EMC DATA DOMAIN DD600 SERIES

Deduplication storage for small to midsized data centers

ESSENTIALS

Scalable Deduplication Storage

- Fast, inline deduplication with up to 1.2 TB/hour of single stream throughput
- Up to 5.4 TB/hour of aggregate throughput
- Extended retention providing up to 2.7 PB of logical storage
- 10-30x average data reduction

Easy Integration

- Supports leading backup and archive applications
- Supports leading enterprise applications for database, email, content management, and virtual environments
- Simultaneous use of VTL, NAS, NDMP, and EMC Data Domain Boost

Multi-Site Disaster Recovery

- 99 percent bandwidth efficiency for network based replication
- Flexible replication topologies for tape free DR or tape consolidation
- Replication from up to 90 remote sites
- Encrypted replication

Ultra-Safe Storage for Reliable Recovery

- Continuous recovery verification, fault detection, and healing
- Dual disk parity RAID 6

Operational Simplicity

- Power, cooling, and space efficiencies for green operation
- Supports any combination of backup and archive applications in a single system

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.

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.

EASY INTEGRATION

The Data Domain DD600 Appliance series is qualified with all leading enterprise backup software and archiving applications and easily integrates into the existing storage infrastructure without change for either data center or distributed office data protection. These systems support simultaneous data access methods through NFS and CIFS file service protocols over Ethernet, or as a disk-based target using application-specific interfaces such as EMC Data Domain Boost. DD Boost enables advanced integration for environments with EMC NetWorker®, Symantec NetBackup and Backup Exec. Users can leverage the same DD600 series system for both backup and archive workloads. This improves the efficiency across backup and archive applications and data types, as well as reduces management overhead by combining multiple applications' storage on a single system.

MULTI-SITE DISASTER RECOVERY

EMC Data Domain Replicator software enables network-efficient and encrypted replication to a remote site for disaster recovery, remote office data protection, or multi-site tape consolidation. The DD670 supports replication fan-in from Data Domain systems installed at up to 90 remote offices. Cross-site deduplication minimizes the required bandwidth between all sites, since only the first instance of data is transferred across any of the WAN segments. Datasets are effectively shrunk by 99 percent, to a size where network-efficient replication is fast and reliable. If confidentiality is required, deduplicated and compressed data can be encrypted in-flight when being replicated between Data Domain systems, independently of the replication topology used.

ULTRA-SAFE STORAGE FOR RELIABLE RECOVERY

The EMC Data Domain Data Invulnerability Architecture provides continuous recovery verification and continuously detects and protects against data integrity issues during the initial backup and throughout the data lifecycle.

OPERATIONAL SIMPLICITY

EMC Data Domain systems are simple to install and manage. Connect an appliance to your backup server as either a file server via Ethernet or as a virtual tape library (VTL) via Fibre Channel. EMC Data Domain Boost (for use with Symantec OpenStorage and EMC NetWorker) is also supported; all three interfaces can be used simultaneously.

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DD600 Series Specifications	DD610	DD630	DD670
Capacity, Raw [1]	Up to 6 TB	Up to 12 TB	Up to 76 TB[4]
Logical Capacity, Standard [1,2]	40 TB	84 TB	0.6 PB[4]
Logical Capacity, Redundant [1,3]	195 TB	420 TB	2.7 PB[4]
Maximum Throughput (Other)	675 GB/hr [5]	1.1 TB/hr [5]	3.6 TB/hr [6]
Maximum Throughput (DD Boost)	1.3 TB/hr	2.1 TB/hr	5.4 TB/hr [7]
Power Dissipation [8]	329 W	329 W	688 W
Cooling Requirements [8]	1,235 BTU/hr	1,235 BTU/hr	2,347 BTU/hr

1. Mix of typical enterprise backup data (filesystems, databases, e-mail, developer files). The low end of capacity range represents a full backup weekly or monthly, incremental backup daily or weekly, to system capacity. The top end of the range represents full backup daily, to system capacity.
2. Mix of typical enterprise data (filesystems, databases, e-mail, developer files), full backup daily, to system capacity.
3. All capacity values are calculated using Base 10 (i.e., 1 TB = 1,000,000,000,000 bytes) and the maximum raw capacity configuration.
4. Includes support for add-on shelves.
5. Maximum throughput achieved using VTL interface and 4 Gb/s Fibre Channel.
6. Maximum throughput achieved using Symantec OpenStorage and 10 Gb Ethernet.
7. Maximum throughput achieved using DD Boost and 10 Gb Ethernet.
8. Controller only.

SPECIFICATIONS

SOFTWARE

EMC Data Domain Operating System (DD OS) 5.0 or later

Software Features
Global Compression™, Data Invulnerability Architecture including end-to-end verification (ongoing) and integrated dual disk parity RAID 6, snapshots, telnet, FTP, SSH, e-mail alerts, scheduled capacity reclamation, Ethernet failover and aggregation, Link Aggregation Control Protocol (LACP), VLAN tagging, IP aliasing, EMC Data Domain Boost, EMC Data Domain Virtual Tape Library (for open systems and IBM i operating environments), EMC Data Domain Encryption, EMC Data Domain Replicator and EMC Data Domain Retention Lock optional software

Management
EMC Data Domain Enterprise Manager, SNMP, and command line interface

Data Access
NFS v3 over TCP, CIFS, DD Boost (for use with Symantec OpenStorage and EMC NetWorker), tape library emulation (VTL) over Fibre Channel, NDMP Tape Server

SYSTEM EXPANSION

DD670: Up to 76 TB raw capacity; 64 TB external
• Twelve 1 TB internal drives
• Up to two 32 TB expansion shelves
• Up to four 16 TB expansion shelves
• Support for a mix of 32TB and 16TB expansion shelves up to 64 TB external raw capacity

DD630: Up to 12 TB raw capacity
• Seven or twelve 1 TB internal drives
• No external expansion

DD610: Up to 6 TB raw capacity
• Seven or twelve 500 GB internal drives
• No external expansion

REGULATORY APPROVALS

Safety: UL 60950-1, CSA 60950-1, EN 60950-1, IEC 60950-1, GS, SABS, GOST, IRAM
Emissions: FCC Class A, EN 55022, CISPR 22, VCCI, BSMI, MIC, ICES-003
Immunity: EN 55024, CISPR 24
Power Line Harmonics: EN 61000-3-2

HARDWARE PLATFORM

2U 19-inch, rack mountable, use in 4-post rack, hotplug disks, redundant fans, redundant power supplies, serial port, 2 copper 10/100/1000 Ethernet ports, optional dual-port copper or optical 1 Gb Ethernet and quad-port copper 1 Gb Ethernet. Optional dual-port copper or dual-port optical 10 Gb Ethernet on DD670 model only.

System Weight
DD670, 12 drives: 66 lbs (30 kg)
DD610/DD630, 7 drives: 49 lbs (22.2 kg)
DD610/DD630, 12 drives: 57 lbs (25.8 kg)

System Dimensions (WxDxH)
DD670: 19" x 29.5" x 3.5"
(48.3 cm x 74.9 cm x 8.9 cm)
2 EIA units

DD610/DD630: 19" x 22" x 3.5"
(48.3 cm x 55.9 cm x 8.9 cm)
2 EIA units

Minimum Clearances
Front, with bezel: 1.56" (4.0 cm)
Rear: 5" (12.7 cm)

Power (VA)
100-120 / 200-240 V~, 50/60 Hz
DD670: 12 drives, 724 VA
DD610/DD630: 7 drives, 319 VA; 12 drives, 362 VA

System Thermal Rating
DD670, 12 drives: 2,347 BTU/hr, 688 Watts
DD610/DD630, 7 drives: 1,089 BTU/hr, 301 Watts
DD610/DD630, 12 drives: 1,235 BTU/hr, 329 Watts

Operating Temperature/Altitude
DD610/630: 10°C to 35°C (50°F to 95°F)

DD670: 10°C to 35°C (50°F to 95°F), derate 1.1°C/1000 feet above 7500 feet to 10,000 feet

Operating Humidity
20% to 80% non-condensing

Non-Operating (Transportation) Temperature
-40°C to +65°C (-40°F to +149°F)

Operating Acoustic Noise
DD670: declared noise emission values per ISO 9296:
    Sound power, LWAd: 7.4 bels
    Sound pressure, LpAm: 58 db
DD610/DD630: Max 7.9 BA, sound power at 25°C