

# EMC Symmetrix DMX-4



EMC Symmetrix DMX-4 systems are available in two- to nine-bay configurations for more than one petabyte of raw storage capacity in a single system. With incremental tiered storage capability for maximum TOS values, Symmetrix DMX-4 systems are the highest capacity, fastest, most scalable, most capable storage systems available and serve as the foundation of today's most demanding, intelligent information collaboration tiers.

The EMC<sup>2</sup> Symmetrix<sup>®</sup> DMX-4 delivers scalable capacity and performance for consolidate systems, applications, and/or hosts while maintaining high service levels. Incrementally scalable packaging facilitates the online addition of disk directors enabling increased performance when needed.

## System Resources

Symmetrix DMX-4 systems are built on the field-proven Direct Matrix Architecture<sup>™</sup> which provides dedicated, non-blocking interconnects between I/O directors and global memory regions. To support the massive scalability of DMX-4 configurations, the DMX architecture has been expanded and enhanced to deliver higher throughput (1 GB/s disk) and increased I/O performance (four dual 1.3 GHz PPC processors per director).

DMX data paths	32-128	8 per I/O director, 24 per Global Memory director
DMX data bandwidth	32-128 GB/s	
DMX message bandwidth	4.0-6.4 GB/s	
PowerPC processors	16-128	4 dual 1.3 GHz processor complexes per director
Global Memory	32-512 GB*	Available in 8, 16, 32, and 64 GB Global Memory directors
Consistent memory transfers	16-32	4 per Global Memory director
*25.6 GB effective		

## Connectivity

Symmetrix DMX-4 is available in configurations supporting up to ten (10) High-Speed Channel (HSC) Directors with four SMP-driven pipeline slots each. Optimized hardware logic and data protection encoding ensures end-to-end data integrity with automated channel failover for maximum availability and load balancing. Symmetrix DMX<sup>™</sup> systems support all popular hardware and operating system platforms, storage area networks (SANs), and high-availability cluster environments. IPv6 and IPv6c support are available with GigE ports.

Protocol	Usable System Ports	Channel Director
4 Gb/s Fibre Channel host/SAN ports	2-64	1-8 per Fibre Channel Director
4 Gb/s Fibre Channel remote replication ports	2-8	1-4 per Fibre Channel Director
1 Gb/s iSCSI ports	2-40	1-4 per Multi-protocol Channel Director
4 Gb/s FICON host ports	2-40	1-4 per Multi-protocol Channel Director
1 Gb/s GigE remote replication ports	2-8	1-4 per Multi-protocol Channel Director
ESCON host ports	2-64	1-8 per ESCON Channel Director
ESCON remote replication ports	2-8	1-4 per ESCON Channel Director

Allowed combinations of the above port types depend upon the configuration. Highest numbers of usable host and replication ports are only supported in configurations with fewer disk channels. Refer to the EMC Support Matrix on [EMC.com](http://EMC.com) or contact your local EMC sales representative for specific configuration support.



# Emc Symmetrix Dmx 4 Product Guide

**Tony Pearson**



## **Emc Symmetrix Dmx 4 Product Guide:**

Exploiting IBM PowerHA SystemMirror V6.1 for AIX Enterprise Edition Dino Quintero,Benny Abrar,Adriano Almeida,Michael Herrera,SoHee Kim,Bjorn Roden,Andrei Socoliuc,Tom Swart,IBM Redbooks,2014-02-18 This IBM Redbooks publication positions the IBM PowerHA SystemMirror V6 1 for AIX Enterprise Edition as the cluster management solution for high availability This solution enables near continuous application service and minimizes the impact of planned and unplanned outages The primary goal of this high availability solution is to recover operations at a remote location after a system or data center failure establish or strengthen a business recovery plan and provide separate recovery location The IBM PowerHA SystemMirror Enterprise Edition is targeted at multisite high availability disaster recovery The objective of this book is to help new and existing PowerHA customers to understand how to plan to accomplish a successful installation and configuration of the PowerHA SystemMirror for AIX Enterprise Edition This book emphasizes the IBM Power Systems™ strategy to deliver more advanced functional capabilities for business resiliency and to enhance product usability and robustness through deep integration with AIX affiliated software stack and storage technologies PowerHA SystemMirror is designed developed integrated tested and supported by IBM from top to bottom **Computerworld** ,2003-02-10 For more

than 40 years Computerworld has been the leading source of technology news and information for IT influencers worldwide Computerworld s award winning Web site Computerworld com twice monthly publication focused conference series and custom research form the hub of the world s largest global IT media network **Cloud Data Centers and Cost Modeling** Caesar Wu,Rajkumar Buyya,2015-02-27 Cloud Data Centers and Cost Modeling establishes a framework for strategic decision makers to facilitate the development of cloud data centers Just as building a house requires a clear understanding of the blueprints architecture and costs of the project building a cloud based data center requires similar knowledge The authors take a theoretical and practical approach starting with the key questions to help uncover needs and clarify project scope They then demonstrate probability tools to test and support decisions and provide processes that resolve key issues After laying a foundation of cloud concepts and definitions the book addresses data center creation infrastructure development cost modeling and simulations in decision making each part building on the previous In this way the authors bridge technology management and infrastructure as a service in one complete guide to data centers that facilitates educated decision making Explains how to balance cloud computing functionality with data center efficiency Covers key requirements for power management cooling server planning virtualization and storage management Describes advanced methods for modeling cloud computing cost including Real Option Theory and Monte Carlo Simulations Blends theoretical and practical discussions with insights for developers consultants and analysts considering data center development

**Information Storage and Management** EMC Education Services,2010-01-06 The spiraling growth of digital information makes the ISM book a must have addition to your IT reference library This exponential growth has driven

information management technology to new levels of sophistication and complexity exposing a skills gap that challenge IT managers and professionals alike The ISM book written by storage professionals from EMC Corporation takes an open approach to teaching information storage and management focusing on concepts and principles rather than product specifics that can be applied in all IT environments The book enables existing and aspiring IT professionals students faculty and those simply wishing to gain deeper insight to this emerging pillar of IT infrastructure to achieve a comprehensive understanding of all segments of information storage technology Sixteen chapters are organized into four sections Advanced topics build upon the topics learned in previous chapters Section 1 Information Storage and Management for Today's World Four chapters cover information growth and challenges define a storage system and its environment review the evolution of storage technology and introduce intelligent storage systems Section 2 Storage Options and Protocols Six chapters cover the SCSI and Fibre channel architecture direct attached storage DAS storage area networks SANs network attached storage NAS Internet Protocol SAN IP SAN content addressed storage CAS and storage virtualization Section 3 Business Continuity and Replication Four chapters introduce business continuity backup and recovery local data replication and remote data replication Section 4 Security and Administration Two chapters cover storage security and storage infrastructure monitoring and management The book's supplementary web site provides up to date information on additional learning aids and storage certification opportunities

**IBM XIV Storage System Business Continuity Functions** Bertrand Dufrasne, Christian Burns, Wenzel Kalabza, Sandor Lengyel, Patrick Schill, Christian Schoessler, IBM Redbooks, 2018-08-07 The IBM XIV Storage System has a rich set of copy functions suited for various data protection scenarios that enable you to enhance your business continuance disaster recovery data migration and online backup solutions These functions allow point in time copies known as snapshots and full volume copies and also include remote copy capabilities in either synchronous or asynchronous mode A three site mirroring function is now available to further improve availability and disaster recovery capabilities These functions are included in the XIV software and all their features are available at no extra charge The various copy functions are reviewed in separate chapters which include detailed information about usage and practical illustrations The book also illustrates the use of IBM Tivoli Storage Productivity Center for Replication to manage XIV Copy Services This IBM Redbooks publication is intended for anyone who needs a detailed and practical understanding of the XIV copy functions

*Oracle Enterprise Manager 10g Grid Control Implementation Guide* Michael New, 2007-12-22 Install and Configure Grid Control to Manage Your Oracle Landscape Build a robust grid computing infrastructure with guidance from an Oracle expert who developed and taught the Grid Control Deep Dive class to Oracle Consulting Featuring real world examples and best practices Oracle Enterprise Manager 10g Grid Control Implementation Guide explains how to reliably and cost effectively deploy a dynamic Grid Control environment Learn how to lay the preinstallation groundwork configure targets for monitoring create services implement security and fine tune performance You'll also get full coverage of backup and recovery strategies

and high availability techniques Prepare infrastructure hosts for Grid Control rollout Install the Oracle management repository service and agents Select the Grid Control installation options that fit your needs Discover and manage host database and application server targets Set target metrics and policies according to best practices Optimize performance and availability of your Grid Control framework Secure the Grid Control framework to protect data transmitted between components

**Computerworld**, 2003-08-04 For more than 40 years Computerworld has been the leading source of technology news and information for IT influencers worldwide Computerworld's award winning Web site Computerworld.com twice monthly publication focused conference series and custom research form the hub of the world's largest global IT media network

**Integrated Information and Computing Systems for Natural, Spatial, and Social Sciences** Rückemann, Claus-Peter, 2012-10-31 The 21st century has seen a number of advancements in technology including the use of high performance computing Computing resources are being used by the science and economy fields for data processing simulation and modeling These innovations aid in the support of production logistics and mobility processes Integrated Information and Computing Systems for Natural Spatial and Social Sciences covers a carefully selected spectrum of the most up to date issues revealing the benefits dynamism potential and challenges of information and computing system application scenarios and components from a wide spectrum of prominent disciplines This comprehensive collection offers important guidance on the development stage of the universal solution to information and computing systems for researchers as well as industry decision makers and developers

**DB2 Developer's Guide** Craig Mullins, 2012 DB2 Developer's Guide is the field's 1 go to source for on the job information on programming and administering DB2 on IBM z OS mainframes Now three time IBM Information Champion Craig S Mullins has thoroughly updated this classic for DB2 v9 and v10 Mullins fully covers new DB2 innovations including temporal database support hashing universal tablespaces pureXML performance security and governance improvements new data types and much more Using current versions of DB2 for z OS readers will learn how to Build better databases and applications for CICS IMS batch CAF and RRSAP Write proficient code optimized DB2 SQL Implement efficient dynamic and static SQL applications Use binding and rebinding to optimize applications Efficiently create administer and manage DB2 databases and applications Design build and populate efficient DB2 database structures for online batch and data warehousing Improve the performance of DB2 subsystems databases utilities programs and SQL stat DB2 Developer's Guide Sixth Edition builds on the unique approach that has made previous editions so valuable It combines Condensed easy to read coverage of all essential topics information otherwise scattered through dozens of documents Detailed discussions of crucial details within each topic Expert field tested implementation advice Sensible examples

**Server Architectures** René J. Chevance, 2004-12-31 The goal of this book is to present and compare various options one for systems architecture from two separate points of view One that of the information technology decision maker who must choose a solution matching company business requirements and secondly that of the systems

architect who finds himself between the rock of changes in hardware and software technologies and the hard place of changing business needs Different aspects of server architecture are presented from databases designed for parallel architectures to high availability systems and touching en route on often neglected performance aspects The book provides IT managers decision makers and project leaders who want to acquire knowledge sufficient to understand the choices made in and capabilities of systems offered by various vendors Provides system design information to balance the characteristic applications against the capabilities and nature of various architectural choices In addition it offers an integrated view of the concepts in server architecture accompanied by discussion of effects on the evolution of the data processing industry

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functionalities and how to plan for Network Control deployments and also a number of common scenarios with best practices The IBM Systems Director Service and Support Manager describes how to set up and how to handle serviceable events Best practices for the Storage Monitoring and Management capabilities offered by IBM Systems Director server This book is for IBM IT specialists and IT architects IBM Business Partners and clients who are utilizing or considering implementing IBM Systems Director     Inside System Storage: Volume I (Paperback) Tony Pearson,2007-10-13 This blog based book or book comprises the first twelve months of posts from Inside System Storage a blog discussing computer storage concepts in general and IBM System Storage TM products in particular Tony Pearson shares his thoughts and experiences about IT storage and storage networking concepts IBM strategy hardware software and services Disk systems Tape systems and storage networking Storage and infrastructure management software Second Life Facebook and other Web 2 0 platforms IBM s many alliances partners and competitors How IT storage impacts society and industry     CIO ,2003-03-01     *The Advertising Red Books* ,2010     **Inside System Storage: Volume II (Paperback)** Tony Pearson,2010-01-21 Inside System Storage Volume II picks up where Volume I ends with eight more months of blog posts including behind the scenes commentary about IBM s transformation in its storage business involving two key acquisitions XIV and Diligent

**Mergent's Handbook of Common Stocks Summer 2007** Mergent, Inc.,2007-09-17 Mergent s Handbook of Common Stocks Summer 2006 offers quick and easy access to key financial statistics on approximately 900 New York Stock Exchange listed issues This handbook updated quarterly presents market data performance ratios stock prices and dividend information as well as recent quarterly results and future prospects in succinct one page profiles Filled with the latest available facts and figures Mergent s Handbook of Common Stocks can help readers make the most informed investment decisions possible

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