Mainframe Virtual Vaults - The Next Generation of DR Center Services

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Discussion Topics

• What is a Virtual Tape Vault?
• Use Cases
• Authorized Disaster Recovery Centers
• Vault+-as-a-Service
• About PSR
• 7 Tiers of Disaster Recovery
• Customer Example
• Summary
What is a Virtual Tape Vault?

• A secure, virtual tape, remote replication storage target
• 1 or more 2U remote appliances located at internal or 3rd party DR or colocation sites
• Includes Remote Inventory Auditing capability for tape VOLSERS
• Use Cases:
  – 3rd site
  – Out of Region
  – 2nd site for Disaster Recovery
  – Migration Tool
Use Case: 3rd Copy

Production Site
- Mainframe
- Luminex MVT

Disaster Recovery Site
- Luminex MVT
- Mainframe

Vaulting Site
- Campus
- Metro
- Out of Region

Luminex MVT Vault

Complete your session evaluations online at www.SHARE.org/Orlando-Eval
Use Case: 2nd Copy

Production Site

Mainframe

Luminex MVT

Vaulting Site

Vaulting Site

Campus

Metro

Out of Region

Luminex MVT Vault

Complete your session evaluations online at www.SHARE.org/Orlando-Eval
How is it Different from Other Mainframe Physical Tape Vaults (Example: Iron Mountain)?

- The last copy of data is more current vs. PTAM (tape shipping via trucks)
- Data is immediately available via WAN
- Physical tapes are not subject to being lost or stolen
- No ongoing cost for tape media, shipping or storage
- Customers can avoid the risk of data inaccessibility due to driving conditions
How is it Different from Mainframe Virtual Tape Products from Other Major Vendors?

• Size: 2U (rackmountable and portable if required)

• Price: A fraction of the cost

• Activated On-Demand
Vault+-as-a-Service for Disaster Recovery

• Only available via Luminex ADRCs as a service
• ADRCs install, maintain and manage it for DR tests and events
• All hardware needed (including HBA & FICON) is pre-installed
• Bandwidth can be a dedicated connection or a secure VPN/Internet connection at minimal cost
PSR: Authorized DR Center for Vault+

- Every PSR customer operates System Z
  - z/OS, z/VM, z/VSE – Supported, Back Levelled, all Sizes
- Highly skilled and experienced PSR technical and sales staff
  - We focus on operating systems and all Z attached Infrastructure
- Centralized technical approach and remote support allow PSR to operate anywhere in the US
- Primary Data Center in Boston with 7 Mainframes and opening 2nd data center in Chattanooga, primarily for DR backup using Luminex Vault+
- In 2014, PSR was awarded the IBM Beacon Award
PSR Offerings

- **Service Plan**
  - Retainer based systems programming for z/OS, z/VM and z/VSE and all ISV software products

- **SystemBuild**
  - Fixed price software upgrade for Z systems including all 3rd party
  - Upgrade is performed at PSR and the customer tests the system at PSR prior to implementation at their site

- **Disaster Recovery**
  - Mainframe DR service for SMB type customers
  - No Open systems but customer may place equipment at PSR
  - Now offering DR to our hosted and z Cloud customers at 2nd data center

- **ServerAssure**
  - Pre-Staging and Pre-testing of new IBM mainframes at PSR
  - Customer performs a full acceptance test at PSR
  - PSR is the only IBM Business Partner to offer this service

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PSR Offerings

- **PSR Hosting**
  - Infrastructure offering for clients to house their own CPU at PSR and use our data center resources
  - Customer owned mainframes can be production or DR

- **PSR z Cloud**
  - Hosting of customer production environments using PSR owned and shared mainframe
  - Key differentiator: the customer maintains their own production control making this infrastructure as a service

- **NEW OFFERING: PSR Vault+ Bundle Offering**
  - Hosting of Luminex MVT or MVT Vault
  - Dedicated Internet Bandwidth at PSR – typically 100 MBPS
  - Customer provides encrypted router for Secure VPN connection
    - Also utilize their existing internet pipe for outbound replication to PSR
  - Implementation of MVT at PSR and customer
    - 36 Months of Support
  - Single bottom line price
  - Optional DR subscription or if in existing DR agreement elsewhere PSR will cut tapes for them to bring to DR as needed
7 Tiers of Disaster Recovery

Tier 0: No off-site data – Possibly no recovery
Tier 1: Data backup with no hot site
Tier 2: Data backup with a hot site
Tier 3: Electronic vaulting
Tier 4: Point-in-time copies
Tier 5: Transaction integrity
Tier 6: Zero or near-zero data loss
Tier 7: Highly automated, business integrated solution

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Customer Example: MVT Vault+ Bundle

Large State University

- PSR Hosting a new zBC12 at PSR
- MVT at existing production site used to migrate off STK and then replicate to PSR
- MVT later moved to PSR and now temporarily replicating back to customer for target
- The target MVT Vault will be sent to PSR’s Southeast site for final DR
- PSR bundled the MVT into their overall price/agreement
Customer Example: Tape Migration

PSR Boston
Mainframe

Luminex MVT Vault+

Customer Site
Mainframe

Luminex MVT 110i

Luminex TMIG

STK Library

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Customer Example: Initial Replication

PSR Boston
Mainframe

Luminex MVT Vault+

Luminex MVT 110i

Customer Site
Mainframe

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Customer Example: Reverse Replication

PSR Boston
Mainframe
Luminex MVT 110i

Luminex MVT Vault+
Mainframe

Customer Site

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Customer Example: Final Configuration

PSR Boston

Mainframe

Luminex MVT 110i

Customer Site

Mainframe (decommissioned)

PSR Chattanooga

Mainframe

Luminex MVT Vault+

Vault +

Complete your session evaluations online at www.SHARE.org/Orlando-Eval
Push Button DR Testing
Replication During Normal Operations

Site A

1. Primary

Tape Data

2. Secondary

Tape Data

Site B

Replication to Secondary Site or DR Site

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Push Button DR Testing
Replication During DR Testing

Site A

1. Primary

Replication to Secondary Site or DR Site continues uninterrupted

2. Secondary

Site B

Tape Data

DR Test Data

Read/Write Testing

Space efficient clone of Tape Data is created for read/write testing; original Tape Data remains untouched

Start DR

CGX CHANNEL GATEWAY X ADMIN GUI

Site Methods
Push Button DR Testing
After DR Testing is Completed

Replication to Secondary Site or DR Site continues uninterrupted

DR Test Data is purged
Optionally, DR Test Data can be automatically replicated back to Site A for auditing purposes
Vault+ Offers the Same DR Capability as the MVTi

- Simplicity and ease of use
- DR tests during continuous replication between Production and DR sites
- Luminex Replication
- Replication monitoring
- Push Button DR
Summary: Vault+-as-a-Service

Available through ADRCs, such as PSR

- Smaller footprint
- Secure
- More cost effective
- Inventory audit capability
- Replication monitoring
- Immediately accessible
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