EMC DATA DOMAIN VTL SOFTWARE

High-speed, inline deduplication storage for SAN environments

ESSENTIALS

Scalable Deduplication

- Emulate multiple tape libraries and tape drives; up to 64,000 virtual slots and up to 250,000 virtual cartridges
- Fast, inline deduplication
- Up to 64 virtual tape libraries
- Up to 512 tape devices with GDA (up to 256 with a single controller system)
- Extended retention providing up to 28.5 PB of logical storage
- 10 to 30x data reduction average

Easy Integration

- Supports leading open systems and IBM i operating environments
- Supports leading enterprise applications for database, email, content management, and virtual environments
- Simultaneous use of VTL, NAS, NDMP, and EMC Data Domain Boost Management Simplicity
- Task-based intuitive graphical user interface (GUI) for configuration and management
- Command-line interface for creating scripts to improve solution integration

Multisite Disaster Recovery

- 99 percent bandwidth reduction
- Flexible replication topologies
- Multisite tape consolidation
- Remote site replication
- Cost-efficient disaster recovery
- Encrypted replication

Ultra-Safe Storage for Reliable Recovery

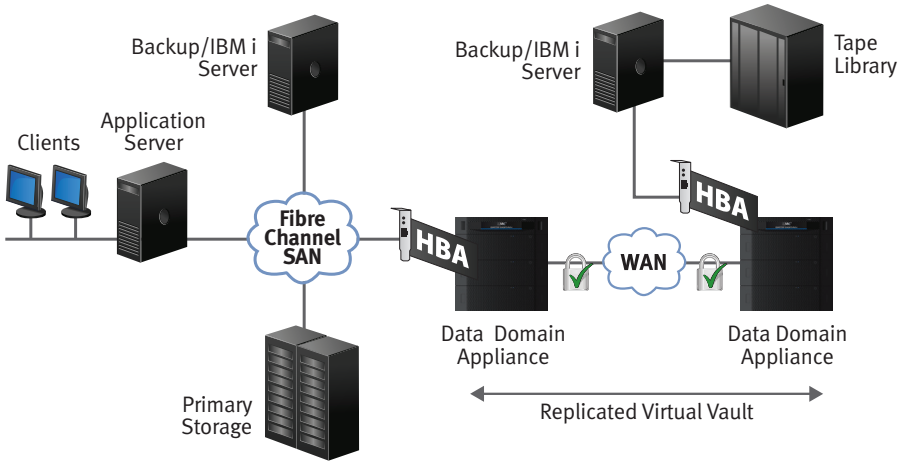
- Continuous recovery verification, fault detection, and healing

Traditional virtual tape library (VTL) systems and disk backup systems can only provide a front-end, fast cache to a tape library infrastructure, temporarily alleviating backup window problems. These systems cannot cost-efficiently retain backup data for any length of time, and backup data is too large to be replicated or "vaulted" over a wide area network (WAN). They do not offer an evolution from tape and its associated challenges, and ironically, tape remains the primary method of retention, recoverability, and disaster protection.

All of that has changed. EMC® Data Domain® high-speed, inline deduplication storage systems reduce the amount of back up data by 10 to 30x on average. This makes disk backup cost-effective for long-term onsite retention and network-efficient replication of data for disaster recovery (DR).

SCALABLE SYSTEM

EMC Data Domain VTL software eliminates tape-related failures by enabling all EMC Data Domain systems to emulate multiple tape devices over a Fibre Channel interface. When used with the EMC Data Domain Global Deduplication Array, the Data Domain VTL software emulates up to 64 virtual tape libraries with up to 512 LTO-1, LTO-2, or LTO-3 virtual tape drives. The VTL software provides up to 64,000 virtual slots and up to 250,000 virtual tape cartridges, with the ability to dynamically change the number of virtual slots and cartridge access ports. EMC Data Domain systems offer data protection capacities up to 28.5 PB of logical storage for a typical enterprise data set and backup policy.



BENEFIT	FEATURE	DD890 with VTL	GDA with VTL	Other VTLs
Cost-efficient backup/ recovery storage	$/GB addressable	Less than $0.35	Less than $0.35	$2 to $5
Long-term rapid recovery	Inline deduplication	Yes	Yes	No
Long-term disk-based retention	Addressable capacity[3] (standard – redundant)	Up to 14.2 PB[1,2]	Up to 28.5 PB[1,2]	275 TB – 5 PB[4]
Cost-efficient disaster recovery	WAN replication using Data Domain Replicator software	Yes	Yes	No
Reliable recoverability	Continuous end-to-end data integrity verification	Yes	Yes	No
Deployment flexibility	Simultaneous use of VTL, NAS, NDMP and EMC Data Domain Boost	Yes	Yes	No
Simplicity and reduced cost of administration	Ease of installation, integration into backup infrastructure and ongoing management	Yes	Yes	No

1. Mix of typical enterprise data (file systems, databases, email, developer files), full backup weekly, incremental backup daily.
2. Mix of typical enterprise data (file systems, databases, email, developer files), full backup daily.
3. All capacity values are calculated using Base10 (i.e., 1 TB = 1,000,000,000,000 bytes).
4. Maximum capacity (usable compressed assuming 2:1 compression).

MASSIVE DATA REDUCTION FOR DISK-BASED RETENTION AND RECOVERABILITY

Data Domain systems are the industry's highest throughput and most scalable deduplication systems for disk backup and network-based DR. Unlike traditional VTLs, Data Domain systems provide a massive 10 to 30x average reduction in backup data.

Working in unison with all leading backup software, Data Domain systems enable cost-efficient long-term retention on disk, and more reliable, high-speed recoveries for backup data in SAN environments.

EASY INTEGRATION INTO EXISTING INFRASTRUCTURES

Data Domain VTL software is qualified with leading open systems and IBM i enterprise backup applications, and easily integrates into existing Fibre Channel SAN backup environments. Data Domain systems support simultaneously data access methods through VTL over Fibre Channel, remote NDMP access over Ethernet for Network Attached Storage (NAS), NFS and CIFS file service protocols over Ethernet, and EMC Data Domain Boost (for use with EMC Avamar, EMC NetWorker and Symantec OpenStorage). This deployment flexibility and simple administration means the user can rapidly adjust to changing enterprise requirements.

MANAGEMENT SIMPLICITY

Data Domain systems are simple to install and manage. Administrators have a centralized management view with EMC Data Domain Enterprise Manager, a browser-based graphical user interface, or through command-line over SSH. The intuitive task-based DD Enterprise Manager simplifies initial VTL configuration and ongoing management. Additionally, initial configuration and configuration updates can easily be made for multiple systems along with the monitoring of system states and the state of system operations. Simple scriptability along with SNMP monitoring provides additional management flexibility.

MULTISITE DISASTER RECOVERY

Using EMC Data Domain Replicator software, virtual tape cartridges can be vaulted over the WAN to another site for DR, remote office data protection, or multisite tape consolidation. With Data Domain deduplication technology, the amount of data transmitted is reduced by 99 percent, to a size where network-efficient replication is now economically and operationally feasible. Using minimal bandwidth, and with significant savings over other advanced replication alternatives, SAN users now have a cost-effective DR solution for all of their SAN data. If confidentiality is required, deduplicated and compressed data can be encrypted in-flight when being replicated between Data Domain systems, independent of the replication topology used.

ULTRA-SAFE STORAGE FOR RELIBLE RECOVERY

Virtual cartridges containing backup images are protected using the EMC Data Domain Data Invulnerability Architecture. Recoverability is verified at backup time and continuously re-verified to ensure reliable recovery.

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.

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