EMC DISK LIBRARY FOR MAINFRAME— DLM1000
Mainframe backup, recovery, and archiving for midsize data centers

ESSENTIALS

- Solution for all mainframe use cases
  - Satisfies all mainframe workloads including batch and backup
  - Works seamlessly with mainframe applications
- Mainframe compatibility and seamless integration
  - Native 3480, 3490, and 3590 tape emulation
  - Supports leading tape management systems
- Scalable deduplication storage
  - 10 to 30 times average reduction in storage requirements
- Multi-site disaster recovery
  - One-to-one or one-to-many data
  - Efficient use of bandwidth
- Ultra-safe storage for tape data
  - EMC Data Domain Data Invulnerability Architecture

ELIMINATING TAPE FROM YOUR BACKUP AND RESTORE PROCESS

A major challenge in the area of mainframe batch processing, DFHSM and backup is the growth of information throughout the enterprise; some estimates say this can be as high as 60 percent per year. While tape has always provided inexpensive storage for batch, backups, disaster recovery, and long-term archives, it does present a number of challenges. Today's data centers face demand for better service-level agreements (SLAs), shorter backup and restore operations, and less complex and less costly tape management processes. Eliminating the risk of missing information due to lost or damaged tapes is a must.

NEXT-GENERATION BACKUP FOR MAINFRAMES

EMC® Disk Library for mainframe (DLM1000) and EMC Data Domain® storage systems address the challenges of tape in the mainframe data center. The solution delivers industry-leading deduplication functionality, scalability, performance, and resiliency to tape operations while working seamlessly with the current host processes and applications to greatly reduce the amount of data center floor space needed to support tape operations. It provides all essential capabilities to provide your mid-size data center with a high-capacity mainframe backup solution in the smallest possible footprint.

The solution consists of the DLM1000, which provides the tape drive emulation and the connectivity between the mainframe and the Data Domain deduplication storage system. EMC Data Domain deduplication storage systems continue to revolutionize disk backup, archiving, and disaster recovery with high-speed, inline deduplication. By consolidating backup and archive data on a Data Domain system, storage requirements can be reduced in size by 10 to 30 times, making disk cost-effective for onsite retention, and highly efficient for

MAINFRAME COMPATIBILITY AND SEAMLESS INTEGRATION

The DLM1000 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 provides connectivity between a Data Domain system and an IBM mainframe over IBM FICON 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 solution is transparent to all applications and provides fast throughput and consistent recovery times.

The DLm1000 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, BIM-EPIC, and others.

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.

FASTER BACKUP AND RESTORES
Traditionally mainframe data centers have had to decide between faster backups and slower restores or slower backups and faster restores. With the DLm1000 and EMC Data Domain solution, that compromise has been removed from the equation. For even greater performance, dual DLm1000 systems can provide up to 600 MB/s throughput to help meet shrinking backup windows.

MIXED USE FOR MAINFRAME AND DISTRIBUTED SYSTEMS
The Data Domain storage system attached to the DLm1000 can be shared with other server platforms concurrently. This streamlines your entire backup process into a single storage platform reducing overhead and simplifying management. This feature is specifically designed to address the needs of enterprises that desire a converged mainframe and distributed systems approach to data protection.

MULTI-SITE DISASTER RECOVERY
EMC Data Domain Replicator software enables network-efficient replication to one or more disaster recovery sites. Data sets 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 disaster recovery (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 OF TAPE DATA
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 DLm1000 systems can be configured to provide redundant mainframe connectivity. In the unlikely event that one becomes unavailable; the second DLm1000 provides the mainframe with access to all of the tape libraries.

Additional information on the Data Domain storage systems can be found at:
REMOTE SUPPORT CAPABILITIES
The DLm1000 is protected by EMC's Secure Remote Support (ESRS). ESRS proactively identifies and resolves potential issues before they impact your operations by providing secure, high-speed, around-the-clock remote support for your EMC information infrastructure. If unexpected issues arise, our proven processes ensure the fastest possible response, escalation, and resolution time to maximize information availability and reduce costs. With ESRS, we handle the workload so that you can devote more time to your business.

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

HARDWARE
EMC DLm1010
- One FICON channel, GB Ethernet, 32 emulated tape drives
EMC DLm1020
- Two FICON channels, 10 GB Ethernet, 128 emulated tape drives
DD630, DD640, DD670, DD860, DD880, DD890 or DD990
Note: Supported DD models are subject to change. Please refer to the EMC Support Matrix for the latest information.

NETWORK CONNECTIVITY
Ethernet connectivity between DLm1000 and Data Domain system

MAINFRAME CONNECTIVITY
FICON channels - Single or Multi Mode

MAINFRAME TAPE DRIVE EMULATIONS
IBM 3480, 3490, and 3590

PHYSICAL ATTRIBUTES
Dimensions 3.45” (87.5 mm) H (2 U) x 16.93” (430 mm) W x 26.46” (672 mm) L
Weight 80 lbs (36.3 kg)
Power Requirements 1.7 Amps @ 240 Volts (374 Watts)
Cooling 1,675 BTU/hour

OPERATING ENVIRONMENT
Temperature
- Operating +10°C to +35°C
- Non-Operating - 40°C to + 70°C
- Humidity (Non-operating) 90% non-condensing at 28°C
CONTACT US

To learn more about how EMC products, services, and solutions can help solve your business and IT challenges, contact your local representative or authorized reseller—or visit us at www.EMC.com.