

The Holy Grail Of Network Storage Management

Storage Area Network Fundamentals

Vladimir V. Riabov, *Rivier College*

Introduction	1	Adaptive Network Storage Architecture (ANSA)	11
SAN Overview	1	Storage Resource Management (SRM)	11
What Is a SAN?	1	Standards	11
Benefits of SANs	3	American National Standards Institute (ANSI)	11
SAN Applications	4	Distributed Management Task Force (DMTF)	11
SAN Architecture and Infrastructure	4	Storage Systems Standards Working Group (SSSWG)	11
SAN Design and Management Issues	6	Internet Engineering Task Force (IETF)	11
SAN Operating System Software Components	7	Storage Networking Associations, Initiatives, Forums, and Coalitions	11
SAN Security Issues	7	SNSA (Storage Networking Industry Association)	11
SAN Technologies and Solutions	8	Fibre Channel Industry Association (FCIA)	12
Fibre-channel Topologies	8	Fibre Alliance (FA)	12
InfiniBand Solutions	9	Jirc	12
Crossroads Systems with a Storage Router	9	National Storage Industry Consortium (NSIC)	12
Brocade's Configurations	9	The SAN Market, Vendors, and Service Providers	12
Other Storage Networking Technologies	9	Evolution of the SAN Market	12
VI (Virtual Interface) Architecture	10	SAN Vendors and Service Providers	13
Direct Access File System	10	Conclusion	14
IP Storage Technologies	10	Glossary	14
SANs over IP	10	References	14
Storage over IP (SoIP)	10		
Fabric Shortest Path First (FSPF)	10		

INTRODUCTION

The volume and value of enterprise data have been growing faster than the speed at which traditional backup utilities' effectiveness has been increasing. Enterprises have become more dependent on their online systems and cannot ensure the availability of these data by relying only on traditional network-bottlenecked, server-attached storage systems. Solutions to this problem have been offered by storage area network (SAN) technology, which provides enterprises with seamless, zero-time-window backup. In this new backup approach, backed-up data are removed to a secondary remote storage device, and the enterprise server becomes off-loaded, permitting high-performance continuous access to both applications and data. The objective of a SAN is to allow multiple servers access to a pool of data storage in which any server can potentially access any storage unit. In this environment, management has a large role in providing security guarantees (with authorization to access particular storage devices) and sequencing or serialization guarantees (with authorization to access a particular device at certain time-point) (Server Clusters 2003).

A SAN fabric is usually based on fibre-channel technology that allows up to 10 km long-distance connections. This feature has a significant advantage in a campus environment, where reliable backup resources can be shared among several divisions. For example, fibre-channel SANs for a health care enterprise allow 24/7 continuous operation, patient record backups, and medical image archiving (Farley 2001).

The SAN becomes a key element of the enterprise environment in which data availability, serviceability, and

reliability are critical for a company's business. Many enterprise solutions (e.g., ATTO FibreBridge products, rack mount solutions, ATTO FibreCenter 3400R/D, host bus adapters, the ATTO Diamond array, Compus Storage Works products, EMC Connectix solutions, LSI Logic E4600 Storage System) are available today. They can be effectively used in multiple platform storage-infrastructure solutions for data-intensive applications such as e-commerce, online transaction processing, electronic mailing, data warehousing, data mining, Internet/intranet browsing, multimedia audio/video editing, high-definition television (HDTV), streaming, and enterprise database management applications (Riabov 2004).

This chapter describes fundamentals of storage area networks (SANs), their architectural elements (interfaces, interconnects, and fabrics), technologies (fibre-channel, arbitrated loop transport protocol, Brocade's configurations, InfiniBand switched fabric architecture, Crossroads systems with a storage router, virtual interface architecture systems with a storage router, virtual interface architecture systems with a storage router, Internet protocol (IP) storage technologies, SANs over IP, fibre channel over IP, Internet fibre-channel protocol, Internet SCSI, storage over IP fabric shortest path first protocol, storage resource management, and adaptive network storage architecture), solutions, standards, associations, initiatives, forums, coalitions, vendors, and service providers.

SAN OVERVIEW

What Is a SAN?

A SAN (storage area network) is a networked high-speed infrastructure (subnetwork) that establishes direct access

The Holy Grail of Network Storage Management, by noted IT veteran and author Jon William Toigo, is a comprehensive, vendor-neutral guide to networked Abstract - Authors - Cited By. The comprehensive guide to vendor neutral networked storage management product offerings that delivers real business value, this book provides an objective. Description. Part of the successful PH PTR Essential Guide to Series, this book will look at where e-business has been, where it is today, and where it is. Storage area networks Computer networks Database.

maUncategorised File organization Computer science. ISBN. Copies. The Holy Grail of Network Storage Management,, (isbn , ean), by Toigo J. W. That's because data itself is poorly managed, a task typically assigned to technical staff who lack either the tools or the skills to design, plan, administer, and. Find great deals for The Holy Grail of Network Storage Management by Jon William Toigo (Paperback,). Shop with confidence on eBay! 26 Mar - 27 sec - Uploaded by berit Up next. CppCon Phil Nash The Holy Grail! A Hash Array Mapped Trie for C++ - Duration. In The Holy Grail of Data Storage Management, Jon William Toigo documents into every next-generation storage technology: network attached storage (NAS). The Holy Grail of network storage management / Jon William Toigo ; with illustrations By Margaret Romao Toigo. By: Toigo, Jon William, Material type. Buy the The Holy Grail Of Network Storage Management online from Takealot. Many ways to pay. Free Delivery Available. Non-Returnable. We offer fast.?: The Holy Grail of Network Storage Management, ISBN: ,?: Jon William Toigo, ????: Prentice Hall, ????:

[\[PDF\] 50 Famous New Zealanders: Portraits And Biographies Of 50 Of The Most Famous New Zealanders](#)

[\[PDF\] The Book Of Gemini](#)

[\[PDF\] Breaking Ground: An Illustration Of Alternative Development Standards In Ontarios New Communities](#)

[\[PDF\] Lawyers And The Rule Of Law In An Era Of Globalization](#)

[\[PDF\] Introduction To The Design And Analysis Of Experiments](#)

[\[PDF\] Brice On Maritime Law Of Salvage](#)

[\[PDF\] Make Rocks Sing](#)