EMC BUS-TECH AND EMC DATA DOMAIN MAINFRAME BACKUP SOLUTION

Optimized for mid-sized mainframe environments

**ESSENTIALS**

**Mainframe Ready**
- IBM FICON and ESCON channel support
- Native IBM 3480, 3490, and 3590 tape emulation
- IBM z/OS, z/VM, and z/VSE support

**Seamless Integration**
- No JCL changes required
- No mainframe host software required
- Leverages IBM DFSMS
- Supports leading mainframe backup applications
- Supports leading Tape Management Systems

**Scalable Deduplication Storage**
- Fast, inline deduplication with up to 2 TB/hr of aggregate throughput
- Up to 76 TB of raw capacity
- Consolidated protection of open systems and mainframe environments

**Multi-Site Disaster Recovery**
- One-to-one or one-to-many replication for fast time-to-DR readiness
- Simple and reliable end-to-end DR testing
- Up to 99 percent less WAN bandwidth required for network-based replication
- Encrypted replication

**Ultra-Safe Storage for Reliable Recovery**
- Continuous recovery verification, fault detection and healing
- Dual disk parity RAID 6
- Dual Bus-Tech Mainframe Data Libraries provide redundant mainframe connectivity

**NEXT-GENERATION DATA PROTECTION**

EMC® Data Domain® deduplication storage systems have revolutionized disk backup and remote office data protection with high-speed, inline deduplication. Backup data can be reduced in size by an average of 10-30x, so disk backup storage is now cost-effective for onsite retention and highly efficient for network-based replication to disaster recovery sites.

The EMC Bus-Tech® and EMC Data Domain mainframe backup solution brings the operational and cost benefits associated with Data Domain systems into IBM mainframe environments.

**MAINFRAME READY**

The Bus-Tech and Data Domain mainframe backup solution provides connectivity between a Data Domain system and an IBM mainframe over IBM FICON or ESCON channels. With native IBM 3480, 3490, and 3590 tape drive emulation, you can leverage a Data Domain system in z/OS, z/VM or z/VSE environments.

The Bus-Tech Mainframe Data Library for Data Domain connects to the Data Domain system via two 10 Gb Ethernet ports. Network-efficient replication enables fast time-to-DR readiness over existing WANs.

**SEAMLESS INTEGRATION**

The Bus-Tech and Data Domain mainframe backup solution presents itself to the mainframe as native IBM tape drives. It easily integrates into your existing infrastructure without requiring changes to JCL or additional mainframe host software. The solution is transparent to all applications and provides fast throughput and consistent recovery times.

The Bus-Tech and Data Domain mainframe backup solution works with the leading mainframe backup products including IBM DSS and Innovation Data Processing FDR and all leading Tape Management Systems including IBM RMM, CA-1, TLMS, BMC CONTROL-T, ASG ZARA, VM/Tape and BIM-EPIC.
SCALABLE DEDUPLICATION STORAGE
All Data Domain systems derive their performance advantages from the EMC Data Domain Stream-Informed Segment Layout (SISL™) scaling architecture. This CPU-centric approach minimizes the number of disk spindles required to achieve the throughput performance needed for critical single-stream operations. Data Domain systems save significant physical storage capacity by substituting small references for each identical redundant sequence, enabling cost-efficient retention on disk for fast, reliable recoveries. In addition, the Mainframe Data Library’s data stream recognition feature optimizes deduplication effectiveness. This solution combines Data Domain and Bus-Tech technology to provide fast and efficient mainframe backup.

Data Domain systems integrate easily with existing infrastructures and can be used seamlessly with a variety of data movers and application workloads. By consolidating to a common disk-based target for open systems and mainframe environments, you can avoid creating disparate islands of data and storage. A single Data Domain system can be used for backup and recovery, protection of enterprise applications, archiving and online reference storage.

MULTI-SITE DISASTER RECOVERY
EMC Data Domain Replicator software enables network-efficient and encrypted replication to one or more disaster recovery sites. Datasets are effectively shrunk by up to 99 percent, to a size where network-based replication is fast and reliable. If confidentiality is required data can be encrypted in-flight when being replicated between Data Domain systems.

Leveraging snapshot technology found in Data Domain systems, you can perform complete end-to-end DR testing with read/write capabilities on all tape data at the target site. This enables you to have 100 percent confidence in your DR readiness. In addition, replication continues uninterrupted during DR testing. When testing is complete, the snapshot is simply deleted without affecting the existing backup tape volumes.

ULTRA-SAFE STORAGE FOR RELIABLE RECOVERY
Tape files are protected using the EMC Data Domain Data Invulnerability Architecture which provides continuous recovery verification and continuously detects and protects against data integrity issues during the initial backup and throughout the data lifecycle. In addition, dual Mainframe Data Libraries can be configured to provide redundant mainframe connectivity. In the unlikely event of a Mainframe Data Library failure, the surviving Mainframe Data Library remains operational allowing the mainframe to access all of the tape libraries.
SPECIFICATIONS

SOFTWARE
EMC Data Domain Operating System (DD OS) 5.0 or later
EMC Bus-Tech Virtuent™ 7 software
IBM z/OS, z/VM and z/VSE operating systems supported

HARDWARE
EMC Bus-Tech Mainframe Data Library-1000 for Data Domain
EMC Bus-Tech Mainframe Data Library-2000 for Data Domain
EMC Data Domain DD630 deduplication storage system
EMC Data Domain DD670 deduplication storage system

NETWORK CONNECTIVITY
Ethernet connectivity between Mainframe Data Library and Data Domain system

MAINFRAME CONNECTIVITY
IBM FICON and ESCON channels

MAINFRAME TAPE DRIVE EMULATION
IBM 3480, 3490 and 3590