

EMC Connectrix Manager Software



New dimensions in information and networked storage management

The Big Picture

- Delivers common, consistent deployment of multiple Connectrix enterprise M-series directors and switches across the networked storage environment
- Offers monitoring and control for centralized information and resource management
- Performs performance monitoring and provides performance displays
- System- and fabric-level configuration and user administration
- Allows user management of storage components across SANs
- Provides an intuitive interface for management of Connectrix connectivity resources that includes flyovers for optimal device identification and drag-and-drop icons which offer logical topology display
- Integrates with leading enterprise management systems.
- Provides extensive error- and audit-logging functions required in data center environments

EMC Connectrix™ Manager provides an interface to the Connectrix server, centralized management of multiple enterprise directors and switches, and a high-level view of the enterprise storage network within the local data centers or at geographically dispersed locations. As a system administrator, with Connectrix Manager you can control and protect user passwords and port access; monitor port-level statistics; and automatically record system events and networked storage fabric configuration changes. Connectrix Manager software gives you high-level management services, from session management with a centralized repository of configuration files, to system logs, firmware upgrades, and more.

Software tools that empower the enterprise

A powerful software family

Connectrix Manager fits into EMC ControlCenter™ suite—a family of storage and host-based applications that allow user management of networked storage components.

EMC ControlCenter meets the challenges of information management: handling 24x7x365 online demands, adding and redeploying open systems, creating a flexible storage environment, and dynamically reallocating resources.

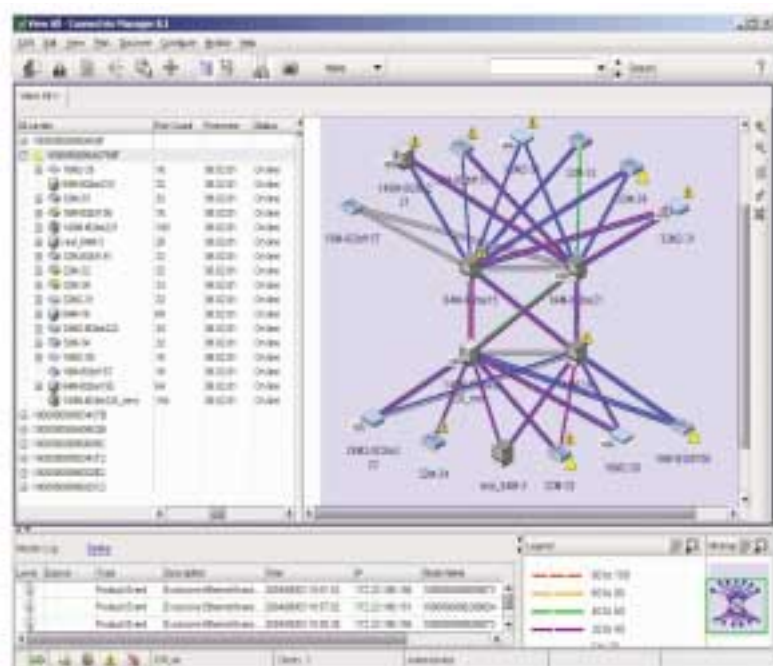
EMC ControlCenter provides centralized monitoring and management of Symmetrix®, CLARiiON®, the Connectrix family, and third-party switches and hubs. It integrates enterprise management frameworks and creates a single point of control.

Centralized, information consolidation

Connectrix Manager delivers centralized management, which can include management over a WAN, of multiple fabrics, directors, and switches remotely located in multiple data centers. Connectrix Manager software also provides SNMP capabilities to other enterprise management systems, such as CA Unicenter, Tivoli, and HP OpenView. The Connectrix Manager client application can be installed on Windows XP, 2000, NT or 98/95, Solaris, HP/UX, AIX, and Linux workstations.

Connectrix Manager provides a single system view of up to forty-eight devices from one central location. Connectrix Manager simplifies the addition of new directors and switches and the management of SAN resources. Administrators can use the Java-based GUI locally on the service processor or remotely from anywhere in the enterprise. Color, halo effect, or shaped icon indicators make interpretation of device status on the GUI display uncomplicated and direct.

Topology View



Zoning

A zoning library provides for the maintenance of multiple zone sets. Zones can be copied, renamed, replaced, and found through Connectrix Manager functions. Zoning displays can be toggled between WWNs and nicknames for easy identification.

The zone set comparison function highlights additions and deletions to the zone set. This allows viewing the details of what has been modified before activation.

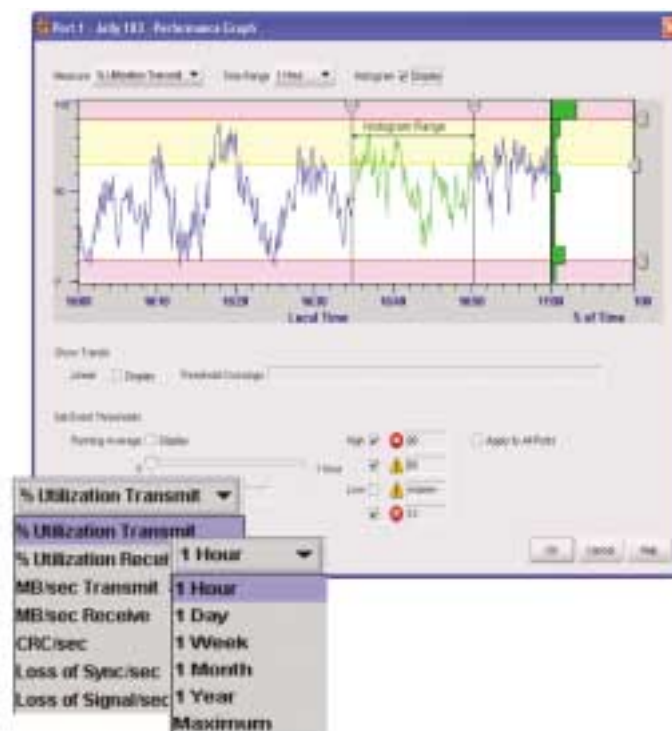
- Import and export zone functions
- Display active and inactive members

Representing the physical layout

Connectrix Manager provides element-specific management and control. It realistically represents the physical layout of the directors and switches using GUI screens. Clicking the appropriate device component lets you:

- Assign and reassign user password protection and access privilege levels
- Block and unblock port access
- Monitor performance and error statistic displays at the port level
- Automatically record all system events
- Automatically record and present all networked storage fabric configuration changes
- Create and modify multiple zones across multiple fabrics
- Drag-and-drop switch icons to build a topology view representative of your environment
- Take a snapshot of your topology layout; if changes occur in the fabric, they will be highlighted

Performance Monitoring



SANtegrity Security Suite

The SANtegrity Suite, an optional feature available on the M-series switches and directors provides a layer of security to Storage Area Network ports, switches, and fabrics through authorization, authentication, and secure management techniques in open system or mainframe environments. SANtegrity ensures that Fibre Channel traffic is not re-directed by unauthorized access. In mainframe FICON environments, SANtegrity enables multi-director FICON fabrics.

Performance Monitoring

The Performance Monitoring option provides the ability to effectively measure and graphically display performance statistics, historic metrics and future trends of every switch port on your SAN. Graphs of time-based performance data can be set for an hour, day, month, or year. Performance Monitoring helps you identify over-utilized and under-utilized ports as well as trends and problem areas. Performance Monitoring:

- Provides realtime and historical port utilization views
- Displays throughput trending for capacity planning
- Provides error-rate monitoring and trending
- Identifies over and under utilization
- Allows for asset optimization
- Increases ROI on storage networking

Open Trunking

Optional Open Trunking software for the Connectrix M-series product line offers the ability to effectively manage bandwidth of inter-switch links (ISLs) to avoid congestion in large enterprise SANs. Open Trunking aggregates the bandwidth into a single logical link improving overall bandwidth and simplifying network design and administration. Open Trunking software is compatible with all Connectrix M-series and McDATA offerings and can also be connected to Connectrix B and Connectrix MDS switches/directors, although in this mode, Open Trunking works in one direction—from the McDATA product to the non-McDATA product.

FICON Management Server

The optional FICON Management Server license allows you to manage your Connectrix M-series switches or directors from an S/390 console.

Increased connectivity promotes information consolidation

A single Connectrix director supports multiple hosts and multiple operating system connectivity. Many servers can connect to a few Symmetrix or CLARiiON systems or a few servers can connect to many Symmetrix or CLARiiON systems.

Currently, the EMC Connectrix system supports both open systems and IBM Z/900 servers. Open systems include Windows NT, Windows 2000, Sunplatforms, IBM AIX, Compaq Tru64, Linux, HP-UX, and Digital UNIX. Contact your local EMC representative for the most current list of supported hardware and operating system platforms or view the EMC Support Matrix on www.EMC.com.

EMC Services

To make sure your SAN, and your entire networked storage environment run as effectively as possible, turn to the computer industry's number-one-ranked service organization, EMC's Services. EMC Services offers a complete range of needs-analysis, consulting, and implementation services. EMC Global Education is available to train your staff in the latest technologies and best practices for operating and managing your networked storage environment. EMC Customer Service delivers around-the-clock basic two-year hardware and 90-day software warranty and post-warranty coverage including onsite service, parts, and labor, 365 days a year. As a result, your business gets a fast and reliable return on your investment.*

* Warranty and service terms may vary outside the United States. Ask your local EMC representative for non-U.S. warranty and service terms and conditions.

Deploy with EMC-assured confidence

Whatever servers, host bus adapters, databases, or operating systems your Connectrix products are working with, EMC interoperability engineers run them all through grueling tests under rigorous real-world conditions. Your networked storage environment will work seamlessly, no matter how demanding your business setting. The end result is access to all your information. Anywhere. Everywhere. All the time. Now and into the future. No bandwidth bottlenecks. No server roadblocks. No clogged availability. No deteriorating performance.

Take the Next Step

You need fully integrated and tested, highly available storage area networks. You need information storage that reaches more servers at greater distances from the enterprise. EMC Connectrix switches and directors deliver. EMC creates the possibilities. Your business gains the advantages. For more information, contact your local EMC sales representative or authorized EMC value-added system integrator. Or contact EMC directly and visit our website at www.EMC.com.



EMC Corporation
Hopkinton
Massachusetts
01748-9103
1-508-435-1000
In North America 1-866-464-7381

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Data Sheet
L861.4

Installation Specification:

This product, if entitled to EMC installation, will be installed within one hundred twenty (120) days after shipment unless otherwise delayed by (i) customer's acts or omissions, (ii) mutual agreement, or (iii) conditions beyond EMC's control.