

Designing Storage Area Networks A Practical Reference For Implementing Fibre Channel And Ip Sans 2nd Edition

Discusses storage networks, covering architecture, devices, connectivity options, data organization methods, and the two major models: Network Attached Storage and Storage Area Networking.

Explores recent innovations in information and data storage technology.

The superabundance of data that is created by today's businesses is making storage a strategic investment priority for companies of all sizes. As storage takes precedence, the following major initiatives emerge: Flatten and converge your network: IBM® takes an open, standards-based approach to implement the latest advances in the flat, converged data center network designs of today. IBM Storage solutions enable clients to deploy a high-speed, low-latency Unified Fabric Architecture. Optimize and automate virtualization: Advanced virtualization awareness reduces the cost and complexity of deploying physical and virtual data center infrastructure. Simplify management: IBM data center networks are easy to deploy, maintain, scale, and virtualize, delivering the foundation of consolidated operations for dynamic infrastructure management. Storage is no longer an afterthought. Too much is at stake. Companies are searching for more ways to efficiently manage expanding volumes of data, and to make that data accessible throughout the enterprise. This demand is propelling the move of storage into the network. Also, the increasing complexity of managing large numbers of storage devices and vast amounts of data is driving greater business value into software and services. With current estimates of the amount of data to be managed and made available increasing at 60% each year, this outlook is where a storage area network (SAN) enters the arena. SANs are the leading storage infrastructure for the global economy of today. SANs offer simplified storage management, scalability, flexibility, and availability; and improved data access, movement, and backup. Welcome to the cognitive era. The smarter data center with the improved economics of IT can be achieved by connecting servers and storage with a high-speed and intelligent network fabric. A smarter data center that hosts IBM Storage solutions can provide an environment that is smarter, faster, greener, open, and easy to manage. This IBM® Redbooks® publication provides an introduction to SAN and Ethernet networking, and how these networks help to achieve a smarter data center. This book is intended for people who are not very familiar with IT, or who are just starting out in the IT world.

If you've been charged with setting up storage area networks for your company, learning how SANs work and managing data storage problems might seem challenging. Storage Area Networks For Dummies, 2nd Edition comes to the rescue with just what you need to know. Whether you already a bit SAN savvy or you're a complete novice, here's the scoop on how SANs save money, how to implement new technologies like data de-duplication, iScsi, and Fibre Channel over Ethernet, how to develop SANs that will aid your company's disaster recovery plan, and much more. For example, you can: Understand what SANs are, whether you need one, and what you need to build one Learn to use loops, switches, and fabric, and design your SAN for peak performance Create a disaster recovery plan with the appropriate guidelines, remote site, and data copy techniques Discover how to connect or extend SANs and how compression can reduce costs Compare tape and disk backups and network vs. SAN backup to choose the solution you need Find out how data de-duplication makes sense for backup, replication, and retention Follow great troubleshooting tips to help you find and fix a problem Benefit from a glossary of all those pesky acronyms From the basics for beginners to advanced features like snapshot copies, storage virtualization, and heading off problems before they happen, here's what you need to do the job with confidence!

Get up to speed on the latest Ethernet capabilities for building and maintaining networks for everything from homes and offices to data centers and server machine rooms. This thoroughly revised, comprehensive guide covers a wide range of Ethernet technologies, from basic operation to network management, based on the authors' many years of field experience. When should you upgrade to higher speed Ethernet? How do you use switches to build larger networks? How do you troubleshoot the system? This book provides the answers. If you're looking to build a scalable network with Ethernet to satisfy greater bandwidth and market requirements, this book is indeed the definitive guide. Examine the most widely used media systems, as well as advanced 40 and 100 gigabit Ethernet Learn about Ethernet's four basic elements and the IEEE standards Explore full-duplex Ethernet, Power over Ethernet, and Energy Efficient Ethernet Understand structured cabling systems and the components you need to build your Ethernet system Use Ethernet switches to expand and improve network design Delve into Ethernet performance, from specific channels to the entire network Get troubleshooting techniques for problems common to twisted-pair and fiber optic systems

* The emphasis of this book will be on detailed practicality. Most of the SAN books provide a theoretical treatment of the technology from a top-down perspective. This book will be written from the perspective of "from the ground up". * Relates specific technology offerings to particular application areas. Email stores, Image stores, Video Production and RDBMS disk are used as specific case studies to show how the hardware, firmware, and interconnects are set up and used. * SAN technology is ready to move out of the glass house and large scale storage is becoming applicable to even dedicated purposes. This represents an increase in the potential audience for a book on SANs and, of course, remains highly useful for the administrators and centralized technical staff responsible for backups, recoverability, and availability.

Objectives The purpose of Top-Down Network Design, Third Edition, is to help you design networks that meet a customer's business and technical goals. Whether your customer is another department within your own company or an external client, this book provides you with tested processes and tools to help you understand traffic flow, protocol behavior, and internetworking technologies. After completing this book, you will be equipped to design enterprise networks that meet a customer's requirements for

functionality, capacity, performance, availability, scalability, affordability, security, and manageability. Audience This book is for you if you are an internetworking professional responsible for designing and maintaining medium- to large-sized enterprise networks. If you are a network engineer, architect, or technician who has a working knowledge of network protocols and technologies, this book will provide you with practical advice on applying your knowledge to internetwork design. This book also includes useful information for consultants, systems engineers, and sales engineers who design corporate networks for clients. In the fast-paced presales environment of many systems engineers, it often is difficult to slow down and insist on a top-down, structured systems analysis approach. Wherever possible, this book includes shortcuts and assumptions that can be made to speed up the network design process. Finally, this book is useful for undergraduate and graduate students in computer science and information technology disciplines. Students who have taken one or two courses in networking theory will find Top-Down Network Design, Third Edition, an approachable introduction to the engineering and business issues related to developing real-world networks that solve typical business problems. Changes for the Third Edition Networks have changed in many ways since the second edition was published. Many legacy technologies have disappeared and are no longer covered in the book. In addition, modern networks have become multifaceted, providing support for numerous bandwidth-hungry applications and a variety of devices, ranging from smart phones to tablet PCs to high-end servers. Modern users expect the network to be available all the time, from any device, and to let them securely collaborate with coworkers, friends, and family. Networks today support voice, video, high-definition TV, desktop sharing, virtual meetings, online training, virtual reality, and applications that we can't even imagine that brilliant college students are busily creating in their dorm rooms. As applications rapidly change and put more demand on networks, the need to teach a systematic approach to network design is even more important than ever. With that need in mind, the third edition has been retooled to make it an ideal textbook for college students. The third edition features review questions and design scenarios at the end of each chapter to help students learn top-down network design. To address new demands on modern networks, the third edition of Top-Down Network Design also has updated material on the following topics: ; Network redundancy ; Modularity in network designs ; The Cisco SAFE security reference architecture ; The Rapid Spanning Tree Protocol (RSTP) ; Internet Protocol version 6 (IPv6) ; Ethernet scalability options, including 10-Gbps Ethernet and Metro Ethernet ; Network design and management tools This is a complete revision of Clark's bestseller "Designing Storage Area Networks." The new book provides guidelines for implementing SANs to solve existing networking problems in large-scale corporate networks.

The amount of data being generated, processed, and stored has reached unprecedented levels. Even during the recent economic crisis, there has been no slow down or information recession. Instead, the need to process, move, and store data has only increased. Consequently, IT organizations are looking to do more with what they have while supporting gr Learn efficient ways to harness and manage your data storage networks Whether you're preparing for the CompTIA Storage+ exam or simply seeking a deeper understanding of data storage networks, this Sybex guide will help you get there. This book covers data storage from the basics to advanced topics, and provides practical examples to show you ways to deliver world-class solutions. In addition, it covers all the objectives of the CompTIA Storage+ exam (SG0-001), including storage components, connectivity, storage management, data protection, and storage performance. Focuses on designing, implementing, and administering storage for today's evolving organizations, getting under the hood of the technologies that enable performance, resiliency, availability, recoverability, and simplicity Covers virtualization, big data, cloud storage, security, and scalability as well as how storage fits in to the wider technology environments prevalent in today's cloud era Provides advice and real-world examples that storage administrators in the trenches can actually use An excellent study aid for the CompTIA Storage+ exam (SG0-001), covering all the exam objectives Data Storage Networking: Real World Skills for the CompTIA Storage+ Certification and Beyond provides a solid foundation for data storage administrators and a reference that can be consulted again and again.

A guide to Cisco technology covers such topics as routers, switches, network security, Cisco certifications, wireless technology, and SAN and CDN solutions.

A guide to planning, implementing, managing, and using storage area networks to increase the efficiency of your network infrastructure Gain in-depth coverage of SAN fundamentals, topologies, implementation and management techniques, and products Build and sharpen your troubleshooting skills for data-mining, online transaction processing, imaging, data warehousing, and other highly data-intensive applications Understand how to implement the Fibre Channel and iSCSI protocols, which are key to any SAN solution Learn current industry implementation and application standards, as well as future advances During the last decade, a multitude of changes in computing technology and the globalization of business through the Internet have resulted in a tremendous growth in storage requirements. This has forced many organizations around the world to reassess the way they view their storage environment. Many applications, such as e-commerce, imaging, data warehousing, Enterprise Resource Planning (ERP), and Customer Relationship Management (CRM), fill storage media quickly. Data accessibility and availability for these applications has to be fast and efficient. Clearly, the ever-increasing information access requirements have had a profound effect on most data centers. As a result, many organizations are searching for cost-effective ways to ensure high data availability and reliability. Storage Area Network Fundamentals presents the benefits of storage area networks (SANs) to corporate users and enables them to deploy SAN technology effectively. Designed as an introduction to SANs, Storage Area Network Fundamentals develops an understanding of SAN basics and shows how to plan, implement, and manage a SAN. This book covers the topologies, protocols, and products required to implement and manage efficient SANs.

Market_Desc: The book provides basic application information key for systems administrators, database administrators and managers who need to know about the networking aspects of their systems. As well as systems architects, network managers, information management directors and decision makers. This book also supports applications for graduate students and other relevant courses in the field.

Special Features: · Hot topic that will become increasingly important in the coming years· First book to focus on using rather than building storage networks, and how to solve problems· Looking beyond technology and showing the With CD benefits of storage networks· Covers fibre channel SAN, Network Attached Storage, iSCSI and InfiniBand technologies· Contains several case studies (e.g. the example of a travel portal, protecting a critical database)· Endorsed by the Storage Networking Industry Association· Written by very experienced professionals who tailored the book specifically to meet customer needs About The Book: The authors have hands-on experience of network storage hardware and software, they teach customers about concrete network storage products, they understand the concepts behind storage networks, and show customers how storage networks address their business needs. They know which questions their readers will ask and what they need to know to do their day-to-day job as efficiently as possible, both those with no SAN experience and those with SAN experience.

IP Storage Networking: Straight to the Core is your complete blueprint for planning, deploying, managing, and maximizing the business value of enterprise storage. Gary Orenstein introduces IP storage, iSCSI, and related technologies; then shows how to integrate them into an overall storage strategy for maximizing availability and business agility. Coverage includes: architecture; software infrastructure; virtualization; security; storage policies; outsourcing; and measuring ROI on enterprise storage investments.

Evaluating, planning, and migrating to SAN storage architectures SAN concepts, components, and applications--in depth Management, backup, disaster recovery, and day-to-day administration Includes an overview of Fibre Channel, the SAN enabler The complete guide to SAN technology for every implementer and manager! Every month, enterprises require more information, delivered faster, with greater reliability--and traditional data storage methods no longer suffice. Enter the Storage Area Network (SAN), which can store enormous amounts of data, serve it at lightning speed, scale to meet accelerating growth, and deliver unprecedented reliability. Now, there's a complete guide to SAN technology for every IT professional and decision-maker. Storage Area Networks covers it all: key concepts, components, applications, implementation examples, management, and much more. Coverage includes: What SANs are, what they can do, and how they overcome the critical limitations of earlier data storage systems Evolving to SANs: best practices for building SANs from your legacy storage topologies An overview of Fibre Channel, the key enabling technology for SANs SAN configuration, device, and connectivity options--in depth Well-managed SANs: day-to-day administration, backup, restore, and disaster recovery A detailed review of Hewlett-Packard's market-leading SAN product line: Fibre Channel chips, host bus adapters, hubs, arrays, tape libraries, bridges, switches, and more Storage Area Networks also previews the future of SAN technology: policy-based SANs, emerging applications, and more. Whether you're considering a SAN for the first time, or you want a comprehensive management reference for the SAN you've already invested in, this book offers the insights, techniques, and guidance you need right now.

The High Performance Storage System (HPSS) is a mature Hierarchical Storage Management (HSM) system that was developed around a network-centered architecture, with client access to storage provided through third-party controls. Because of this design, HPSS is able to leverage today's Storage Area Network (SAN) infrastructures to provide cost effective, large-scale storage systems and high performance global file access for clients. Key attributes of SAN file systems are found in HPSS today, and more complete SAN file system capabilities are being added. This paper traces the HPSS storage network architecture from the original implementation using HIPPI and IPI-3 technology, through today's local area network (LAN) capabilities, and to SAN file system capabilities now in development. At each stage, HPSS capabilities are compared with capabilities generally accepted today as characteristic of storage area networks and SAN file systems.

Compares the architecture, management responsibilities, storage procedures, size, and reliability of the information storage and retrieval technologies.

There is a great deal of change happening in the technology being used for local networks. As Web intranets have driven bandwidth needs through the ceiling, inexpensive Ethernet NICs and switches have come into the market. As a result, many network professionals are interested in evaluating these new technologies for implementation consideration. If you are looking for advice from experts who can help you realistically compare and decide how to use the options before you. Often, books on this subject are too varied in subject matter, attempting to cover too many subjects in the book. This book addresses the topic of Ethernet Networking from a planning perspective to a bit analysis of the Ethernet packets. It explains in detail information in the new network administrator would find it necessary to know.

Storage Area Networks provide highly reliable, high-performance connectivity between hosts and storage devices. This allows storage resource sharing, improving asset utilization, and enabling solutions such as high availability, disaster recovery, information lifecycle management, and utility computing. These solutions provide a high return on investment, resulting in an accelerating SAN adoption rate in all IT markets. This book provides an overview of SAN protocols and technologies, and practical guidance on SAN design, implementation, and management topics. Some future SAN trends and technologies are discussed, but the focus is on designing SANs with current, real-world products such as Fibre Channel switches and routers. Principles of SAN Design offers a "one stop shop" for SAN design knowledge. Why wait? Read the definitive work on SAN design today!

Describes ways to incorporate domain modeling into software development.

Due to the growth of Internet-driven applications, issues such as storage capacity and access speed have become critical in the design of today's computer systems Book fills the need for a readily-accessible single reference source on the subject of high-performance, large scale storage and delivery systems Contains the latest information and future directions of disk arrays and parallel I/O A Wiley-IEEE Press Publication

The worldwide market for SAN and NAS storage is anticipated to grow from US \$2 billion in 1999 to over \$25 billion by 2004. As business-to-business and business-to-consumer e-commerce matures, even greater demands for management of stored data will arise. With the rapid increase in data storage requirements in the last decade, efficient management of stored data becomes a necessity for the enterprise. A recent UC-Berkeley study predicts that 150,000 terabytes of disk storage will be shipped in 2003. Most financial, insurance, healthcare, and telecommunications institutions are in the process of implementing storage networks that are distributed to some degree. For these institutions, data integrity is critical, and they will spend much time and money on planning. One of the primary obstacles to implementing a storage network cited by enterprise IT managers is a lack of knowledge about storage networking technology and the specific issues involved in extending a Storage Area Network (SAN) or Network Attached Storage (NAS) over the Metropolitan Area Networks (MAN) or Wireless Area Networks (WAN). Distributed Storage Networks : Architecture, Protocols and Management addresses the "terminology gap" between enterprise network planners and telecommunications engineers, who must understand the transport requirements of storage networks in order to implement distributed storage networks. Jepsen comprehensively provides IT managers, planners, and telecommunications professionals with the information they need in order to choose the technologies best suited for their particular environment. * Addresses a hot topic that will become increasingly important in the coming years * Enables high-level managers and planners to make intelligent decisions about network needs. * Includes example network configurations providing solutions to typical user scenarios * Fills the "terminology gap" between enterprise network managers and telecommunications engineers who must understand the transport requirements of storage networks in order to implement distributed storage area networks A fundamental resource for all network managers, planners and network design engineers, as well as telecommunications engineers and engineering, computer science, and information technology students.

IP SANS is a technical overview of the new IP-based storage area network solutions for the explosive growth in data storage requirements faced by today's modern businesses.

Designing Storage for Exchange 2007 SP1 will help you understand the new choices and possibilities available in designing your storage environment for Microsoft Exchange Server 2007 SP1. The move of Microsoft Exchange Server from a 32-bit application to the 64-bit world reduced the I/O footprint on the storage subsystem. This allows users to consider shared storage deployments or go the opposite way and focus on direct attached storage. Supporting large mailboxes is now possible, but how do you back up and recover the increased amount of data? Exchange Server 2007 Continuous Replication and new features in Windows Server 2008 Failover Clustering provides interesting possibilities for geographically dispersed deployments. This book explains these new built-in features of Exchange Server 2007 and compares them with application independent data replication solutions provided by high-end storage subsystems. It is critical to understand these key technologies to make the right decision which storage solution best fits your business needs. The authors share their experience from large scale deployments and depict configurations used during their projects. Includes a description of how the move to a 64-bit application reduced the I/O behavior Storage hardware technologies and Windows storage stack features for Exchange server Exchange Server 2007 Continuous Replication and Windows Server 2008 Failover Clustering Performance monitoring and analysis to optimize the Exchange Server 2007 configuration

This practical guide to techniques necessary to integrate fibre-based switches to an IP-based network is designed for advanced-level administrators. Beginning with a detailed analysis of the benefits of implementing a SAN and an examination of the hardware and bandwidth requirements, this book proceeds to a discussion of the Brocade SilkWorm series of fibre channel switches and how the various switches are configured to connect a SAN with existing LANs.

Praise for the first edition of Building Storage Networks: "This book is the Bible of storage networking" --Dave Hill, Senior Storage Analyst, the Aberdeen Group Now more than ever, especially in the age of e-commerce, data must be available and accessible 24x7 on a network. This easy-to-understand book clearly explains all the latest methods of storing data on a network, including updated coverage of Internet storage service providers.

How do we go about Comparing Storage Area Networks approaches/solutions? Does Storage Area Networks analysis show the relationships among important Storage Area Networks factors? How do you determine the key elements that affect Storage Area Networks workforce satisfaction? how are these elements determined for different workforce groups and segments? Are there any disadvantages to implementing Storage Area Networks? There might be some that are less obvious? Is Supporting Storage Area Networks documentation required? Defining, designing, creating, and implementing a process to solve a challenge or meet an objective is the most valuable role... In EVERY group, company, organization and department. Unless you are talking a one-time, single-use project, there should be a process. Whether that process is managed and implemented by humans, AI, or a combination of the two, it needs to be designed by someone with a complex enough perspective to ask the right questions. Someone capable of asking the right questions and step back and say, 'What are we really trying to accomplish here? And is there a different way to look at it?' This Self-Assessment empowers people to do just that - whether their title is entrepreneur, manager, consultant, (Vice-)President, CxO etc... - they are the people who rule the future. They are the person who asks the right questions to make Storage Area Networks investments work better. This Storage Area Networks All-Inclusive Self-Assessment enables You to be that person. All the tools you need to an in-depth Storage Area Networks Self-Assessment. Featuring 703 new and updated case-based questions, organized into seven core areas of process design, this Self-Assessment will help you identify areas in which Storage Area Networks improvements can be made. In using the questions you will be better able to: - diagnose Storage Area Networks projects, initiatives, organizations, businesses and processes using accepted diagnostic standards and practices - implement evidence-based best practice strategies aligned with overall goals - integrate recent advances in Storage Area Networks and process design strategies into practice according to best practice guidelines Using a Self-Assessment tool known as the Storage Area Networks Scorecard, you will develop a clear picture of which Storage Area Networks areas need attention. Your purchase includes access details to the Storage Area Networks self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows your organization exactly what to do next. Your exclusive instant access details can be found in your book.

PRACTICAL ROADMAP FOR DESIGNING AND DEPLOYING A SAN Fibre Channel has come into its own as the defining network architecture for Storage Area Networks (SANs), which are proving critical for managing the volume and complexity of data generated by Internet-era applications. Fibre Channel for SANs, by Dr. Alan F. Benner, shows you how Fibre Channel works, how it integrates with other protocols and systems, and how to implement it to create a SAN for fast access to mass storage. It walks you through the ANSI standard's 5 levels, from the physical transmission level through interfaces to upper layer protocols, and demonstrates mapping SCSI and IP over Fibre Channel. You get a wealth of timesaving illustrations and practical suggestions for troubleshooting. You learn how to: *Build expertise in the standard used by ISPs for Web page storage, and by enterprise data centers for managing multi-Terabyte storage requirements *Create bandwidth-sparing solutions for multimedia—voice, video, animation, music—and real-time video conferencing *Implement logins and logouts, link services, error detection and recovery, flow control, and more

"Storage Networks Explained has much to recommend it... a rarity in the literature of digital data storage – a complete exposition of both the base subject matter and its applications, which at the same time offers a level of readability making it suitable as an introduction to the subject. Storage Networks Explained is also flexible. It can be read cover-to-cover, browsed, or used as a reference. I recommend Storage Networks Explained as an essential component of any active information technology library." —Paul Massiglia, Technical Director, VERITAS Software Corporation Storage networks will become a basic technology like databases or local area networks. According to market research, 70% of external storage devices will be connected via storage networks in 2003. The authors have hands-on experience of network storage hardware and software, they teach customers about concrete network storage products, they understand the concepts behind storage networks, and show customers how storage networks address their business needs. Storage networks provide shared access to stored data from multiple computers and servers, thus increasing storage efficiency and availability. They permit information management functions such as backup and recovery, data mirroring, disaster recovery, and data migration to be performed quickly and efficiently, with a minimum of system overhead. This book explains how to use storage networks to fix malfunctioning business processes, covering the technologies as well as applications. A hot topic that will become increasingly important in the coming years. One of the first books to focus on using rather than building storage networks, and how to solve problems. Looking beyond technology and showing the true benefits of storage networks. Covers fibre channel SAN, Network Attached Storage, iSCSI and InfiniBand technologies. Contains several case studies (e.g. the example of a travel portal, protecting a critical database) Endorsed by the Storage Networking Industry Association. Written by very experienced professionals who tailored the book specifically to meet customer needs including support with supplementary material on Troppens website and Preface written by Tony Clark. Provides basic application information key for systems administrators, database administrators and managers who need to know about the networking aspects of their systems. As well as systems architects, network managers, information management directors and decision makers. This book also supports applications for graduate students and other relevant courses in the field. Awarded Best System Administration Book 2005 by the Linux Journal

Storage virtualization has come of age, offering IT professionals powerful new ways to simplify infrastructure, streamline management, improve utilization, and reduce costs. Now, the author of the best-selling storage books IP SANs and Designing Storage Area Networks presents an up-to-the-minute, vendor-neutral overview of storage virtualization in all its forms.

Features vendor-neutral coverage applicable to any storage network Includes a special case-study section citing real-world applications and examples The first vendor-neutral volume to cover storage network performance tuning and optimization Exacting performance monitoring and analysis maximizes the efficiency and cost-effectiveness of existing storage networks Meets the needs of network administrators, storage engineers, and IT professionals faced with shrinking budgets and growing data storage demands

Designing Storage Area Networks A Practical Reference for Implementing Fibre Channel and IP SANs Addison-Wesley Professional

There are hundreds of technologies and protocols used in telecommunications. They run the full gamut from application level to physical level. It is overwhelming to try to keep track of them. Network Design, Second Edition: Management and Technical Perspectives is a broad survey of the major technologies and networking protocols and how they inter

A resilient storage network is an environment where data is always available for the needs of the business. This book explains the components, as well as how to design and implement a resilient storage network for workgroup, departmental, and enterprise environments. Storage networks are an enabling capability combining technology and best practices to provide the foundation to support information technology systems and applications. Storage networks can be of various sizes, shapes, and technologies. This book shows you how to implement a resilient storage network infrastructure using different technologies including ATM, DWDM, FCIP, Fibre Channel, FICON, iFCP, InfiniBand, IP, iSCSI, Life Cycle Management, NAS, Object Based Storage, RAID, RDMA, Remote Mirroring, Replication, SAN, SCSI, SMI-S, SONET/SDH, Storage Services, Tape, Virtualization, and Volume Managers. *Important information is clarified and put into context to separate myths and realities *Covers storage networking technologies (hardware, software, networks) and practices *Numerous tips and recommendations allow the reader to quickly understand best practices *Checklists, templates and examples show potential solutions

Unlike networking technology, where there is already a great deal of literature available, many professionals still need to understand the basic building blocks of storage networking. This book provides vendor-neutral, independent analysis and terminology.

Annotation Enter the new era of data storage that combines database and networking technologies with this introductory comparison and practical implementation of Storage Area Networks. Multiple vendor reference: This book provides solutions and schemes from competing SAN vendors, including an appendix of available SAN products. Readers will learn to customize their own SAN solution: Authors forecast future growth of SANs in an Advanced Study of Virtual Interface. Technically accurate instruction: NIIT recently earned the National Education and Training group Excellence Award for defect-free deliveries of Learning products. Even highly experienced system or network professionals are unfamiliar with SAN functionality and terminology. This book opens with an overview of the need for data storage in an enterprise environment, the different types of data storage devices, and existing data storage techniques. The authors build on that foundation with an exploration of the evolution of SAN, the various networking models and data-centric applications, a chapter dedicated to fiber channel, and practical solutions for centralized, heterogeneous, and high-speed data storage challenges. The second half of this book delves into more practical applications of the SAN: designing, implementing, managing, and troubleshooting a SAN. The last chapter explores how SAN fits into the current Web scenario, and VI Architecture as a new system of cluster communications. Unlike competing titles, this book provides solutions for alternative SAN vendors, comparing SAN schemes for competitive products. NIIT is a global eBusiness IT Solutions Corporation that has provided over 650 Educational Multimedia Software titles and more than 10,000 hours of instructor-led training during its 16 years of training delivery. Judged the Best Training Company through an opinion poll among over 1000 CIOs, software professionals, and IT users by ComputerWorld magazine, NIIT provides classroom-based training, technology-based training, and Internet-based training.

A major new entry in the essential series which aims at distinguishing the hype from the reality of SANs.

The inside scoop on a leading-edge data storage technology The rapid growth of e-commerce and the need to have all kinds of applications operating at top speed at the same time, all on a 24/7 basis while connected to the Internet, is overwhelming traditional data storage methods. The solution? Storage Area Networks (SANs)--the data communications technology that's expected to revolutionize distributed computing. Written by top technology experts at VERITAS Software Global Corporation, this book takes readers through all facets of storage networking, explaining how a SAN can help consolidate conventional server storage onto networks, how it makes applications highly available no matter how much data is being stored, and how this in turn makes data access and management faster and easier. System and network managers considering storage networking for their enterprises, as well as application developers and IT staff, will find invaluable advice on the design and deployment of the technology and how it works. Detailed, up-to-date coverage includes: The evolution of the technology and what is expected from SANs Killer applications for SANs Full coverage of storage networking and what it means for the enterprise's information processing architecture Individual chapters devoted to the storage, network, and software components of storage networking Issues for implementation and adoption

This book provides an introduction to digital storage for consumer electronics. It discusses the various types of digital storage, including emerging non-volatile solid-state storage technologies and their advantages and disadvantages. It discusses the best practices for selecting, integrating, and using storage devices for various applications. It explores the networking of devices into an overall organization that results in always-available home storage combined with digital storage in the cloud to create an infrastructure to support

emerging consumer applications and the Internet of Things. It also looks at the role of digital storage devices in creating security and privacy in consumer products.

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