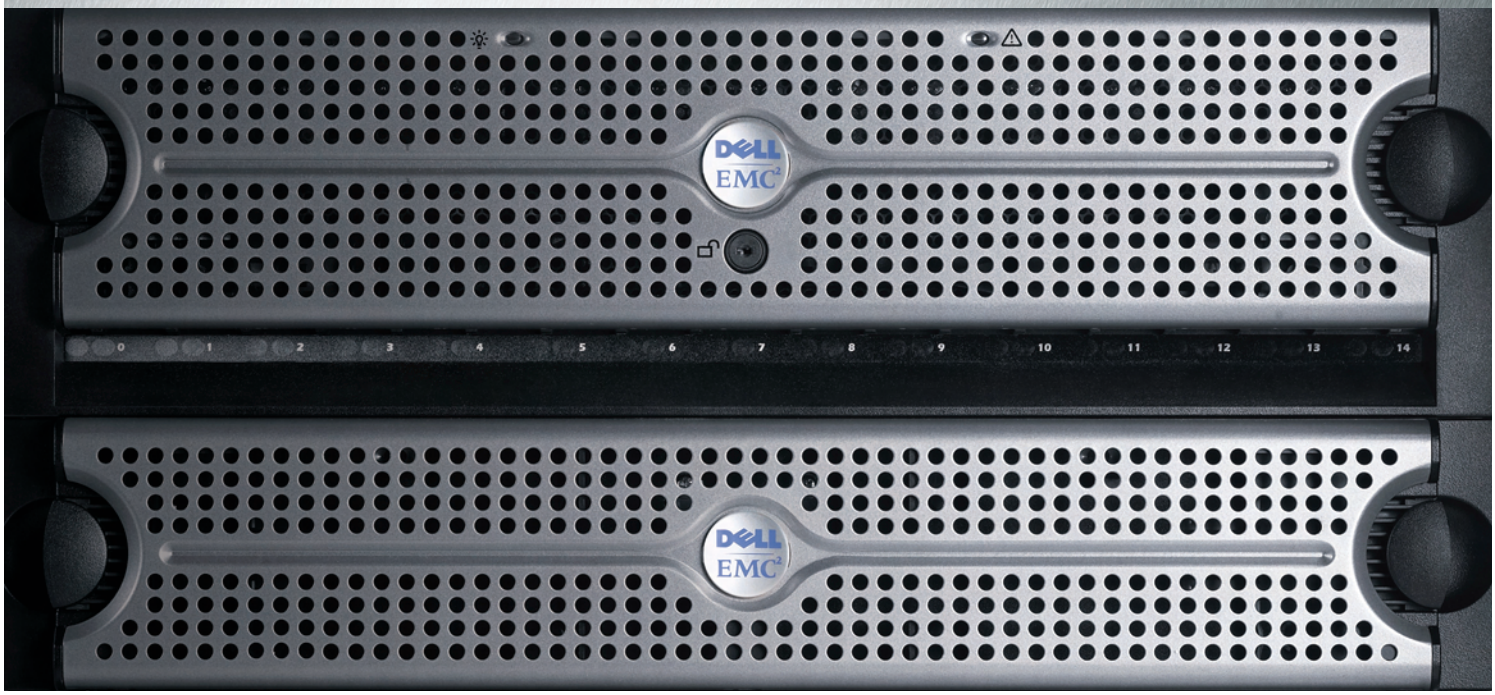
DELL | EMC
STORAGE PRODUCTS



Dell/EMC CX Series Benefits Brief

- Proven, high performance architecture scales from five to 480 drives in modular, pay-as-you-grow increments.
- Designed to prevent a single-point-of-failure while providing multi-path data access, mirrored cache, and automated system diagnostics along with many other features to help ensure high availability.
- Investment protection through incremental scalability and future-generation data-in-place upgrades for the Dell/EMC CX series.
- Flexible tiered storage options with support for both Fibre Channel and iSCSI connectivity to extend the benefits of storage consolidation to more applications.

Leading-edge Dell/EMC Storage Systems Bring High-End Functionality at Mid-Tier Affordability

Storage capabilities that were once only relevant to high-end enterprise-class storage systems are now necessary criteria in smaller growth businesses and departments within larger enterprises. Criteria such as a proven architecture, data availability and integrity, all at an affordable price, are necessities in today's mid-tier market.

Dell/EMC arrays meet these criteria. From the entry-level Dell/EMC AX150 and Dell/EMC CX3-10, the robust Dell/EMC CX3-20 and Dell/EMC CX3-40, to the powerful Dell/EMC CX3-80, these storage systems offer a balanced mix of features, power, capacity and versatility to help you gain the most value for your organization.

Dell/EMC Architecture – Built to Last, Built for Value, Built for Flexibility

Dell/EMC networked storage systems feature a common, high availability architecture that enables the Dell/EMC AX150 and the Dell/EMC CX3 Series to span a broad range of storage solutions, from the work group to the data center including SAN, NAS and DAS environments. Dell/EMC's CX3 UltraScale Series arrays can scale from five disk drives all the way to 480 without having to move data from its original hard drive. Plus, the modular design of the Dell/EMC CX3 UltraScale Series system enables you to start with smaller configurations, the Dell/EMC CX3-10c or CX3-20 array for example, and grow to the Dell/EMC CX3-40 or CX3-80 arrays as your needs and your business expand.

Also, the Dell/EMC AX150, CX3-10c, CX3-20c, and CX3-40c offer the flexibility to connect your hosts via Fibre Channel and iSCSI connectivity to help match the needs of your application workloads. With these multi-fabric Dell/EMC CX3 arrays, both Fibre Channel and iSCSI hosts can be connected simultaneously - offering new options for tiered storage consolidation.

Learn more about the power of the Dell/EMC partnership at www.Dell.com/EMC

Dell/EMC AX150
Dell/EMC AX150i

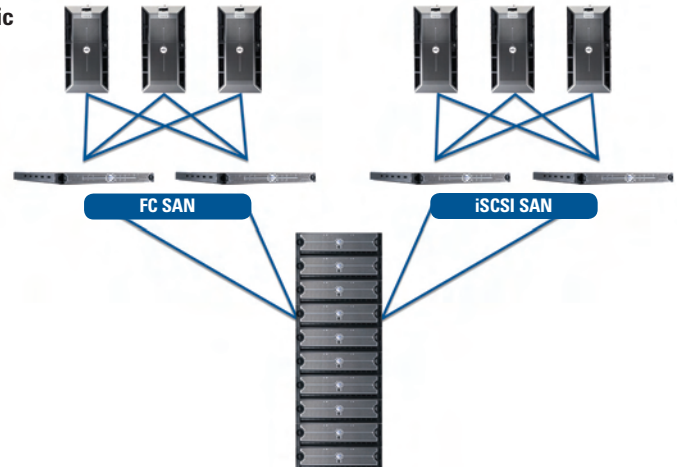
Dell/EMC CX3-10c

Dell/EMC CX3-20c
Dell/EMC CX3-20f

Dell/EMC CX3-40c
Dell/EMC CX3-40f

Dell/EMC CX3-80

A Typical Multi-Fabric SAN Configuration



The Dell/EMC architecture also allows you to scale in terms of performance and functionality. By capitalizing on the latest microprocessor technologies, Dell/EMC systems are able to apply ever-more powerful technology to your applications. With the dual processor version of the Dell/EMC CX series, dual storage processors each access disks in the array independently creating dual data paths for improved speed via load balancing. In the rare event of a storage processor problem, the remaining storage processor is able to assume the entire workload. This advanced architecture with automated failover helps protect data access, yet it is exceptionally cost-effective.

Dell/EMC Storage Arrays Scale to Fit Your Exact Needs

Dell/EMC CX3 storage arrays are built to power your storage network with high performance and dynamic scalability in an easy-to-manage form factor. They utilize the full potential of Fibre Channel by integrating 4Gbs Fibre Channel with a new storage processor architecture delivering both high data throughput and high I/O performance. Yet they provide exceptional flexibility by also supporting both high performance Fibre Channel and high capacity SATA drives in the same array.

Dell/EMC AX150 Storage Array

The Dell/EMC AX150 array is ideal for organizations implementing their first storage network, with either Fibre Channel or iSCSI, or for those wanting a SAN-capable DAS system to be able to easily expand storage capability in the future. It delivers high availability storage and is easy to install, even for people with little IT knowledge. This customer installable array is easy to manage from virtually anywhere. In fact the Dell/EMC AX150 is specifically designed to be easy to use and easy on the budget for small organizations and workgroups without compromising performance and availability, making it an exceptionally cost-effective solution for your first SAN.

Dell/EMC CX3-10c Storage Array

The Dell/EMC CX3-10c is an entry level array in the Dell/EMC CX3 portfolio that offers enterprise storage features at an affordable cost. It is an ideal product for customers who require increased capacity and modularity in a small footprint. The Dell/EMC CX3-10c extends the reliability and availability of the powerful UltraScale architecture to one of the industry's fastest growing customer segments. The Dell/EMC CX3-10c is a multi-fabric array that supports front end connections to both 4Gb Fibre Channel and iSCSI hosts and up to 60 Fibre Channel or SATA hard drives. The Dell/EMC CX3-10c array is ideal for organizations deploying cost-effective e-mail and messaging, workgroup applications and databases, file/print and remote office solutions.

Dell/EMC CX3-20c & CX3-20f Storage Arrays

For customers who require higher level performance, scalability and mirroring capabilities than the Dell/EMC CX3-10c, the Dell/EMC CX3-20 arrays support end-to-end 4GB capability and scale to 120 drives. The Dell/EMC CX3-20f can support up to 6 directly attached HA hosts for simpler, low cost configurations. The Dell/EMC CX3-20c supports simultaneous connections to both Fibre Channel and iSCSI hosts.

The Dell/EMC CX3-20 storage systems are ideal for organizations deploying cost-effective Windows®, Linux® and UNIX® workgroup SAN and direct-attach storage solutions. It offers the ease of management and performance required by companies running file/print, e-mail, moderate database and Web services applications.

Dell/EMC CX3-40c & CX3-40f Storage Arrays

The Dell/EMC CX3-40 arrays extend the Dell/EMC CX3 UltraScale family into the heart of the modular storage market. With 8GB of mirrored cache, the Dell/EMC CX3-40 delivers exceptional performance for large database and heavy I/O application needs. With the ability to easily upgrade the CX3 family, the Dell/EMC CX3-40 can easily be upgraded to the Dell/EMC CX3-80 providing investment protection for your enterprise storage needs. The Dell/EMC CX3-40f supports up to 4 back end loops that offers customers tremendous flexibility to segment their storage capacity by application or by performance. The Dell/EMC CX3-40c also supports both Fibre Channel and iSCSI connections so you can better match the needs of your host applications.

The Dell/EMC CX3-40 arrays deliver this tremendous amount of power in an amazingly small form factor. The entry Dell/EMC CX3-40 configuration is only 7U high including both storage processors, stand by power supply and up to 15 drives. All Dell/EMC CX3-40 arrays can be configured with as few as five and up to 240 disk drives in a maximum of 52U of rack space.

Dell/EMC CX3-80 Storage Array

For customers who demand enterprise-class storage functionality, the Dell/EMC CX3-80 provides one of the industry's most powerful mid-tier storage platforms. With the ability to support over 28,000 Exchange users the Dell/EMC CX3-80 is ideal for large Enterprise applications where performance, capacity and availability are critical. The Dell/EMC CX3-80 can scale to 480 drives and 353TB of capacity.

Continuous Availability and Data Integrity to Keep Your Business Running

A high performance array such as the Dell/EMC CX3-80 is meaningless without uninterrupted information access. All Dell/EMC systems feature advanced high availability technology designed to keep your information where you need it, when you need it.

With Dell/EMC products, your data is protected at the fundamental storage processor level in addition to being protected throughout the data path as it travels and is stored in your network. Each storage processor's cache mirrors the other processor's cache. As a result, the write cache in each storage processor contains both its own primary cached data and a secondary copy of the cache of its peer storage processor. If a storage processor fails, the cached data in the surviving storage processor, both primary and secondary, are immediately written to disk ensuring writes are safely stored. What's more, if your power should fail, full-system battery backup and an orderly shutdown process saves cached data on disks to provide data protection.

RAID Flexibility for Easy Configuration

Dell/EMC CX3 systems also offer a variety of RAID data-protection choices. These include RAID levels 1/0, 0, 1, 3, 5 and 6 (RAID 5 and 1/0 are offered on the Dell/EMC AX150). All levels can co-exist in the same array simultaneously to match the right protection characteristics to the value of the data. All disks are dual-ported for redundant access should one port fail. And all major Dell/EMC components such as power supplies, disk drives and storage processors are capable of being replaced without shutting down your entire system or disrupting data access.

Dell/EMC products and services can provide you with a complete solution for data availability and integrity. The Dell/EMC AX150 storage array offers data integrity with battery-backed cache, cache de-staging, hot disk sparing and active/active failover storage processor modules. Likewise, continuous cache and disk data integrity detection/correction, fault isolation, automatic diagnosis and phone-home capabilities round out the Dell/EMC CX3 UltraScale Series' data integrity features. As a result, you can rely on peace-of-mind and a cost-effective storage system designed to help your organization achieve its goals.

Match Drive Technologies to Application and Performance Requirements

The Dell/EMC AX150 supports the low cost, SATA II (Serial Advanced Technology Attachment II) hard drive, while the Dell/EMC CX3 series supports Fibre Channel drives and SATA II drives - all in the same array. This deployment flexibility helps enable customers to better match their application requirements with their performance and cost requirements.

DELL IT INFRASTRUCTURE SERVICES

Dell simplifies IT Services. The planning, implementation and maintenance of your IT infrastructure deserves nothing less. Complexity and variability in execution can compromise user productivity, IT resources, and ultimately, your reputation. By leveraging our expertise in simplifying IT Services, Dell can deliver a higher value solution.

Our approach stems from our world-class, process management and "no excuses" culture, and delivers what customers today need most—a simpler IT solution. We start with your needs, since you know your business better than anyone, and apply our proven expertise to create a more simple IT solution for your business.

Infrastructure Consulting Services
Key challenges facing IT professionals today include simplifying operations, planning and building for scalability and improving utilization of existing systems. Dell's Infrastructure Consulting Services are organized into focused practice areas such as Systems Management, Messaging, Databases, Virtualization/ Consolidation, and Storage, to help you resolve these challenges.

Deployment Services
Our Deployment Services are designed to simplify and speed up the deployment and utilization of new systems. Dell provides scalable processes and technology that can get your Dell storage systems up and running quickly. As a result, you don't need to divert your sophisticated IT resources away from mission critical activities. You get a single point of contact with real time measurement, seamless delivery and end-to-end deployment management.

Training Services
Make sure your employees have the knowledge and skills they need to fully utilize new technology. Dell offers comprehensive training services which include hardware and software training, and professional development classes. Dell training services can help you improve system reliability, maximize productivity, reduce end user requests and minimize downtime.

Asset Recovery and Recycling Services
Most IT personnel just don't have the time to properly dispose of, resell or donate unused computer equipment. Dell provides a simple, end-of-life process that maximizes the value of the overall IT solution.

Enterprise Support Services
Dell's Enterprise Support Services provide you with robust, flexible support for your server and storage systems, and help ensure your IT systems consistently achieve their performance potential. Through proactive maintenance, our specialist support teams can help you prevent problems before they happen, prepare in advance for any elevated IT demands, and achieve the fastest and most complete approach to problem resolution. Our innovative service technologies and processes enable a new level of performance management and consistent improvement. When your business requires nothing less than the very best support, Dell's Enterprise Support Services are the answer.

To help you get the most from your Dell systems, visit www.dell.com/services.

Services vary by region.

DELL | EMC STORAGE PRODUCTS

	Dell/EMC AX150 Dell/EMC AX150i	Dell/EMC CX300	Dell/EMC CX3-10c	Dell/EMC CX3-20c Dell/EMC CX3-20f	Dell/EMC CX3-40c Dell/EMC CX3-40f	Dell/EMC CX3-80
Cache	1GB	2GB	2GB	4GB	8GB	16GB
Drives per Array	Up to 12 drives	Up to 60 drives	Up to 60 drives	Up to 120 drives	Up to 240 drives	Up to 480 drives
Maximum Capacity per Array	Up to 9TB with SATA	Up to 38TB with SATA; Up to 18TB with FC	Up to 45TB with SATA; Up to 18TB with FC	Up to 83TB with SATA; Up to 36TB with FC	Up to 173TB with SATA; Up to 72TB with FC	Up to 353TB with SATA; Up to 144TB with FC
Host Connectivity	FC or iSCSI	FC Only	FC/iSCSI	FC or FC/iSCSI	FC or FC/iSCSI	FC Only
Maximum Direct Attached HA Hosts	AX150: Up to 4 FC AX150i: Up to 4 iSCSI	2 FC	2 FC, 2 iSCSI	CX3-20c: 2 FC, 4 iSCSI; CX3-20f: 6 FC	CX3-40c: 2 FC, 4 iSCSI; CX3-40f: 4 FC	4 FC
Maximum SAN Attached HA Hosts	10	64	64	128	128	256
Power, Watts (SPE+SPS)	326W	540W	662W	667W	725W	1285W
Storage Management	EMC Navisphere Express; EMC SpanView Express; EMC PowerPath; EMC SAN Copy/E	EMC Navisphere; EMC SnapView; EMC SAN Copy/E; Access Logix; EMC PowerPath bundled	EMC Navisphere; EMC SnapView; EMC SAN Copy; EMC MirrorView; Access Logix; EMC PowerPath bundled	EMC Navisphere; EMC SnapView; EMC SAN Copy; EMC MirrorView; Access Logix; EMC PowerPath	EMC Navisphere; EMC SnapView; EMC SAN Copy; EMC MirrorView; Access Logix; EMC PowerPath	EMC Navisphere; EMC SnapView; EMC SAN Copy; EMC MirrorView; Access Logix; EMC PowerPath
Form Factor	2U Disk Array Enclosure; 1U Standby Power Supply	3U Disk Processor; 1U Standby Power Supply; 3U Disk Array Enclosure	1U Storage Processor; 1U Standby Power Supply; 3U Disk Array Enclosure	1U Storage Processor; 1U Standby Power Supply; 3U Disk Array Enclosure	1U Storage Processor; 1U Standby Power Supply; 3U Disk Array Enclosure	4U Storage Processor; 1U Standby Power Supply; 3U Disk Array Enclosure

Learn more about the power of the Dell/EMC partnership at www.Dell.com/EMC

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