Ibm Ds3400 Manual

Squeezing the Most Out of Dynamic SQL with DB2 for Z/OS and OS/390IBM Smart Analytics SystemIBM System Storage DS3500 Introduction and Implementation GuideIBM Power 550 Technical OverviewIBM i 7.1 Technical Overview with Technology Refresh UpdatesCreating Smart Virtual Appliances with IBM Image Construction and Composition ToolIBM Spectrum Virtualize and SAN Volume Controller Enhanced Stretched Cluster with VMwareDemon BoxHeavily-Doped 2D-Quantized Structures and the Einstein RelationIBM Virtual Disk System Quickstart GuideIBM Power 520 and Power 550 (Power6) System BuilderIBM CloudBurst on System xIBM System Storage Solutions HandbookImplementing the IBM StorwizeThe FermataSAN Volume ControllerIBM Systems Director 6.3 Best PracticesLux: Beginnings (Obsidian & Onyx)ElectricityIBM Information Infrastructure Solutions HandbookNanostructured CeramicsTuning IBM System X Servers for PerformanceBest Practices for DB2 on AIX 6.1 for POWER SystemsIBM System Storage SAN Volume Controller and Storwize V7000 Replication Family ServicesImplementing the IBM Storwize V3500Implementing the IBM Storwize V7000 Gen2Docker and Kubernetes for Java DevelopersIBM Data Center Networking: Planning for Virtualization and Cloud ComputingLiving in the AnointingArduino for MusiciansIBM PowerHA SystemMirror for AIX 7.1.3 Best Practices and Migration GuideExploiting IBM AIX Workload PartitionsIBM System Storage DS3000IBM PowerHA SystemMirror for AIX CookbookIBM i and Midrange

External StorageIBM SAN Volume Controller 2145-DH8 Introduction and ImplementationImplementing the IBM Storwize V7000 V7.2IBM Flex System p260 and p460 Planning and Implementation GuideVMware Implementation with IBM System Storage DS5000IBM PowerHA SystemMirror 7.1.2 Enterprise Edition for AIX

Squeezing the Most Out of Dynamic SQL with DB2 for Z/OS and OS/390

Explains how home electricity works, including what devices it powers, where it comes from, and how it is dispersed throughout a home.

IBM Smart Analytics System

This IBM® RedpaperTM is a comprehensive guide covering the Power 550 server. The goal of this paper is to introduce the innovative Power 550. It introduces major hardware offerings and discusses their prominent functions, including: o The POWER6 processor available at frequencies of 3.5 GHz, 4.2 GHz, and 5.0 GHz. o The specialized POWER6 DDR2 memory that provides greater bandwidth, capacity, and reliability. o The 1 Gb or 10 Gb Integrated Virtual Ethernet adapter that brings native hardware virtualization to this server o EnergyScale technology that provides features such as power trending, power-saving, capping of power, and

thermal measurement o PowerVM Live Partition Mobility o Mainframe continuous availability brought to the UNIX environment This Redpaper expands the current set of IBM System p documentation by providing a desktop reference that offers a detailed technical description of the 550 system. This Redpaper does not replace the latest marketing materials and tools. It is intended as an additional source of information that, together with existing sources, may be used to enhance your knowledge of IBM server solutions.

IBM System Storage DS3500 Introduction and Implementation Guide

-- Explains the anointing and shows how you can be empowered by the Spirit in every area of your life -- Calls for a radical, biblical, Christian faith and true, uncompromising discipleship -- Points toward a deeper, more intimate walk with God, while explaining the call and anointing of Christians for the fulfillment of God's purposes This book is for everyone who wants truth and reality in his or her Christian walk wants the purpose of God in their lifethirsts for more of Chris and His anointingand longs to get into the deeper life in the dimension of the spirit, whatever it may cost! It encourages readers to challenge the "easy gospel" and pursue the knowledge of God at a much deeper level.

IBM Power 550 Technical Overview

This IBM® Redbooks® publication provides an update of the latest AIX Workload Partition (WPAR) capabilities. It provides a how-to guide and well-defined and documented deployment model for system administrators and architects using WPARs in AIX® Version 7.1 within an IBM POWER® System virtualized environment. This book helps clients create a planned foundation for their future deployments. This book is targeted toward technical professionals, such as business intelligence (BI) consultants, technical support staff, IT architects, and IT specialists, who are responsible for providing solutions and support for IBM POWER Systems and IBM AIX Version 7.1.

IBM i 7.1 Technical Overview with Technology Refresh Updates

Businesses of all sizes are faced with the challenge of managing huge volumes of data that are becoming increasingly valuable. But storing this data can be costly, and extracting value from the data is becoming more and more difficult. IT organizations have limited resources and cannot afford to make investment mistakes. The IBM® Storwize® V3500 system provides a smarter solution that is affordable, simple, and efficient, which enables businesses to overcome their storage challenges. IBM Storwize V3500 is the most recent addition to the IBM

Storwize family of disk systems. It delivers easy-to-use, entry-level configurations that are specifically designed to meet the modest budgets of small and medium-sized businesses. IBM Storwize V3500 features the following highlights: - Consolidate and share data with low cost iSCSI storage networking. - Deploy storage in minutes and perform storage management tasks quickly and easily through a breakthrough graphical user interface. - Experience peace of mind with proven IBM Storwize family high-availability data protection with snapshot technology and IBM warranty support. - Optimize efficiency by allocating only the amount of disk space needed at the time it is required with high performance, thin-provisioning capabilities.

Creating Smart Virtual Appliances with IBM Image Construction and Composition Tool

This book presents the Einstein Relation(ER) in two-dimensional (2-D) Heavily Doped (HD) Quantized Structures. The materials considered are quantized structures of HD non-linear optical, III-V, II-VI, Ge, Te, Platinum Antimonide, stressed materials, GaP, Gallium Antimonide, II-V, Bismuth Telluride together with various types of HD superlattices and their Quantized counterparts respectively. The ER in HD opto-electronic materials and their nanostructures is studied in the presence of strong light waves and intense electric fields on the basis of newly

formulated electron dispersion laws that control the studies of such quantum effect devices. The suggestion for the experimental determination of HD 2D and 3D ERs and the importance of measurement of band gap in HD optoelectronic materials under intense built-in electric field in nanodevices and strong external photo excitation (for measuring photon induced physical properties) are also discussed in this context. The influence of crossed electric and quantizing magnetic fields on the ER of the different 2D HD quantized structures (quantum wells, inversion and accumulation layers, quantum well HD superlattices and nipi structures) under different physical conditions is discussed in detail. This monograph contains 100 open research problems which form the integral part of the text and are useful for both Ph.D aspirants and researchers in the fields of condensed matter physics, solid-state sciences, materials science, nano-science and technology and allied fields.

IBM Spectrum Virtualize and SAN Volume Controller Enhanced Stretched Cluster with VMware

The enterprise data center has evolved dramatically in recent years. It has moved from a model that placed multiple data centers closer to users to a more centralized dynamic model. The factors influencing this evolution are varied but can mostly be attributed to regulatory, service level improvement, cost savings,

and manageability. Multiple legal issues regarding the security of data housed in the data center have placed security requirements at the forefront of data center architecture. As the cost to operate data centers has increased, architectures have moved towards consolidation of servers and applications in order to better utilize assets and reduce "server sprawl." The more diverse and distributed the data center environment becomes, the more manageability becomes an issue. These factors have led to a trend of data center consolidation and resources on demand using technologies such as virtualization, higher WAN bandwidth technologies, and newer management technologies. The intended audience of this book is network architects and network administrators. In this IBM® Redbooks® publication we discuss the following topics: The current state of the data center network The business drivers making the case for change The unique capabilities and network requirements of system platforms The impact of server and storage consolidation on the data center network The functional overview of the main data center network virtualization and consolidation technologies The new data center network design landscape

Demon Box

Heavily-Doped 2D-Quantized Structures and the Einstein

Relation

Leverage the lethal combination of Docker and Kubernetes to automate deployment and management of Java applications About This Book Master using Docker and Kubernetes to build, deploy and manage Java applications in a jiff Learn how to create your own Docker image and customize your own cluster using Kubernetes Empower the journey from development to production using this practical guide. Who This Book Is For The book is aimed at Java developers who are eager to build, deploy, and manage applications very quickly using container technology. They need have no knowledge of Docker and Kubernetes. What You Will Learn Package Java applications into Docker images Understand the running of containers locally Explore development and deployment options with Docker Integrate Docker into Maven builds Manage and monitor Java applications running on Kubernetes clusters Create Continuous Delivery pipelines for Java applications deployed to Kubernetes In Detail Imagine creating and testing Java EE applications on Apache Tomcat Server or Wildfly Application server in minutes along with deploying and managing Java applications swiftly. Sounds too good to be true? But you have a reason to cheer as such scenarios are only possible by leveraging Docker and Kubernetes. This book will start by introducing Docker and delve deep into its networking and persistent storage concepts. You will then proceed to learn how to refactor monolith application into separate services by building an application and then packaging it into Docker containers. Next, you will create an

image containing Java Enterprise Application and later run it using Docker. Moving on, the book will focus on Kubernetes and its features and you will learn to deploy a Java application to Kubernetes using Maven and monitor a Java application in production. By the end of the book, you will get hands-on with some more advanced topics to further extend your knowledge about Docker and Kubernetes. Style and approach An easy-to-follow, practical guide that will help Java developers develop, deploy, and manage Java applications efficiently.

IBM Virtual Disk System Quickstart Guide

This book discusses fundamentals of nanostructured ceramics involving functional, structural and high temperature materials. It provides both solved numerical problems and unsolved problems to enable the reader to envisage the correlation between synthesis process and properties in the perspective of new material development. It serves as a concise text to answer the basics and achieve research goals for academia and industry. Key Features Deals with basic strategy on data interpretation for nanostructured ceramics Proposes to bridge the gap between the nano and bulk properties of nanostructured ceramics Discusses brief schematics and equations to understand the different properties of nano to bulk ceramics Presents mode of data acquisition and interpretation through statistical module and solved numerical Includes unsolved numericals based on properties, data acquisition and interpretation

IBM Power 520 and Power 550 (Power6) System Builder

IBM CloudBurst on System x

Organizations of all sizes are faced with the challenge of managing massive volumes of increasingly valuable data. However, storing this data can be costly, and extracting value from the data is becoming more and more difficult. IT organizations have limited resources, but must stay responsive to dynamic environments and act quickly to consolidate, simplify, and optimize their IT infrastructures. The IBM® Storwize® V3700 system provides a solution that is affordable, easy to use, and self-optimizing, which enables organizations to overcome these storage challenges. Storwize V3700 delivers efficient, entry-level configurations that are specifically designed to meet the needs of small and midsize businesses. Designed to provide organizations with the ability to consolidate and share data at an affordable price, Storwize V3700 offers advanced software capabilities that are usually found in more expensive systems. Built on innovative IBM technology, Storwize V3700 addresses the block storage requirements of small and midsize organizations, Storwize V3700 is designed to accommodate the most common storage network technologies. This design enables easy implementation and management. Storwize V3700 includes the

following features: Web-based GUI provides point-and-click management capabilities. Internal disk storage virtualization enables rapid, flexible provisioning and simple configuration changes. Thin provisioning enables applications to grow dynamically, but only use space they actually need. Enables simple data migration from external storage to Storwize V3700 storage (one-way from another storage device). Remote Mirror creates copies of data at remote locations for disaster recovery. IBM FlashCopy® creates instant application copies for backup or application testing. This IBM Redbooks® publication is intended for pre-sales and post-sales technical support professionals and storage administrators. The concepts in this book also relate to the IBM Storwize V3500. This book was written at a software level of version 7 release 4.

IBM System Storage Solutions Handbook

Implementing the IBM Storwize

This IBM® Redbooks® publication can help you install, tailor, and configure the new IBM PowerHA® Version 7.1.3, and understand new and improved features such as migrations, cluster administration, and advanced topics like configuring in a virtualized environment including workload partitions (WPARs). With this book,

you can gain a broad understanding of the IBM PowerHA SystemMirror® architecture. If you plan to install, migrate, or administer a high availability cluster, this book is right for you. This book can help IBM AIX® professionals who seek a comprehensive and task-oriented guide for developing the knowledge and skills required for PowerHA cluster design, implementation, and daily system administration. It provides a combination of theory and practical experience. This book is targeted toward technical professionals (consultants, technical support staff, IT architects, and IT specialists) who are responsible for providing high availability solutions and support with the IBM PowerHA SystemMirror Standard on IBM POWER® systems.

The Fermata

This IBM® Redbooks® publication describes the new IBM i Midrange External Storage solutions available for IBM POWERTM Systems POWER6TM servers with IBM i being a client of IBM Virtual I/O Server (VIOS). It introduces the VIOS virtualization concepts and IBM DS Midrange External Storage Systems architecture of the supported models DS3400, DS4700, DS4800, and DS5000, discusses planning and sizing for IBM i Midrange External Storage, and provides detailed implementation procedures including IBM DS Midrange Storage Copy Services. Finally, it provides monitoring, maintenance, and troubleshooting hints for the triumvirate of IBM i, VIOS, and IBM DS Midrange External Storage. The

information provided by this book will help customers, business partners, and IBM service professionals with planning and implementing IBM i Midrange External Storage solutions.

SAN Volume Controller

Lux: Beginnings by Jennifer Armentrout: Now available together for the first time, don't miss Obsidian and Onyx, the first two books in Jennifer L. Armentrout's bestselling Lux series. Also includes bonus content exclusive to the print edition! "A thrilling ride from start to finish," says RT Book Reviews. Obsidian There's an alien next door. And with his looming height and eerie green eyes, he's hotuntil he opens his mouth. He's infuriating. Arrogant. Stab-worthy. But when a stranger attacks me and Daemon literally freezes time with a wave of his hand, he marks me. Turns out he has a galaxy of enemies wanting to steal his abilities and the only way I'm getting out of this alive is by sticking close to him until my alien mojo fades. If I don't kill him first, that is. Onyx Daemon's determined to prove what he feels for me is more than a product of our bizarro connection. So I've sworn him off, even though he's running more hot than cold these days. But we've got bigger problems. I've seen someone who shouldn't be alive. And I have to tell Daemon, even though I know he's never going to stop searching until he gets the truth. What happened to his brother? Who betrayed him? And what does the DOD want from them--from me? Want to read the LUX series on your ereader? Each book is

sold individually in e-format: #1: Obsidian #2: Onyx #3: Opal #4: Origin #5: Opposition Prequel novella: Shadows

IBM Systems Director 6.3 Best Practices

Having turned phone sex into the subject of an astonishing national bestseller in Vox, Baker now outdoes himself with an outrageously arousing, acrobatically stylish "X-rated sci-fi fantasy that leaves Vox seeming more like mere fiber-optic foreplay" (Seattle Times). "Sparkling."--San Francisco Chronicle.

Lux: Beginnings (Obsidian & Onyx)

Electricity

This IBM® Redbooks® publication describes the new features that have been added with the release of the IBM System Storage® SAN Volume Controller (SVC) and IBM System Storage Storwize® V7000 6.4.0 code, including Replication Family Services. Replication Family Services refers to the various copy services available on the SVC and Storwize V7000 including IBM FlashCopy®, Metro Mirror and Global Mirror, Global Mirror with Change Volumes, Volume Mirroring, and Stretched

Cluster Volume Mirroring. The details behind the theory and practice of these services are examined, and SAN design suggestions and troubleshooting tips are provided. Planning requirements, automating copy services processed, and fabric design are explained. Multiple examples including implementation and server integration are included, along with a discussion of software solutions and services that are based on Replication Family Services. This book is intended for use by pre-sales and post-sales support, and storage administrators. Readers are expected to have an advanced knowledge of the SVC, Storwize V7000, and the SAN environment. The following publications are useful resources that provide background information: Implementing the IBM System Storage SAN Volume Controller V6.3, SG24-7933 Implementing the IBM Storwize V7000 V6.3, SG24-7938 IBM SAN Volume Controller and Brocade Disaster Recovery Solutions for VMware, REDP-4626 IBM System Storage SAN Volume Controller Upgrade Path from Version 4.3.1 to 6.1, REDP-4716 Real-time Compression in SAN Volume Controller and Storwize V7000, REDP-4859 SAN Volume Controller: Best Practices and Performance Guidelines, SG24-7521 Implementing the Storwize V7000 and the IBM System Storage SAN32B-E4 Encryption Switch, SG24-7977

IBM Information Infrastructure Solutions Handbook

This IBM® Redbooks® publication gives an overview of Cloud solutions, followed by detailed information and usage scenarios for IBM CloudBurst® in a System x®

environment. Cloud computing can be defined as a style of computing in which dynamically scalable resources, such as CPU, storage, or bandwidth, are provided as a service over the Internet. Cloud computing represents a massively scalable, self-service delivery model where processing, storage, networking, and applications can be accessed as services over the Internet. Enterprises can adopt cloud models to improve employee productivity, deploy new products and services faster and reduce operating costs—starting with workloads, such as development and test, virtual desktop, collaboration, and analytics. IBM provides a scalable variety of cloud solutions to meet these needs. This IBM Redbooks publication helps you to tailor an IBM CloudBurst installation on System x to meet virtualized computing requirements in a private cloud environment. This book is intended for IT support personnel who are responsible for customizing IBM CloudBurst to meet business cloud computing objectives.

Nanostructured Ceramics

This IBM® Redbooks® publication presents a best practices guide for DB2® and InfoSphere™ Warehouse performance on a AIX® 6L with Power Systems™ virtualization environment. It covers Power hardware features such as PowerVM™, multi-page support, Reliability, Availability, and Serviceability (RAS) and how to best exploit them with DB2 LUW workloads for both transactional and data warehousing systems. The popularity and reach of DB2 and InfoSphere Warehouse

has grown in recent years. Enterprises are relying more on these products for their mission-critical transactional and data warehousing workloads. It is critical that these products be supported by an adequately planned infrastructure. This publication offers a reference architecture to build a DB2 solution for transactional and data warehousing workloads using the rich features offered by Power systems. IBM Power Systems have been leading players in the server industry for decades. Power Systems provide great performance while delivering reliability and flexibility to the infrastructure. This book presents a reference architecture to build a DB2 solution for transactional and data warehousing workloads using the rich features offered by Power systems. It aims to demonstrate the benefits DB2 and InfoSphere Warehouse can derive from a Power Systems infrastructure and how Power Systems support these products. The book is intended as a guide for a Power Systems specialist to understand the DB2 and InfoSphere Warehouse environment and for a DB2 and InfoSphere Warehouse specialist to understand the facilities available for Power Systems supporting these products.

Tuning IBM System X Servers for Performance

Arduino, Teensy, and related microcontrollers provide a virtually limitless range of creative opportunities for musicians and hobbyists who are interested in exploring "do it yourself" technologies. Given the relative ease of use and low cost of the Arduino platform, electronic musicians can now envision new ways of synthesizing

sounds and interacting with music-making software. In Arduino for Musicians, author and veteran music instructor Brent Edstrom opens the door to exciting and expressive instruments and control systems that respond to light, touch, pressure, breath, and other forms of real-time control. He provides a comprehensive guide to the underlying technologies enabling electronic musicians and technologists to tap into the vast creative potential of the platform. Arduino for Musicians presents relevant concepts, including basic circuitry and programming, in a building-block format that is accessible to musicians and other individuals who enjoy using music technology. In addition to comprehensive coverage of music-related concepts including direct digital synthesis, audio input and output, and the Music Instrument Digital Interface (MIDI), the book concludes with four projects that build on the concepts presented throughout the book. The projects, which will be of interest to many electronic musicians, include a MIDI breath controller with pitch and modulation joystick, "retro" step sequencer, custom digital/analog synthesizer, and an expressive MIDI hand drum. Throughout Arduino for Musicians, Edstrom emphasizes the convenience and accessibility of the equipment as well as the extensive variety of instruments it can inspire. While circuit design and programming are in themselves formidable topics, Edstrom introduces their core concepts in a practical and straightforward manner that any reader with a background or interest in electronic music can utilize. Musicians and hobbyists at many levels, from those interested in creating new electronic music devices, to those with experience in synthesis or processing software, will welcome Arduino for

Musicians.

Best Practices for DB2 on AIX 6.1 for POWER Systems

The IBM® Smart Analytics System is a fully-integrated and scalable data warehouse solution that combines software, server, and storage resources to offer optimal business intelligence and information management performance for enterprises. This IBM Redbooks® publication introduces the architecture and components of the IBM Smart Analytics System family. We describe the installation and configuration of the IBM Smart Analytics System and show how to manage the systems effectively to deliver an enterprise class service. This book explains the importance of integrating the IBM Smart Analytics System with the existing IT environment, as well as how to leverage investments in security, monitoring, and backup infrastructure. We discuss the monitoring tools for both operating systems and DB2®. Advance configuration, performance troubleshooting, and tuning techniques are also discussed. This book is targeted at the architects and specialists who need to know the concepts and the detailed instructions for a successful Smart Analytics System implementation and operation.

IBM System Storage SAN Volume Controller and Storwize V7000 Replication Family Services

This IBM® Redbooks® publication provides a technical overview of the features, functions, and enhancements available in IBM i 7.1, including all the Technology Refresh (TR) levels from TR1 to TR7. It provides a summary and brief explanation of the many capabilities and functions in the operating system. It also describes many of the licensed programs and application development tools that are associated with IBM i. The information provided in this book is useful for clients, IBM Business Partners, and IBM service professionals who are involved with planning, supporting, upgrading, and implementing IBM i 7.1 solutions.

Implementing the IBM Storwize V3500

An information infrastructure is comprised of software, servers, storage, and networks, integrated and optimized to deliver timely, secure, and trusted information throughout the organization and to its clients and partners. With the explosive growth in data and information—coupled with demands for projects with rapid ROI—IT infrastructures and storage administrators are reaching a breaking point. IBM® can help with the changes needed to manage information availability, security, and regulatory and compliance requirements on a tighter budget. And because the health of any business often depends on its ability to take advantage of information in real time, a sound, intelligent information infrastructure becomes critical to supporting new growth initiatives. IBM offers an innovative approach to help you manage information growth more effectively and mitigate risks with a

dynamic infrastructure that efficiently and securely stores and protects information, and optimizes information access. You can control, protect, manage, and gain new intelligence from your information with the IBM leading-edge Information Infrastructure products, services and integrated solutions, supported by world-class expertise and access to top experts from around the world. This IBM Redbooks® publication provides an overview of the IBM Information Infrastructure solutions that are designed to help you manage the information explosion and address challenges of information compliance, availability, retention, and security. This will lead your company toward improved productivity, service delivery, and reduced risk, while streamlining costs.

Implementing the IBM Storwize V7000 Gen2

This IBM® Redbook captures some of the best practices based on field experience and details the performance gains that can be achieved by implementing the IBM System StorageTM SAN Volume Controller. This book is intended for very experienced storage, SAN, and SVC administrators and technicians. Readers are expected to have an advanced knowledge of the SVC and SAN environment, and we recommend these books as background reading: IBM System Storage SAN Volume Controller, SG24-6423 Introduction to Storage Area Networks, SG24-5470 Using the SVC for Business Continuity, SG24-7371.

Docker and Kubernetes for Java Developers

Data is the new currency of business, the most critical asset of the modern organization. In fact, enterprises that can gain business insights from their data are twice as likely to outperform their competitors. Nevertheless, 72% of them have not started, or are only planning, big data activities. In addition, organizations often spend too much money and time managing where their data is stored. The average firm purchases 24% more storage every year, but uses less than half of the capacity that it already has. The IBM® Storwize® family, including the IBM SAN Volume Controller Data Platform, is a storage virtualization system that enables a single point of control for storage resources. This functionality helps support improved business application availability and greater resource use. The following list describes the business objectives of this system: To manage storage resources in your information technology (IT) infrastructure To make sure that those resources are used to the advantage of your business To do it quickly, efficiently, and in real time, while avoiding increases in administrative costs Virtualizing storage with Storwize helps make new and existing storage more effective. Storwize includes many functions traditionally deployed separately in disk systems. By including these functions in a virtualization system, Storwize standardizes them across virtualized storage for greater flexibility and potentially lower costs. Storwize functions benefit all virtualized storage. For example, IBM Easy Tier® optimizes use of flash memory. In addition, IBM Real-time CompressionTM

enhances efficiency even further by enabling the storage of up to five times as much active primary data in the same physical disk space. Finally, high-performance thin provisioning helps automate provisioning. These benefits can help extend the useful life of existing storage assets, reducing costs. Integrating these functions into Storwize also means that they are designed to operate smoothly together, reducing management effort. This IBM Redbooks® publication provides information about the latest features and functions of the Storwize V7000 Gen2 and software version 7.3 implementation, architectural improvements, and Easy Tier.

IBM Data Center Networking: Planning for Virtualization and Cloud Computing

In a traditional deployment model, software is installed on a physical server, and it is configured for the particular data center environment. The cloud deployment model requires that the dependency on a specific hardware configuration is severed. This IBM® Redbooks® publication guides you through the transition from the traditional application deployment model to the cloud-friendly deployment model. It explains how to achieve these goals by packaging the software stacks into industry standard virtual appliances. A key part of this transition involves using the IBM Image Construction and Composition Tool. This tool is the IBM tool

for creating virtualized workloads that target several private cloud deployment platforms, including platforms from IBM and not from IBM. In fact, this tool is unique in its ability to support such a wide range of cloud offerings. It is also the only tool in the marketplace that can create virtual appliances for both x86 and IBM Power hardware architectures. This book provides an in-depth look at the capabilities and internal workings of Image Construction and Composition Tool. It focuses on the capabilities of this tool, which target the virtualization and cloud offerings of IBM Systems and Technology Group. These offerings include IBM Systems Director VMControlTM, IBM SmartCloud® Entry, and IBM PureFlexTM System with IBM Flex System ManagerTM appliance. The Image Construction and Composition Tool also has a much richer set of capabilities. Specifically, it supports IBM Workload Deployer, IBM PureApplicationTM Systems, and IBM SmartCloud Provisioning. This publication targets software architects, cloud solutions architects, and cloud administrators. Its goal is to provide you with the expert-level skills required to package the existing and newly created applications into self-configurable, smart virtual appliances. Related publication: Smart Virtual Appliances Made Easy with IBM Image Construction and Composition Tool, TIPS1037

Living in the Anointing

Arduino for Musicians

Data is the new currency of business, the most critical asset of the modern organization. In fact, enterprises that can gain business insights from their data are twice as likely to outperform their competitors; yet, 72 percent of them have not started or are only planning big data activities. In addition, organizations often spend too much money and time managing where their data is stored. The average firm purchases 24% more storage every year, but uses less than half of the capacity it already has. A member of the IBM® Storwize® family, IBM SAN Volume Controller (SVC) Data Platform is a storage virtualization system that enables a single point of control for storage resources to help support improved business application availability and greater resource utilization. The objective is to manage storage resources in your IT infrastructure and to make sure they are used to the advantage of your business, and do it quickly, efficiently, and in real time, while avoiding increases in administrative costs. Virtualizing storage with SVC Data Platform helps make new and existing storage more effective. SVC Data Platform includes many functions traditionally deployed separately in disk systems. By including these in a virtualization system, SVC Data Platform standardizes functions across virtualized storage for greater flexibility and potentially lower costs. SVC Data Platform functions benefit all virtualized storage. For example, IBM Easy Tier® optimizes use of flash storage. And IBM Real-time CompressionTM enhances efficiency even further by enabling the storage of up to five times as

much active primary data in the same physical disk space. Finally, high-performance thin provisioning helps automate provisioning. These benefits can help extend the useful life of existing storage assets, reducing costs. Integrating these functions into SVC Data Platform also means that they are designed to operate smoothly together, reducing management effort. In this IBM Redbooks® publication, we discuss the latest features and functions of the SVC 2145-DH8 and software version 7.3, implementation, architectural improvements, and Easy Tier.

IBM PowerHA SystemMirror for AIX 7.1.3 Best Practices and Migration Guide

To meet today's complex and ever-changing business demands, you need a solid foundation of compute, storage, networking, and software resources that is simple to deploy and can quickly and automatically adapt to changing conditions. You also need to be able to take advantage of broad expertise and proven preferred practices in systems management, applications, hardware maintenance, and more. The IBM® Flex SystemTM p260 and p460 Compute Nodes are IBM Power SystemsTM servers optimized for virtualization, performance, and efficiency. The nodes support IBM AIX®, IBM i, or Linux operating environments, and are designed to run various workloads in IBM PureFlexTM System. This IBM Redbooks® publication is a comprehensive guide to IBM PureFlex System and the Power

Systems compute nodes. We introduce the offerings and describe the compute nodes in detail. We then describe planning and implementation steps and go through some of the key the management features of the IBM Flex System Manager management node. This book is for customers, IBM Business Partners, and IBM technical specialists that want to understand the new offerings and to plan and implement an IBM Flex System installation that involves the Power Systems compute nodes.

Exploiting IBM AIX Workload Partitions

This IBM® Redbooks® publication describes the IBM storage area network (SAN) and IBM SpectrumTM Virtualize, and SAN Volume Controller Enhanced Stretched Cluster configuration when combined with VMware. It describe guidelines, settings, and implementation steps necessary to achieve a satisfactory implementation. Business continuity and continuous availability of applications are among the top requirements for many organizations today. Advances in virtualization, storage, and networking make enhanced business continuity possible. Information technology solutions can now be designed to manage both planned and unplanned outages, and to take advantage of the flexibility, efficient use of resources, and cost savings that cloud computing offers. The IBM Enhanced Stretched Cluster design offers significant functions for maintaining business continuity in a VMware environment. You can dynamically move applications across data centers without

interruption to those applications. The live application mobility across data centers relies on these products and technologies: IBM Spectrum Virtualize and SAN Volume Controller Enhanced Stretched Cluster Solution VMware Metro vMotion for live migration of virtual machines A Layer 2 IP Network and storage networking infrastructure for high-performance traffic management Data center interconnection

IBM System Storage DS3000

IBM PowerHA SystemMirror for AIX Cookbook

This IBM® Redbooks® publication describes the positioning of the IBM Systems Director in the complete management range. It also compares the IBM Systems Director with the IBM Flex Systems Manager (FSM) and describes the environments for which each tool is best suited. This publication helps you plan, install, tailor, and configure the IBM Systems Director on different platforms. It contains information about required system resources and which network ports are used. It shows how to use the Workload Estimator to select the appropriate hardware for IBM Systems Director server and provides information about the IBM Systems Director Editions. Best practices are covered for the basic management tasks that

are available in IBM Systems Director, including how to perform discovery; how to collect inventory on discovered resources; how to deploy agent, driver, and firmware updates; how to manage hardware events; and other miscellaneous tasks. An overview of best practices is provided for using IBM Systems Director VMControlTM. Systems Director VMControl is a cross-platform product that assists you in rapidly deploying virtual appliances to create virtual servers that are configured with the operating system and software applications that you want. It also enables you to group resources into system pools, which enable you to centrally manage and control the different workloads in your environment. The following plug-in offerings are described: Energy monitoring and management features offered by IBM Systems Director Active Energy ManagerTM along with the best practice, which needs to be followed in using the IBM Systems Director Active Energy Manager. The IBM AIX® Profile Manager is a tool that can help implement and monitor the security of all AIX servers in a production environment but also implement and monitor the system compliance of those AIX servers. Best practices and the most important questions to ask before creating Workload Partition Manager (WPAR) and WPAR Manager infrastructure. In addition, how you can manage and relocate WPARs using WPAR Manager graphical interface and the command-line interface. Network Control basic 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.

IBM i and Midrange External Storage

This IBM® Redbooks® publication positions high availability solutions for IBM Power SystemsTM with IBM PowerHA® SystemMirror® Standard and Enterprise Editions (hardware, software, best practices, reference architectures, migration, and tools) with a well-defined and documented deployment model within an IBM Power Systems environment allowing customers a planned foundation for a dynamic high available infrastructure for their enterprise applications. This Redbooks publication documents topics to leverage the strengths of IBM PowerHA SystemMirror Standard and Enterprise Editions 7.1.3 for IBM Power Systems to solve customers' application high availability challenges, and maximize systems' availability, and management. This Redbooks publication focuses on providing the readers with technical information and references on the capabilities of each edition, functionalities, usability, and features that make IBM PowerHA SystemMirror a premier solution for high availability and disaster recovery for IBM Power Systems servers. This Redbooks publication helps strengthen the position of the IBM PowerHA SystemMirror solution with a well-defined and documented best practices, usability, functionality, migration and deployment model within an IBM

POWER® system virtualized environment allowing customers a planned foundation for business resilient infrastructure solutions. This Redbooks publication is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) responsible for providing high availability solutions and support with the IBM PowerHA SystemMirror on IBM POWER.

IBM SAN Volume Controller 2145-DH8 Introduction and Implementation

The IBM® System Storage® Solutions Handbook helps you solve your current and future data storage business requirements. It helps you achieve enhanced storage efficiency by design to allow managed cost, capacity of growth, greater mobility, and stronger control over storage performance and management. It describes the most current IBM storage products, including the IBM SpectrumTM family, IBM FlashSystem®, disk, and tape, as well as virtualized solutions such IBM Storage Cloud. This IBM Redbooks® publication provides overviews and information about the most current IBM System Storage products. It shows how IBM delivers the right mix of products for nearly every aspect of business continuance and business efficiency. IBM storage products can help you store, safeguard, retrieve, and share your data. This book is intended as a reference for basic and comprehensive information about the IBM Storage products portfolio. It provides a starting point

for establishing your own enterprise storage environment. This book describes the IBM Storage products as of March, 2016.

Implementing the IBM Storwize V7000 V7.2

IBM Flex System p260 and p460 Planning and Implementation Guide

This IBM® Redbooks® publication is a quickstart guide for implementing an IBM virtual disk system. We use the term IBM virtual disk system to collectively refer to IBM SAN Volume Controller (SVC), System Storage Productivity Center (SSPC), IBM mid range storage (DS3400 in this case), and IBM/Brocade SAN Switches. IBM System Storage SAN Volume Controller (SVC) is a virtualization appliance solution that maps virtualized volumes visible to hosts and applications to physical volumes on storage devices. The IBM virtualization technology improves management of information at the "block" level in a network, enabling applications and servers to share storage devices on a network. With IBM System Storage Productivity Center (SSPC)TM, administrators can manage storage along with the other devices in the storage environment. This greatly simplifies management of even the most basic storage environments, and the awareness of environment helps to reduce

accidental errors that can cause downtime. SSPC comes preloaded with IBM Tivoli Storage Productivity Center products, enables end-to-end disk management on single screen, and supports management of heterogeneous systems and devices.

VMware Implementation with IBM System Storage DS5000

IBM PowerHA SystemMirror 7.1.2 Enterprise Edition for AIX

In this IBM® Redbooks® publication, we compiled best practices for planning, designing, implementing, and maintaining IBM Midrange Storage Solutions. In this publication, we use IBM System Storage® DS5000 storage subsystem for the implementation procedures, and the same procedures can be used for implementations with DCS3700 or DS3500 storage subsystems. We also compiled configurations for a VMware ESX and VMware ESXi Server host environment. Setting up an IBM Midrange Storage Subsystem is a challenging task. Our principal objective in this book is to provide you with a sufficient overview to effectively enable storage area network (SAN) storage and VMware. There is no single configuration that is satisfactory for every application or situation. However, the effectiveness of the VMware implementation is enabled by careful planning and consideration. Although the compilation of this publication is derived from an

actual setup and verification, we did not stress test or test for all possible use cases that are used in a limited configuration assessment. Because of the highly customizable nature of a VMware ESXi host environment, you must consider your specific environment and equipment to achieve optimal performance from an IBM Midrange Storage Subsystem. When you are weighing the recommendations in this publication, you must start with the first principles of input/output (I/O) performance tuning. Each environment is unique and the correct settings that are used depend on the specific goals, configurations, and demands for the specific environment. This publication is intended for technical professionals who want to deploy VMware ESXi and VMware ESX Servers with IBM Midrange Storage Subsystems.

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