

EMC DATA DOMAIN ENTERPRISE MANAGER

Centralized management for EMC Data Domain deduplication storage systems

ESSENTIALS

GUI-based Management

- Web-based application interface
- Operational simplicity and lower costs configuration wizards for initial setup

Centralized Management

- Single sign-on
- Role-based access control

Simplified Data Management

- Configure filesystem and monitor usage
- Snapshot management
- Replication management

Data Access Interfaces Management

- NFS and CIFS management
- Virtual Tape Library (VTL) management
- EMC Data Domain Boost management (for use with EMC Avamar, EMC NetWorker, and Symantec OpenStorage)

Integrated Manageability

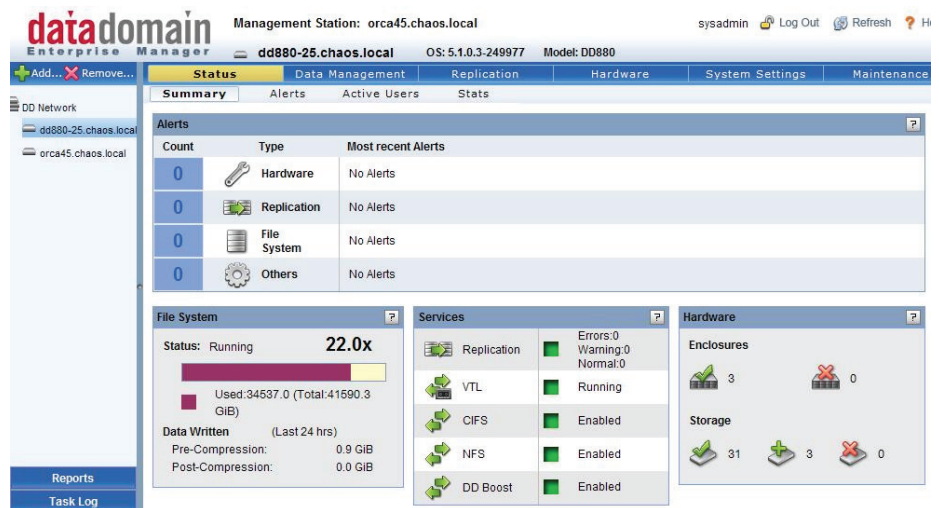
- Secure SSH-based Command Line Interface (CLI) for script integration
- SNMP-based status monitoring and alerting
- Daily, summary, and historical reporting
- Comprehensive task monitoring
- Call-home functionality for automated health monitoring

EMC has revolutionized backup, archiving, disaster recovery, and remote office data protection with high-speed, inline deduplication. EMC® Data Domain® deduplication storage systems enable the most reliable and cost effective approach for minimizing the use of tape for operational recovery and longer term retention. Administrators often experience near immediate improvements in operational efficiency after deployment and integration of Data Domain storage systems in their environments.

GUI-BASED MANAGEMENT

All Data Domain deduplication storage systems ship with EMC Data Domain Enterprise Manager, a Web-based feature rich application for managing Data Domain systems. DD Enterprise Manager provides management and monitoring of all aspects of Data Domain systems from a single interface, including the filesystem, access protocols, data management, and integrated system control. The operational simplicity of DD Enterprise Manager's dashboards provides a high-level overview of system status, and allows drill down into areas of interest.

DD Enterprise Manager also provides Configuration wizards to simplify the steps required to deploy a system into production, dramatically reducing initial setup time. The easy-to-use and intuitive task-based wizards enable monitoring and configuring of core functionality such as data access interfaces and replication. This wizard-based approach effectively reduces time-to-value and its related administrative costs.



The Data Domain Enterprise Manager dashboard provides a high-level overview of vital information for all systems, along with the ability to quickly zoom into any system.

CENTRALIZED MANAGEMENT

DD Enterprise Manager allows the seamless management of multiple Data Domain systems from a central management station. A summary dashboard includes vital information for all systems and presents a high-level overview, with the ability to quickly drill-down into system specific views. The ability to move between high-level and detailed views greatly reduces the time needed to monitor and manage systems. DD Enterprise Manager also provides role-based access control to restrict system management access and functionality to authorized users.

SIMPLIFIED DATA MANAGEMENT

DD Enterprise Manager simplifies the task of monitoring space utilization on a Data Domain system with easy to use graphs. These graphs track disk usage on a historical basis to expose trends for subsequent evaluation. Additional functionality, including snapshot schedules for added data protection, is also provided.

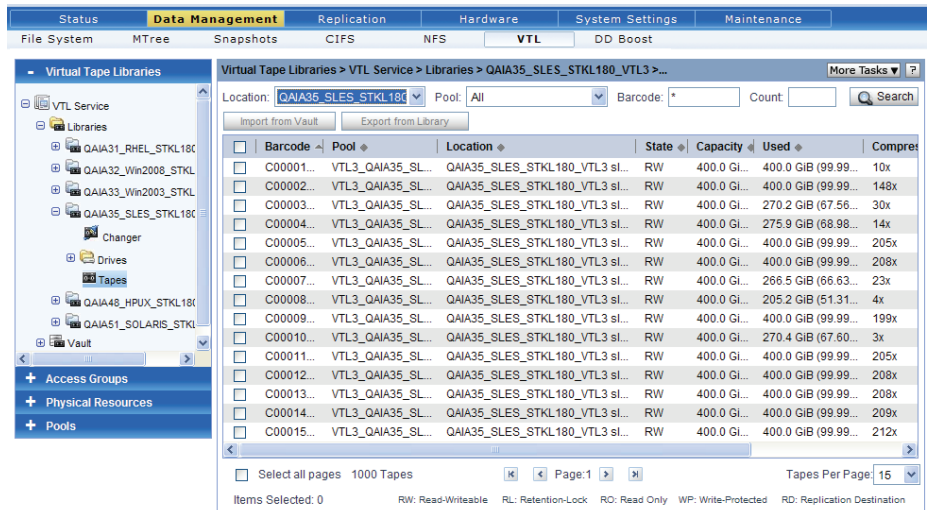
DD Enterprise Manager includes an intuitive interface for visually managing the network efficient EMC Data Domain Replicator software. Several types of replication relationships are supported, providing a high-level overview and drill down to details associated with data sets of interest. The replication interface also provides the ability to track when backups are replicated offsite for DR readiness.

The screenshot displays the 'Replication' section of the DD Enterprise Manager interface. At the top, a navigation bar includes 'Status', 'Data Management', 'Replication' (highlighted), 'Hardware', 'System Settings', and 'Maintenance'. Below this, a status bar indicates 'Configured replication contexts: All are Normal'. The main area is divided into tabs: 'Summary', 'Topology', 'Performance', and 'Advanced Settings'. The 'Summary' tab is active, showing a table of replication pairs with columns for Source, Destination, Type, State, Synced As Of Time, Pre-Comp Remaining, and Time To Completion. The first row is selected, and its details are shown in the 'Detailed Information' section below. This section includes state description, source/destination paths, connection port, completion statistics, and a completion predictor.

| Source | Destination | Type | State | Synced As Of Time | Pre-Comp Remaining | Time To Completion |
|--------------------------------------------------------------------|--------------------------------|------|--------|-------------------|--------------------|--------------------|
| <input checked="" type="checkbox"/> yogi57...backup/Mc/qaia22-It03 | yogi60...backup/Mc/qaia22-It03 | Dir | Normal | 06/24 2:39 PM | 0.00 GiB | Completed |
| <input type="checkbox"/> yogi60.chaos.../backup/qaia19 | yogi57.chaos.../backup/qaia19 | Dir | Normal | 06/24 2:39 PM | 0.00 GiB | Completed |
| <input type="checkbox"/> yogi60.chaos.../backup/qaia38 | yogi57.chaos.../backup/qaia38 | Dir | Normal | 06/24 2:39 PM | 0.00 GiB | Completed |
| <input type="checkbox"/> yogi60.chaos.../backup/qaia53 | yogi57.chaos.../backup/qaia53 | Dir | Normal | 06/24 2:39 PM | 0.00 GiB | Completed |
| <input type="checkbox"/> yogi60...backup/Mc/qaia20-It03 | yogi57...backup/Mc/qaia20-It03 | Dir | Normal | 06/24 2:39 PM | 0.00 GiB | Completed |

| Completion Stats | Status | Source | Destination |
|------------------------------------------|--------------------------------|---------------------------------------|---------------|
| Synced As Of Time: 2011/06/24 2:39:30 PM | Replication: Enabled | Enabled | Enabled |
| Time To Completion: Completed | File System: Enabled | Enabled | Enabled |
| Pre-Comp Remaining: 0.00 GiB | Encryption At Rest: Disabled | Disabled | Disabled |
| Files Remaining: 0 | Encryption Over Wire: Disabled | Disabled | Disabled |
| Completion Predictor | | Available Space: 17,932.50 GiB | 11,315.23 GiB |
| Source Time: Today 1 am | | Low Bandwidth Optimization: Disabled | |
| Completion Time: Completed | | Compression Ratio: 21.52 | |
| | | Low Bandwidth Optimization Ratio: N/A | |

Data Domain Enterprise Manager provides a high-level view of replication relationships, and replication pair drill-down view for additional activity and configuration details.



Data Domain Enterprise Manager simplifies VTL administration including managing emulated tape drives, slots, cartridge access ports, and cartridges.

DATA ACCESS INTERFACES MANAGEMENT

Data Domain Enterprise Manager lets you centrally manage across multiple data access interfaces including IP (CIFS, NFS, and DD Boost) and Fibre Channel (VTL). DD Enterprise Manager makes it simple to integrate Data Domain systems using standard interfaces. A configuration wizard can be used to integrate the Data Domain system into an existing Active Directory or Workgroups environment, setup CIFS shares and corresponding Access Control Lists, and integrate with Dynamic DNS. The automation of these workflows greatly reduces the setup and deployment time required to get Data Domain systems in production.

DD Enterprise Manager makes it easy to install and manage the EMC Data Domain Virtual Tape Library (VTL) software option. The configuration wizard can be used to install and configure common VTL management parameters. DD Enterprise Manager's visual management also simplifies VTL administration by managing emulated tape drives, slots, cartridge access ports, and cartridges. In short, DD Enterprise Manager significantly reduces the management challenges associated with large-scale VTL system deployment.

DD Enterprise Manager also provides an intuitive interface for EMC Avamar®, EMC NetWorker®, and Symantec OpenStorage administrators to manage DD Boost functionality. DD Boost specific features such as distributed segment processing, advanced load balancing and link failover, and backup application managed file replication are easily configured using simple task-based wizards.

INTEGRATED MANAGEABILITY

In addition to the GUI-based interface, all Data Domain systems are equipped with a command line interface (CLI) for secure management over SSH. A rich set of CLIs are provided for initial system configuration and ongoing management and monitoring. SNMP-based monitoring is also provided to allow easy integration of Data Domain systems with existing heterogeneous monitoring tools. Simple scriptability along with SNMP monitoring provides additional management flexibility.

Additionally, Data Domain Enterprise Manager includes a suite of management reports to monitor performance and capacity, and forecast growth across systems. Several reports are provided including daily and cumulative reports for the file system as well as summary and per context status reports for replication. These reports can also be retained on local systems for historical purposes.

Data Domain Enterprise Manager also includes an integrated task manager, which provides the ability to monitor the progress of running tasks and view the history of completed tasks

across systems. Key details including system, description, start and end time, and error information are provided for each task. Task views can also be filtered by status.

Lastly, all Data Domain systems include Autosupport, an automatic call-home system reporting feature. Autosupport provides a customizable email notification of complete system status to EMC Data Domain support and to a selected list of administrators. This non-intrusive alerting and data collection capability enables proactive support and service without administrator intervention, further simplifying ongoing management.

Since Data Domain deduplication storage systems achieve massive data reduction, much less physical storage equipment is required. This simplifies the management of backup, recovery, disaster recovery, and archiving operations across the distributed enterprise. In addition, centralized management of Data Domain systems using DD Enterprise Manager delivers added monitoring and control capabilities to drive maximum efficiency and a greater return on investment.

SPECIFICATIONS

SOFTWARE

EMC Data Domain Operating System 5.1 or later

EMC Data Domain Replicator

EMC Data Domain Boost

EMC Data Domain Retention Lock

EMC Data Domain Virtual Tape Library

HARDWARE

EMC Data Domain Appliance Series

EMC Data Domain Global Deduplication Array

EMC Data Domain Archiver

WEB BROWSERS

Firefox 3.6 or 4.0

Internet Explorer 7.0 or 8.0

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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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