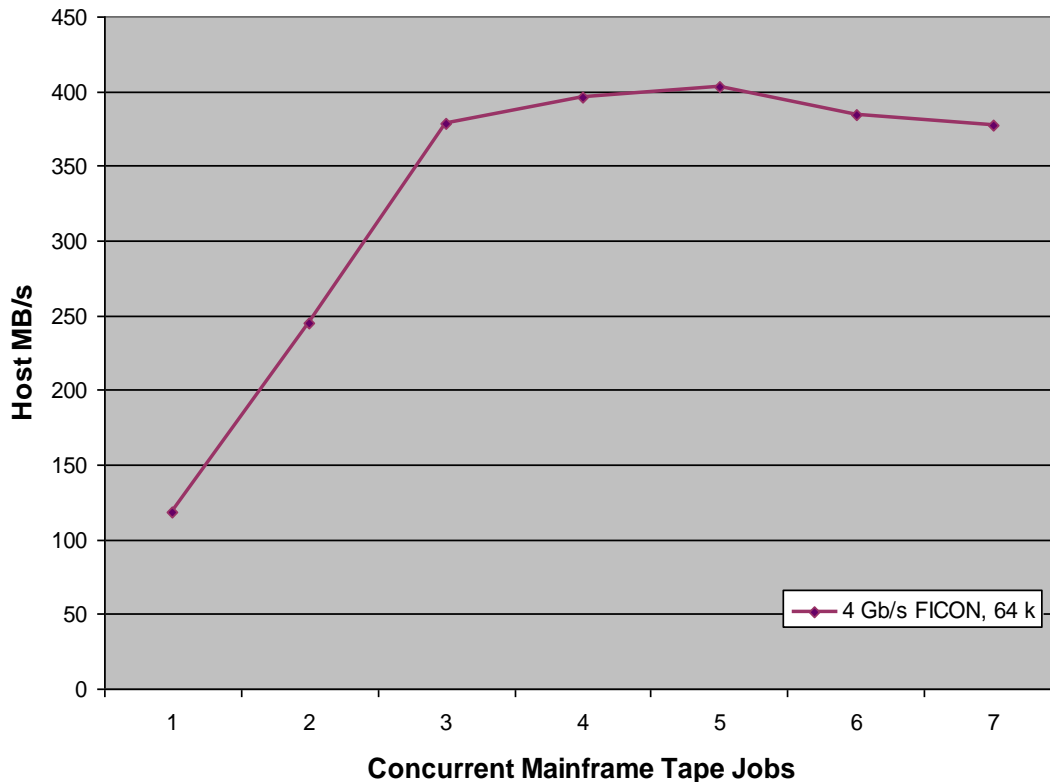
# In Progress or Open: 5  
 # Replicated: 0  
 # Unknown or Error: 0

Avg. Replication Time: 0.0 s  
 Session Time: 00:24:37

CHANNEL GATEWAY

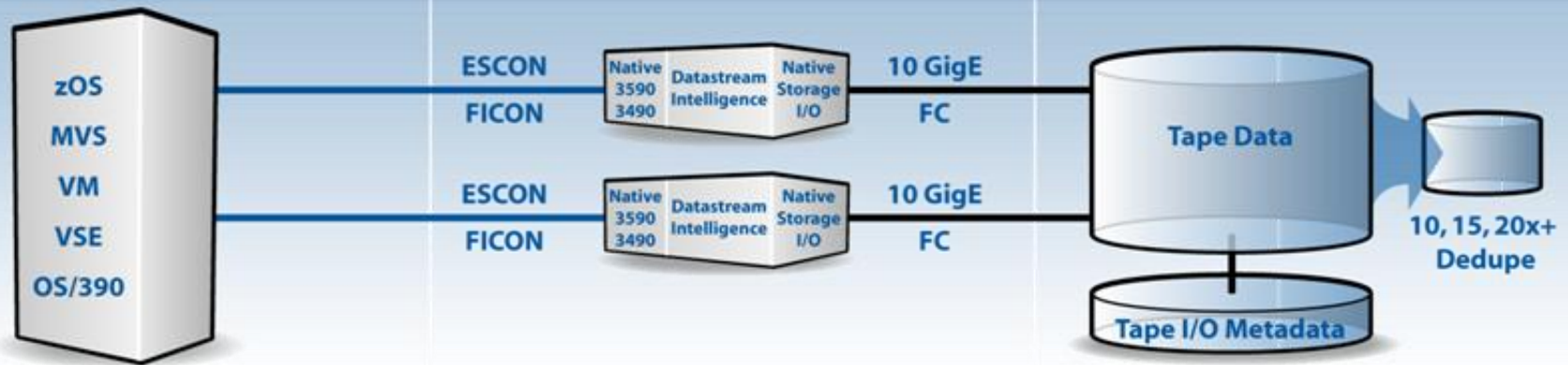
# Channel Gateway Performance *Setting New Standards*

Channel Gateway Sustained Write Performance  
1 FICON Channel



- True “wire-speed” FICON performance
- Even 8GB/s host FICON
  - “system optimizations” needed for host to saturate channel
- PROVEN 1.3 GB/s in 1U
- Take Your Own Test Drive!

# DataStream Intelligence Maximizes Deduplication



## Mainframe

- Application transparent – non-intrusive
- No MIPS required
- zOS, MVS, VM, VSE and OS390 supported
- Works well with all major tape management systems
- SMS, MTL or Esoterics can be used








## Luminex Channel Gateways

- Emulates 3480, 3490 or 3590 mainframe tape drives
- DataStream Intelligence optimizes deduplication
- Compression options
- Active – Active with NSPOF
- Dual PS, Fans & Mirrored OS
- No tape data on gateways

## Enterprise Storage System

- NFS or FC attached
- Mainframe Tape Volumes stored as standard files
- Data Deduplication maximized
- Replication for backup and Disaster Recovery

# LUMINEX Customers (Partial 1 of 2)

 CA	 NY	 FL	 MA	 MI	 TN
 CA	 NY	 FL	 MA	 MI	 TN
 CA	 CO	 FL	 AL	 MS	 US
 CA	 GA	 SC	 AL	 IL	 CN
 IT	 IT	 ZA	 ZA	 MX	 MX

 Replaced IBM

 Replaced StorageTek

 Replaced Other Storage Vendor

# LUMINEX Customers (Partial 2 of 2)

 Bank of Tokyo	 NEW YORK CITY HEALTH AND HOSPITALS CORPORATION	 HealthNow HealthNow New York Inc.			
NJ	NY	NY	NY	PA	MO, PA, UT
 Allscripts™	 MASSACHUSETTS		 Your Neighborhood Food Market		
NJ	MA	VA	NC	FL	MI
 IDAHO FARM BUREAU	 IDAHO POWER An IDACORP Company	 IDAHO DEPARTMENT OF LABOR	 IDAHO OFFICE OF THE STATE CONTROLLER		
ID	ID	ID	ID	ID	CO
 LANDS' END	 AgriBank FCB	 EBSCO Industries, Inc.	 WELLS FARGO Dealer Services		 Circulo de Lectores
WI	MN	AL	CA	QC	ES
 BRITISH AIRWAYS	 John Lewis	 Sainsbury's	 PRT Puerto Rico Telephone	 EVERTEC.	
UK	UK	UK	PR	PR	DE

 Replaced IBM

 Replaced StorageTek

 Replaced Other Storage Vendor



# Discussion Points

## How do I Choose?

- References Matter. Demand Them.
  - Luminex continues to lead the industry transition to disk-based virtual tape.
- Solutions that Scale for YOU (not your neighbor or a vendor line card)
  - How will you migrate your existing tape infrastructure?
  - How will your operational needs addressed?
- What is the product and vendor Roadmap?
  - Luminex continues to Set New Standards in performance, features, and customer-driven functionality

**Q&A?**

**Thank You**

**Arthur Tolsma**  
*CEO*  
Luminex