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Appliance Series

DD120 Deduplication Appliance for Remote Office Data Protection

Key Benefits

Remote Office Data Protection

- > High-speed, inline deduplication storage
- > 10-30x data reduction
- > Reliable backup and rapid recovery
- > Extended disk-based retention
- > Eliminate tape at remote sites
- Includes Data Domain Replicator software

Easy Integration

- Supports leading backup and archive applications
 - > Symantec
 - > EMC
 - > HP Data Protector
 - > IBM TSM
 - > CommVault
 - > Computer Associates
 - > Atempo
 - > BakBone
- > Supports leading enterprise applications
 - > Database: Oracle, SAP, DB2
 - > Email: Microsoft Exchange
 - > Virtual environments: VMware
- Simultaneous use of NAS and Symantec OpenStorage (OST) option

Multi-Site Disaster Recovery

- > 99% bandwidth reduction
- > Consolidate remote office backups
- > Flexible replication topologies
- > Replicate to larger Data Domain systems at central site
- > Multi-site tape consolidation
- > Cost-efficient disaster recovery

Ultra-Safe Storage for Reliable Recovery

- > Data Invulnerability Architecture
- > Continuous recovery verification, fault detection and healing

Backup and recovery of company data at its primary sites typically places high demands on the resources of a company's IT department. The result is that data protection strategies and execution are neglected at the smaller, remote sites even though information at these regional offices or branch offices may be as important as that found at the primary data center. A lack of technical resources at remote sites further complicates the problem and recent advances in disk-based backup technologies have done little to provide relief. Though some of these products allow faster backup or slightly longer retention at the remote site, it still creates an 'island of backup data' that is too voluminous to replicate to a primary facility for centralized management and disaster recovery purposes.

Data Domain has revolutionized disk backup and remote office data protection with patented, high-speed, inline deduplication. Backup data can be reduced in size by an average of 20x, so disk backup storage is now cost-effective for long-term onsite retention, is highly efficient for WAN vaulting to disaster recovery sites and becomes a critical tool for consolidation of backup data across distributed enterprises. The Data Domain DD120 appliance extends the benefits of Data Domain's industryleading deduplication technology to distributed enterprises that have large numbers of small remote offices or branches. These organizations can eliminate tape from all remote sites and deploy a common diskbased data protection strategy to consolidate backup across their distributed enterprise.

Remote Office Data Protection

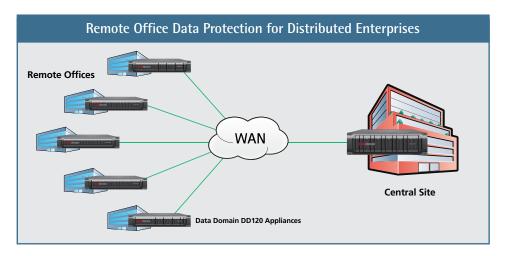
Data Domain inline deduplication systems store each unique data sequence only once and save significant physical storage capacity by substituting small references for each identical redundant sequence. Backup data, for example, is ideal for this technology, and

Data Domain is the only vendor to offer the benefits of data reduction, the throughput to meet backup windows and the right capacity and price points to meet the data protection and replication needs of remote sites.

The DD120 offers an average of 20x data reduction for enterprise recovery images, enabling cost-efficient retention on disk for fast, reliable recoveries as well as highly efficient replication of remote office data to a primary data center. Snapshot technology further enables extended local and offsite retention on disk. This makes the elimination of tape at remote branch offices operationally and economically feasible, and further adds to the return on investment of the solution.

Easy Integration Into Existing Infrastructures

The DD120 is qualified with all leading enterprise backup software and archiving applications and easily integrates into the existing nearline storage infrastructure without change for remote site data protection. Data Domain deduplication storage works with the backup packages already in use at remote and branch offices and primary data



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centers. This means that the lengthy and costly planning periods for implementing new software, server resources and disk targets required by competing solutions is entirely avoided when choosing the DD120 to satisfy the data protection needs of the remote sites.

Installation is as easy as connecting to Ethernet. Connect the DD120 to your backup server as a NAS file server or use the Symantec OpenStorage option for Veritas NetBackup. It takes just minutes to start backing up and recovering data.

Multi-Site Disaster Recovery

Replication capabilities are included as part of the core feature set of the DD120. Using Data Domain Replicator software, distributed enterprises can electronically vault business critical remote or branch office data to a secure offsite centralized hub or to a disaster recovery site. Multiple geographically distributed offices can simultaneously vault selected backup and archive data to this central location enabling a flexible, enterprisewide site recovery and retention model.

WAN vaulting is operationally feasible because Data Domain deduplication technology effectively shrinks backup data sets by 99%. Cross-site deduplication further improves network efficiency by eliminating the need to transfer common data already received. DD120 systems deployed at remote sites can replicate to larger systems, such as the Data Domain DD530 or DD580.

Data Domain

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Once replicated, or "vaulted," across the WAN, multi-site data can be recovered or duplicated to tape from the Data Domain storage system. Data is typically recovered from the onsite system however a server can easily access the replicated data over the WAN to get critical information back onsite quickly. Remote office backup and recovery can now be achieved orders of magnitude faster, cheaper, more securely and reliably than with tape technologies, enabling multisite tape consolidation.

SPECIFICATIONS	DD120
Capacity: Raw ³	750 GB
Logical Capacity: Standard 1,3	7 TB
Logical Capacity: Redundant 2,3	18 TB
Maximum Throughput	150 GB/hr
Power Dissipation	257 W
Cooling Requirement	876 BTU/hr

- Mix of typical enterprise data (file systems, databases, mail, developer files), full backup weekly, incremental backup daily, to system capacity.
- Mix of typical enterprise data (file systems, databases, mail, developer files), full backup daily, to system capacity.
- All capacity values are calculated using Base10 arithmetic (i.e., 1TB = 1,000,000,000,000 bytes).

SOFTWARE

Data Domain Operating System (DD OS) 4.4 or later

Software Features

Global Compression, Data Invulnerability Architecture including end-to-end verification (ongoing), snapshots, telnet, FTP, SSH, email alerts, scheduled capacity reclamation, Ethernet failover and aggregation, Data Domain Replicator software

Management

Data Domain Enterprise Manager, GUI, SNMP, and command line management interface

Protocols

NFS v3 over TCP, CIFS, NDMP v2, Symantec OpenStorage (OST) option

Ultra-Safe Storage for Reliable Recovery

The Data Domain Data Invulnerability Architecture provides the industry's best defense against data integrity issues.

Continuous recovery verification along with extra levels of data protection continuously protect against data integrity issues during the initial backup and throughout the data life cycle. Unlike any other storage array, deduplication system, or file system, each DD120 ensures that recoverability is verified and then continuously re-verified.

HARDWARE PLATFORM

1U 19 inch rack-mountable, use in 4-post rack, hotplug disks, 2 fans, 2 copper 10/100/1000 Ethernet ports, serial port

System Weight

23 lbs (11 kg)

System Dimensions (WxDxH)

 $16.92 \times 25.51 \times 1.7$ inches (43 x 64.8 x 4.3 cm) without rack mounting ears and bezel. $19 \times 27.25 \times 1.7$ inches (48.3 x 69.2 x 4.3 cm) with rack mounting ears and bezel.

Minimum Clearances

Front, with Bezel Closed: 1" (2.5 cm) Rear: 5" (12.7 cm)

Operating Current

115VAC/230VAC 2.2/1.1 Amps

System Thermal Rating

876 BTU/hr

Operating Temperature

5°C to 35°C (41°F to 95°F)

Operating Humidity

20% to 80%, non-condensing

Non-operating (Transportation) Temperature

-40°C to +65°C (-40°F to +149°F)

Operating Acoustic Noise

Max 7.0 BA, at typical office ambient temperature $(23 +/- 2^{\circ} C)$

REGULATORY APPROVALS

Safety: UL60950-1, CSA60950-1, EN60950-1, IEC60950-1

Emissions: FCC Class A, EN55022, CISPR 22 Immunity: EN 55024, CISPR 24 Power Line Harmonics: EN61003-2