

storage systemsstorage networkingstorage softwarestorage managementpartner solutionsinfrastructure services

EMC CLARiiON FC4500 System

CLARiiON multiple-host support extends the value of an EMC Enterprise Storage Network outside the data center.

EMC CLARiiON FC4500 delivers multiple-host support

The EMC CLARiiON[®] FC4500 is the first CLARiiON system to support multiple hosts. The FC4500, complemented by EMC Access Logix[™] and Navisphere[®] Manager software, allows you to build a storage infrastructure that supports today's constantly changing IT environment. The EMC CLARiiON FC4500 storage system and Access Logix extend the value of an EMC Enterprise Storage Network[®] outside the data center to more of the organization. To support high availability, servers can be removed, replaced, or added on the fly, an important benefit in today's 24x7 operations. Based upon Fibre Channel drive technologies, the FC4500 supports capacities from 90GB to 3.6TB.

- The Big Picture**
- Achieve operational gains and accelerate server deployments through storage consolidation and multiple-host connectivity
 - Reduce unplanned downtime and improve revenue generation by employing the FC4500, a highly available, fully redundant storage solution
 - Boost IT productivity and reduce management costs across the enterprise with centralized storage-management tools
 - Respond to changing requirements faster and protect your storage investment through the FC4500 "building-block" architecture
 - Deliver more information with faster response times to your users
 - Leverage EMC's world-renowned customer service organization for around-the-clock coverage, including onsite service, parts, and labor

The FC4500 exploits the Fibre Channel interface to deliver unparalleled performance

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EMC CLARiiON FC4500 System

Whether it is a requirement to add to a Web site, replace an existing OLTP system, or build a data warehouse, today's IT organization must be able to respond at Internet speed. The FC4500 meets this need by providing a highly scalable, easy-to-reconfigure solution. The FC4500 is a fully redundant, high-availability array with no single point of failure. It retains all of the same data integrity and high-availability features for which EMC CLARiiON is so well respected — global hot spares, redundant power and cooling, dual paths to Fibre Channel disk drives, data path parity checking throughout the array, and more.

Bridging the gap.

Business requirements are changing faster and faster, and most often, those changes directly affect your IT organization. To enable these environments and answer the call for immediate, cost-effective reconfiguration, businesses must build a strategic foundation that answers the demanding challenges required by today's business initiatives — EMC calls it the E-Infostructure™. A successful E-Infostructure in today's economy cannot be centered exclusively at the data center. Distributed organizations, remote offices, and decentralized workgroups all share the need for information that is highly available, yet easy to reconfigure as enterprise requirements evolve. Applications like e-mail, Web servers, and customer relationship management are crucial to the success of an organization, yet often the servers providing these tools are local to their users, with hardware that is tied specifically to an application and

supported by limited onsite management expertise. The EMC CLARiiON FC4500 can help you bridge that gap.

Storage consolidation.

Distributed computing environments often contain a range of stand-alone systems targeted to solve specific application needs. For example, e-mail might be running on one or more NT servers; a human resources or financial database application might be running on an IBM server; and engineering might be relying on a number of Sun servers. Each of these systems utilizes isolated host-supplied storage. While this may seem to be the simplest deployment method, it is not. Over time you will suffer from lack of flexibility to support changes in your business requirements, and ownership costs can go through the roof as capacity and server count inevitably grow.

Contrast this with building an E-Infostructure and consolidating information storage on a single, flexible platform. Storage can be allocated to servers on the fly. A single architecture allows deployment of common management practices. IT personnel can devote themselves to new projects, not reconfiguring existing systems. Whether the solution is incremental storage or a new server rollout, a consolidated storage approach accelerates the time to availability while decreasing the administrative effort.

Highly available Fibre Channel storage.

The FC4500 represents the fourth generation of Fibre Channel arrays from EMC CLARiiON. In addition to its fault-resilient architecture, the FC4500

extends availability protection outside the array through CLARiiON Application Transparent Failover™ software. This software ensures that users always have access to information, even in the event of a failure in one of the pathways between the host and the FC4500. This level of protection becomes paramount as you build larger Fibre Channel switched environments.

High performance.

The FC4500 fully exploits the Fibre Channel interface to deliver unparalleled performance. Capable of delivering more than 30,000 cached I/Os, and over 175MB/s, the FC4500 is the ideal array for a broad spectrum of applications. From OLTP and Web servers to data warehouses and graphics-intensive environments, the FC4500 delivers information fast.

Flexibility in deployment model.

To facilitate standardization and consolidation, the EMC CLARiiON FC4500 has a number of connectivity options. Direct attachment to a single host or cluster is provided through

standard FC-AL connections. For multi-host storage consolidation, Fibre Channel switches and EMC Access Logix software are available to facilitate connectivity and management of the complete environment.

Access Logix.

Access Logix provides secure, shared, or selective access to the FC4500 storage array in both mixed and homogeneous platform environments. Protection is provided on the CLARiiON FC4500 system and easily managed centrally and graphically with EMC Navisphere Manager. Access Logix

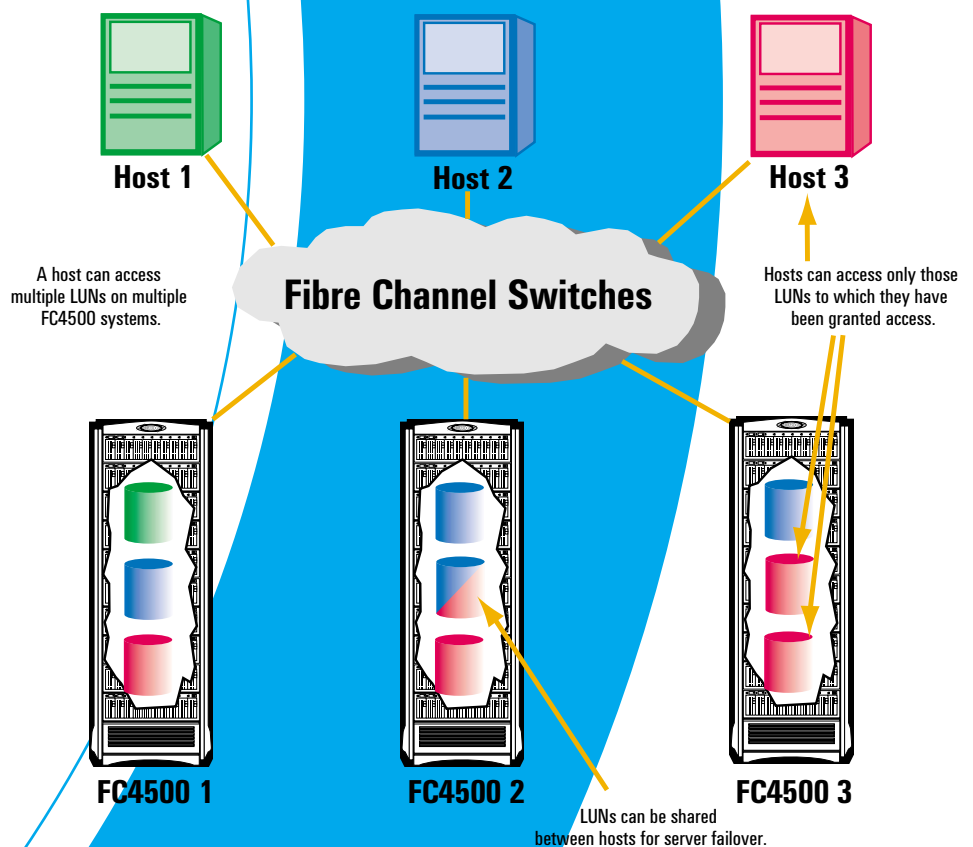
controls access to both reading and writing data, configuration changes, and management of array resources. While allowing multiple hosts to share a single array, Access Logix creates a safe environment by protecting data where it resides — on the array.

Flexible building-block architecture.

One significant hallmark of the FC4500 is its architecture. As capacity requirements rise, storage can be added to the array on the fly. With this powerful capability, system users can even add servers to the array without halting operations—an important benefit in today’s non-stop, 24x7 operations. In fact, adding capacity to a server is a simple click of a mouse button — messy cabling and hardware reconfiguration are no longer required.

FC4500 system management.

Through a combination of EMC ControlCenter™ and Navisphere software, administrators can view the complete range of their EMC storage environments (Symmetrix®, Connectrix™, and Celerra™). If a fault occurs on the FC4500, it is noted on the Navisphere screen. Administrators can then address the issue



The EMC CLARiiON FC4500 storage system provides multiple-host support.

Take the Next Step.

For more information on the EMC CLARiiON FC4500 system, contact your EMC sales representative or authorized EMC value-added systems integrator. Or contact EMC directly.

where information lives

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Data Sheet

by viewing the FC4500 through the Navisphere storage management software tool set.

Network management systems have also become an important tool for many organizations. To ensure ease of integrated use in management, the FC4500 can be integrated into a variety of network management systems, like IBM Tivoli and HP OpenView.

Cluster support for enhanced application availability.

The EMC CLARiiON FC4500 supports clustered hosts to enhance performance and data availability. Servers can be removed, replaced, or added, and additional FC4500 storage systems can be added on the fly.

Simplified IT infrastructure management with Navisphere.

Navisphere storage management software extends the capabilities of EMC CLARiiON arrays by delivering comprehensive business-wide storage management. Navisphere enables a business to effectively configure, monitor, and tune EMC CLARiiON disk arrays. Navisphere simplifies the management of all EMC CLARiiON storage devices, increasing the productivity of the system administration staff while reducing storage management costs.

Remote diagnostics protect your operations.

CLARAlert[®] remote support, automatically included with your EMC CLARiiON FC4500 array, is a key tool we use to seek out and eliminate problems before they can affect your business. CLARAlert detects hardware or software problems as they occur. CLARAlert's diagnostic tools automatically transmit a machine-initiated (MI) notification packet to the EMC Customer Support Center, where EMC technical experts remotely dial in to your site to perform diagnostics. An automated escalation process for CLARAlert-initiated situations ensures notification of all appropriate individuals at your site, the local and regional field service offices, and EMC corporate headquarters.

Onsite warranty protects your information.

EMC delivers around-the-clock coverage for your EMC CLARiiON FC4500 system, including onsite service, parts, and labor, 24-hours-a-day, seven-days-a-week, including holidays. EMC CLARiiON hardware includes a standard two-year warranty, designed for mission-critical support. Warranty service is delivered directly by the "best-in-class" EMC Customer Service organization, which is committed to providing coordinated support across multivendor platforms, technologies, and geographical boundaries.