[Book] Db2 Purescale Architecture Ibm

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IBM Db2 11.1 Certification Guide-Mohankumar Saraswatipura 2018-06-28 Mastering material for dealing with DBA certification exams Key Features Prepare yourself for the IBM C2090-600 certification exam Cover over 50 Db2 procedures including database design, performance, and security Work through over 150 Q&As to gain confidence on each topic Book Description IBM Db2 is a relational database management system (RDBMS) that helps you store, analyze, and retrieve data efficiently. This comprehensive book is designed to help you master all aspects of IBM Db2 database administration and prepare you to take and pass IBM's Certification Exams C2090-600. Building on years of extensive experience, the authors take you through all areas covered by the test. The book delves deep into each certification topic: Db2 server management, physical design, business rules implementation, activity monitoring, utilities, high availability, and security. IBM Db2 11.1 Certification Guide provides you with more than 150 practice questions and answers, simulating real certification examination questions. Each chapter includes an extensive set of practice questions along with carefully explained answers. This book will not just prepare you for the C2090-600 exam but also help you troubleshoot day-to-day database administration challenges. What you will learn Configure and manage Db2 servers, instances, and databases Implement Db2 BLU Acceleration and a DB2 pureScale environment Create, manage, and alter Db2 database objects Use the partitioning capabilities available within Db2 Enforce constraint checking with the SET INTEGRITY command Utilize the Db2 problem determination (db2pd) and dsmtop tools Configure and manage HADR Understand how to encrypt data in transit and at rest Who this book is for The IBM Db2 11.1 Certification Guide is an excellent choice for database administrators, architects, and application developers who are keen to obtain certification in Db2. Basic understanding of Db2 is expected in order to get the most out of this guide.

Delivering Continuity and Extreme Capacity with the IBM DB2 pureScale Feature-Vlad Barshai 2012-09-25 The IBM® DB2® pureScale® feature offers clustering technology that helps deliver high availability and exceptional scalability transparent to applications. The DB2 pureScale feature helps you to meet your business needs around availability and scalability, and is also easy to configure and administer. This IBM Redbooks® publication addresses the DB2 pureScale feature that is available in IBM DB2 10.1 for Linux, UNIX, and Windows operating systems. It can help you build skills and deploy the DB2 pureScale feature. This book bundles all the information necessary for a in-depth analysis into the functions of the DB2 pureScale feature, including the actual hardware requirements. It includes validated step-by-step hardware and software installation instructions. In addition, this book provides detailed examples about how to work effectively with a DB2 pureScale cluster and how to plan and run an upgrade for all DB2 related components to DB2 10.1. This book is intended for database administrators (DBAs) who use IBM DB2 10.1 for Linux, UNIX, and Windows operating systems who want to explore and get started with the DB2 pureScale feature.

Highly Available and Scalable Systems with IBM eX5 and DB2 pureScale-Mike Ebbers 2011-04-19 The pressures related to managing transactional databases are increasing rapidly. Business growth, the drive to consolidate databases, and the need to deploy new, data-intensive technologies are fostering the massive expansion of data volumes and application workloads. At the same time, the move toward real-time computing requires faster and more reliable data access, especially when databases are used to drive client-facing applications. Businesses need simpler and more cost-effective strategies for expanding their database environment. IBM and Intel® provide an answer to this challenge with the IBM DB2® pureScaleTM feature and the latest generation of IBM System x eX5 servers based on the Intel Xeon® E7 processor family. The combined solution enables clients to scale mission-critical, performance-sensitive databases simply, using affordable, industry-standard servers. This IBM® RedpaperTM publication describes an IBM solution containing high availability and scalability for mission-critical databases on System x®. The audience includes executives and other decision-makers, consultants, and architects.

DB2 pureScale: Risk Free Agile Scaling-Paul Zikopoulos 2010-11-05 Extreme Availability and Scalability--Up and Running With DB2 pureScale DB2 is a leading-edge hybrid data server that offers optimum storage, scalability, and availability. DB2 pureScale is a new technology primarily optimized for scale-out transactional processing clusters in an active-active manner. This succinct guide will show you how DB2 with pureScale can deliver transparent application scalability, the ability to deliver agile-like computing to your transaction systems, and extreme availability. This book, together with IBM DB2 9 New Features (McGraw-Hill, 2007) and Break Free with DB2 9.7 (McGraw-Hill, 2009), provides you with the comprehensive knowledge you need to get started with the latest DB2 release. Try the new features by downloading DB2 Express-C 9.7--it is free to develop, deploy, and distribute (with no user and database size limitations) and features pureXML technology. Go to ibm.com/db2/express. Discover the benefits your business can achieve with the agility provided by DB2 pureScale Find out how applications can be transparently scaled Reduce the risk and cost of business growth through umlimited capacity

DB2 pureScale: Risk Free Agile Scaling-Paul Zikopoulos 2010-12-10 Extreme Availability and Scalability--Up and Running With DB2 pureScale DB2 is a leading-edge hybrid data server that offers optimum storage, scalability, and availability. DB2 pureScale is a new technology primarily optimized for scale-out transactional processing clusters in an active-active manner. This succinct guide will show you how DB2 with pureScale can deliver transparent application scalability, the ability to deliver agile-like computing to your transaction systems, and extreme availability. This book, together with IBM DB2 9 New Features (McGraw-Hill, 2007) and Break Free with DB2 9.7 (McGraw-Hill, 2009), provides you with the comprehensive knowledge you need to get started with the latest DB2 release. Try the new features by downloading DB2 Express-C 9.7--it is free to develop, deploy, and distribute (with no user and database size limitations) and features pureXML technology. Go to ibm.com/db2/express. Discover the benefits your business can achieve with the agility provided by DB2 pureScale Find out how applications can be transparently scaled Reduce the risk and cost of business growth through umlimited capacity

Best Practices for DB2 on AIX 6.1 for POWER Systems-Rakesh Dash 2015-08-27 This IBM® Redbooks® publication presents a best practices guide for DB2® and InfoSphereTM Warehouse performance on a AIX® 6L with Power SystemsTM virtualization environment. It covers Power hardware features such as PowerVMTM, 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.

Implementing the IBM General Parallel File System (GPFS) in a Cross Platform Environment-Dino Quintero 2011-06-30 This IBM® Redbooks® publication provides a documented deployment model for IBM GPFSTM in a cross-platform environment with IBM Power SystemsTM,

Linux, and Windows servers. With IBM GPFS, customers can have a planned foundation for file systems management for cross-platform access solutions. This book examines the functional, integration, simplification, and usability changes with GPFS v3.4. It can help the technical teams provide file system management solutions and technical support with GPFS, based on Power Systems virtualized environments for cross-platform file systems management. The book provides answers to your complex file systems management requirements, helps you maximize file system availability, and provides expert-level documentation to transfer the how-to skills to the worldwide support teams. The audience for this book is the technical professional (IT consultants, technical support staff, IT architects, and IT specialists) who is responsible for providing file system management solutions and support for cross-platform environments that are based primarily on Power Systems.

DB2 10.5 with BLU Acceleration-Paul Zikopoulos 2013-10-07 UPGRADE TO THE NEW GENERATION OF DATABASE SOFTWARE FOR THE ERA OF BIG DATA! If big data is an untapped natural resource, how do you find the gold hidden within? Leaders realize that big data means all data, and are moving quickly to extract more value from both structured and unstructured application data. However, analyzing this data can prove costly and complex, especially while protecting the availability, performance and reliability of essential business applications. In the new era of big data, businesses require data systems that can blend always-available transactions with speed-of-thought analytics. DB2 10.5 with BLU Acceleration provides this speed, simplicity, and affordability while making it easier to build next-generation applications with NoSQL features, such as a mongo-styled JSON document store, a graph store, and more. Dynamic in-memory columnar processing and other innovations deliver faster insights from more data, and enhanced pureScale clustering technology delivers high-availability transactions with application-transparent scalability for business continuity. With this book, you'll learn about the power and flexibility of multiworkload, multi-platform database software. Use the comprehensive knowledge from a team of DB2 developers and experts to get started with the latest DB2 trial version you can download at ibm.com/developerworks/downloads/im/db2/. Stay up to date on DB2 by visiting ibm.com/db2/.

High Availability and Disaster Recovery Options for DB2 for Linux, UNIX, and Windows-Stanislaw Bartkowski 2012-10-18 As organizations strive to do more with less, IBM® DB2® for Linux, UNIX, and Windows provides various built-in high availability features. DB2 further provides high availability solutions by using enterprise system resources with broad support for clustering software, such as IBM PowerHA® SystemMirror®, IBM Tivoli® System Automation for Multiplatforms (Tivoli SA MP), and Microsoft Windows Cluster Server. This IBM Redbooks® publication describes the DB2 high availability functions and features, focusing on High Availability Disaster Recovery (HADR) in the OLTP environment. The book provides a detailed description of HADR, including setup, configuration, administration, monitoring, and preferred practices. This book explains how to configure Cluster software PowerHA, Tivoli SA MP, and MSCS with DB2 and show how to use these products to automate HADR takeover. DB2 also provides unprecedented enterprise-class disaster recovery capability. This book covers single system view backup, backup and restore with snapshot backup, and the db2recovery command, in detail. This book is intended for database administrators and information management professionals who want to design, implement, and support a highly available DB2 system.

IBM DB2 9.7 Advanced Administration Cookbook-Adrian Neagu 2012-02-24 This is a practical hands-on book with clear instructions and lot of code examples. It takes a simple approach, guiding you through different architectural topics using realistic sample projects

High Availability and Disaster Recovery for Temenos T24 with IBM DB2 and AIX-Barrie Mike 2012-10-09 The Temenos T24 core banking application is a critical application for the banks that use it and has a primary focus on providing an appropriate level of high availability and disaster recovery. The level of availability is determined largely by the configuration of the infrastructure that supports T24. This infrastructure is built on hardware, middleware, and networking, in addition to the operational procedures and practices that are used to operate T24. Many options are available for meeting a client's high availability and disaster recovery requirements. The solution chosen by a Temenos T24 user depends on many factors. These factors include a user's detailed availability and recovery requirements; their existing datacenter standards, practices, and processes; and the available network infrastructure. Therefore, the optimum solution must be determined on a case-by-case basis for each deployment. This IBM® RedpaperTM publication serves as a guide to help IT architects and other technical staff who are designing, configuring, and building the infrastructure to support Temenos T24. It shows how IBM software can deliver high availability and disaster recovery for Temenos T24 to meet a client's requirements. This software might run on IBM AIX®, IBM WebSphere® Application Server, WebSphere MQ Server, and IBM DB2®. These IBM software components are typically used for a Temenos T24 deployment on an IBM middleware stack to ensure a highly available infrastructure for T24.

IBM Db2 Mirror for i Getting Started-Scott Vetter 2019-12-13 IBM® Db2® Mirror for i provides a new solution for continuous availability for an IBM i environment based on an active-active clustering design that uses a low-latency communication protocol for synchronous database replication. With Db2 Mirror, IBM i customers can benefit from continuous application availability for both planned and unplanned outages. Db2 Mirror can help reduce or eliminate application downtime for regular maintenance operations such as program temporary fix (PTF) installations, operating system (OS) upgrades, or for planned server outages. This IBM Redpaper publication provides a broad overview and understanding of this new solution by covering its architecture, positioning, planning, and implementation aspects. It provides an introduction reference for a seller or technical specialist audience to become familiar with the new Db2 Mirror solution.

IBM FileNet P8 Platform and Architecture-Wei-Dong Zhu 2011-04-21 IBM® FileNet® Platform is a next-generation, unified enterprise foundation for the integrated IBM FileNet P8 products. It combines the enterprise content management with comprehensive business process management and compliance capabilities. IBM FileNet P8 addresses the most demanding compliance, content, and process management needs for your entire organization. It is a key element in creating an agile, adaptable enterprise content management (ECM) environment necessary to support a dynamic organization that must respond quickly to change. In this IBM Redbooks® publication, we provide an overview of IBM FileNet P8 and describe the core component architecture. We also introduce major expansion products that extend IBM FileNet P8 functionality in the areas of content ingestion, content accessing through connectors and federation, the application framework, and discovery and compliance. In this book, we discuss the anatomy of an ECM infrastructure, content event processing, content life cycle, and business processes. This book gives IT architects, IT specialists, and IT Technical Sales a solid understanding of IBM FileNet P8 Platform, its architecture, its functions and extensibility, and its unlimited capabilities.

Oracle to DB2 Conversion Guide: Compatibility Made Easy-Yvonne Chan 2014-07-03 This IBM® Redbooks® publication describes IBM DB2® SQL compatibility features. The latest version of DB2 includes extensive native support for the PL/SQL procedural language, new data types, scalar functions, improved concurrency, built-in packages, OCI, SQLPlus, and more. These features can help with developing applications that run on both DB2 and Oracle and can help simplify the process of moving from Oracle to DB2. In addition, IBM now provides tools to simplify the enablement process, such as the highly scalable IBM Data Movement Tool for moving schema and data into DB2, and an Editor and Profiler for PL/SQL provided by the IBM Data Studio tool suite. This Oracle to DB2 migration guide describes new technology, preferred practices for moving to DB2, and common scenarios that can help you as you move from Oracle to DB2. This book is intended for IT architects and developers who are converting from Oracle to DB2. DB2 compatibility with Oracle is provided through native support. The new capabilities in DB2 that provide compatibility are implemented at the lowest and most intimate levels of the database kernel, as though they were originally engineered for DB2. means that the DB2 implementation is done without the aid of an emulation layer. This intimacy leads to the scalable implementation that DB2 offers, providing identical performance between DB2 compatibility features and DB2 other language elements. For example, DB2 runs SQL PL at the same performance as PL/SQL implementations of the same function.

Ruby on Rails for Microsoft Developers-Antonio Cangiano 2009-04-27 This definitive guide examines how to take advantage of the new Agile methodologies offered when using Ruby on Rails (RoR). You'll quickly grasp the RoR methodology by focusing on the RoR development from the point of view of the beginner- to intermediate-level Microsoft developer. Plus, you'll get a reliable roadmap for migrating your applications, skill set, and development processes to the newer, more agile programming platform that RoR offers.

IBM SAN Volume Controller Stretched Cluster with PowerVM and

PowerHA-Jon Tate 2013-11-18 This IBM® Redbooks® publication describes the IBM Storage Area Network and IBM SAN Volume Controller Stretched Cluster solution when combined with PowerVM® and PowerHA®. We describe guidelines, settings, and the implementation steps that are necessary to achieve a successful implementation. This book is for administrators who are familiar with the SAN, IBM SAN Volume Controller, and IBM PowerVM and PowerHA Systems.

IBM GDPS Active/Active Overview and Planning-Lydia Parziale 2015-12-15 IBM® Geographically Dispersed Parallel SysplexTM (GDPS®) is a collection of several offerings, each addressing a different set of IT resiliency goals. It can be tailored to meet the recovery point objective (RPO), which is how much data can you are willing to lose or recreate, and the recovery time objective (RTO), which identifies how long can you afford to be without your systems for your business from the initial outage to having your critical business processes available to users. Each offering uses a combination of server and storage hardware or software-based replication, and automation and clustering software technologies. This IBM Redbooks® publication presents an overview of the IBM GDPS active/active (GDPS/AA) offering and the role it plays in delivering a business IT resilience solution.

IBM Optim Performance Manager for DB2 for Linux, UNIX, and Windows-Whei-Jen Chen 2011-04-22 OptimTM Performance Manager Extended Edition, a follow-on to DB2® Performance Expert, is one of the key products of the IBM® Optim Solution. Optim Performance Manager Extended Edition provides a comprehensive, proactive performance management approach. It helps organizations resolve emergent database problems before they impact the business. This IBM Redbooks® publication describes the architecture and components of Optim Performance Manager Extended Edition. We provide information for planning the deployment of Optim Performance Manager and detail steps for successful installation, activation, and configuration of Optim Performance Manager and the Extended Insight client. Optim Performance Manager delivers a new paradigm in terms of how it is used to monitor and manage database and database application performance issues. We describe individual product dashboards and reports and discuss, with various scenarios, how they can be used to identify, diagnose, prevent, and solve database performance problems.

Database Administration-Craig S. Mullins 2012-10-11 Database Administration, Second Edition , is the definitive, technology-independent guide to the modern discipline of database administration. Packed with best practices and proven solutions for any database platform or environment, this text fully reflects the field’s latest realities and challenges. Drawing on more than thirty years of database experience, Mullins focuses on problems that today’s DBAs actually face, and skills and knowledge they simply must have. Mullins presents realistic, thorough, and up-to-date coverage of every DBA task, including creating database environments, data modeling, normalization, design, performance, data integrity, compliance, governance, security, backup/recovery, disaster planning, data and storage management, data movement/distribution, data warehousing, connectivity, metadata, tools, and more. This edition adds new coverage of “Big Data,” database appliances, cloud computing, and NoSQL. Mullins includes an entirely new chapter on the DBA’s role in regulatory compliance, with substantial new material on data breaches, auditing, encryption, retention, and metadata management. You’ll also find an all-new glossary, plus up-to-the-minute DBA rules of thumb.

Performance Management: Using IBM InfoSphere Optim Performance Manager and Query Workload Tuner-Chuck Ballard 2013-11-27 This IBM® Redbooks® publication describes the architecture and components of IBM InfoSphere® OptimTM Performance Manager Extended Edition. Intended for DBAs and those involved in systems performance, it provides information for installation, configuration, and deployment. InfoSphere Optim Performance Manager delivers a new paradigm used to monitor and manage database and database application performance issues. It describes product dashboards and reports and provides scenarios for how they can be used to identify, diagnose, prevent, and resolve database performance problems. IBM InfoSphere Optim Query Workload Tuner facilitates query and query workload analysis and provides expert recommendations for improving query and query workload performance. Use InfoSphere Optim Performance Manager to identify slow running queries, top CPU consumers, or query workloads needing performance improvements and seamlessly transfer them to InfoSphere Optim Query Workload Tuner for analysis and recommendations. This is done using query formatting annotated with relevant statistics, access plan graphical or hierarchical views, and access plan analysis. It further provides recommendations for improving query structure, statistics collection, and indexes including generated command syntax and rationale for the recommendations.

Architecting and Deploying DB2 with BLU Acceleration-Whei-Jen Chen 2015-05-11 IBM® DB2® with BLU Acceleration is a revolutionary technology that is delivered in DB2 for Linux, UNIX, and Windows Release 10.5. BLU Acceleration delivers breakthrough performance improvements for analytic queries by using dynamic in-memory columnar technologies. Different from other vendor solutions, BLU Acceleration allows the unified computing of OLTP and analytics data inside a single database, therefore, removing barriers and accelerating results for users. With observed hundredfold improvement in query response time, BLU Acceleration provides a simple, fast, and easy-to-use solution for the needs of today's organizations; quick access to business answers can be used to gain a competitive edge, lower costs, and more. This IBM Redbooks® publication introduces the concepts of DB2 with BLU Acceleration. It discusses the steps to move from a relational database to using BLU Acceleration, optimizing BLU usage, and deploying BLU into existing analytic solutions today, with an example of IBM Cognos®. This book also describes integration of DB2 with BLU Acceleration into SAP Business Warehouse (SAP BW) and SAP's near-line storage solution on DB2. This publication is intended to be helpful to a wide-ranging audience, including those readers who want to understand the technologies and those who have planning, deployment, and support responsibilities.

IBM FileNet Content Manager Implementation Best Practices and Recommendations-Fay Chuck 2013-06-07 IBM® FileNet® Content Manager Version 5.2 provides full content lifecycle and extensive document management capabilities for digital content. IBM FileNet Content Manager is tightly integrated with the family of IBM FileNet products based on the IBM FileNet P8 technical platform. IBM FileNet Content Manager serves as the core content management, security management, and storage management engine for the products. This IBM Redbooks® publication covers the implementation best practices and recommendations for solutions that use IBM FileNet Content Manager. It introduces the functions and features of IBM FileNet Content Manager, common use cases of the product, and a design methodology that provides implementation guidance from requirements analysis through production use of the solution. We address administrative topics of an IBM FileNet Content Manager solution, including deployment, system administration and maintenance, and troubleshooting. Implementation topics include system architecture design with various options for scaling an IBM FileNet Content Manager system, capacity planning, and design of repository design logical structure, security practices, and application design. An important implementation topic is business continuity. We define business continuity, high availability, and disaster recovery concepts and describe options for those when implementing IBM FileNet Content Manager solutions. Many solutions are essentially a combination of information input (ingestion), storage, information processing, and presentation and delivery. We discuss some solution building blocks that designers can combine to build an IBM FileNet Content Manager solution. This book is intended to be used in conjunction with product manuals and online help to provide guidance to architects and designers about implementing IBM FileNet Content Manager solutions. Many of the features and practices described in the book also apply to previous versions of IBM FileNet Content Manager.

IBM Power System E950: Technical Overview and Introduction-Scott Vetter 2019-12-09 This IBM® RedpaperTM publication gives a broad understanding of a new architecture of the IBM Power System E950 (9040-MR9) server that supports IBM AIX®, and Linux operating systems. The objective of this paper is to introduce the major innovative Power E950 offerings and relevant functions: The IBM POWER9TM processor, which is available at frequencies of 2.8 - 3.4 GHz. Significantly strengthened cores and larger caches. Supports up to 16 TB of memory, which is four times more than the IBM POWER8® processor-based IBM Power System E850 server. Integrated I/O subsystem and hot-pluggable Peripheral Component Interconnect Express (PCIe) Gen4 slots, which have double the bandwidth of Gen3 I/O slots. Supports EXP12SX and ESP24SX external disk drawers, which have 12 Gb Serial Attached SCSI (SAS) interfaces and support Active Optical Cables (AOCs) for greater distances and less cable bulk. New IBM EnergyScaleTM technology offers new variable processor frequency modes that provide a significant performance boost beyond the static nominal frequency. This publication is for professionals who want to acquire a better understanding of IBM Power SystemsTM products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of Power Systems documentation by providing a desktop reference that offers a

detailed technical description of the Power E950 server. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

IBM Technical Computing Clouds-Dino Quintero 2013-10-28 This IBM® Redbooks® publication highlights IBM Technical Computing as a flexible infrastructure for clients looking to reduce capital and operational expenditures, optimize energy usage, or re-use the infrastructure. This book strengthens IBM SmartCloud® solutions, in particular IBM Technical Computing clouds, with a well-defined and documented deployment model within an IBM System x® or an IBM Flex SystemTM. This provides clients with a cost-effective, highly scalable, robust solution with a planned foundation for scaling, capacity, resilience, optimization, automation, and monitoring. This book is targeted toward technical professionals (consultants, technical support staff, IT Architects, and IT Specialists) responsible for providing cloud-computing solutions and support.

IBM DB2 9.7 Advanced Application Developer Cookbook-Sanjay Kumar 2012-03-14 This cookbook has recipes written in a simple, easy to understand format with lots of screenshots and insightful tips and hints. If you are an IBM DB2 application developer who would like to exploit advanced features provided by DB2 to design and implement high quality applications, then this book is for you. This book assumes you have a basic understanding of the DB2 application development.

IBM Tivoli Storage Manager as a Data Protection Solution-Larry Coyne 2014-08-15 When you hear IBM® Tivoli® Storage Manager, the first thing that you typically think of is data backup. Tivoli Storage Manager is the premier storage management solution for mixed platform environments. Businesses face a tidal wave of information and data that seems to increase daily. The ability to successfully and efficiently manage information and data has become imperative. The Tivoli Storage Manager family of products helps businesses successfully gain better control and efficiently manage the information tidal wave through significant enhancements in multiple facets of data protection. Tivoli Storage Manager is a highly scalable and available data protection solution. It takes data protection scalability to the next level with a relational database, which is based on IBM DB2® technology. Greater availability is delivered through enhancements such as online, automated database reorganization. This IBM Redbooks® publication describes the evolving set of data-protection challenges and how capabilities in Tivoli Storage Manager can best be used to address those challenges. This book is more than merely a description of new and changed functions in Tivoli Storage Manager; it is a guide to use for your overall data protection solution.

Mastering Service Mesh-Anjali Khatri 2020-03-30 Understand how to use service mesh architecture to efficiently manage and safeguard microservices-based applications with the help of examples Key Features Manage your cloud-native applications easily using service mesh architecture Learn about Istio, Linkerd, and Consul – the three primary open source service mesh providers Explore tips, techniques, and best practices for building secure, high-performance microservices Book Description Although microservices-based applications support DevOps and continuous delivery, they can also add to the complexity of testing and observability. The implementation of a service mesh architecture, however, allows you to secure, manage, and scale your microservices more efficiently. With the help of practical examples, this book demonstrates how to install, configure, and deploy an efficient service mesh for microservices in a Kubernetes environment. You'll get started with a hands-on introduction to the concepts of cloud-native application management and service mesh architecture, before learning how to build your own Kubernetes environment. While exploring later chapters, you'll get to grips with the three major service mesh providers: Istio, Linkerd, and Consul. You'll be able to identify their specific functionalities, from traffic management, security, and certificate authority through to sidecar injections and observability. By the end of this book, you will have developed the skills you need to effectively manage modern microservices-based applications. What you will learn Compare the functionalities of Istio, Linkerd, and Consul Become well-versed with service mesh control and data plane concepts Understand service mesh architecture with the help of hands-on examples Work through hands-on exercises in traffic management, security, policy, and observability Set up secure communication for microservices using a service mesh Explore service mesh features such as traffic management, service discovery, and resiliency Who this book is for This book is for solution architects and network administrators, as well as DevOps and site reliability engineers who are new to the cloud-native framework. You will also find this book useful if you’re looking to build a career in DevOps, particularly in operations. Working knowledge of Kubernetes and building microservices that are cloud-native is necessary to get the most out of this book.

A Complete Guide to DB2 Universal Database-Don Chamberlin 1998-06-15 This is a guide designed to familiarize users with the DB2 standard while helping to optimize their use of the technology.

Implementing IBM FlashSystem 840-Karen Orlando 2015-07-09 Almost all technological components in the data center are getting faster: central processing units, networks, storage area networks (SANs), and memory. All of them have improved their speed by a minimum of 10X; some of them by 100X, for example, data networks. However, spinning disk performance has only increased by 1.2 times. IBM® FlashSystemTM 840 version 1.3 closes this gap. The FlashSystem 840 is optimized for the data center to enable organizations of all sizes to strategically harness the value of stored data. It provides flexible capacity and extreme performance for the most demanding applications, including virtualized or bare-metal online transaction processing (OLTP) and online analytical processing (OLAP) databases, virtual desktop infrastructures (VDI), technical computing applications, and cloud environments. The system accelerates response times with IBM MicroLatency® access times as low as 90 µs write latency and 135 µs read latency to enable faster decision making. The introduction of a low capacity 1 TB flash module allows the FlashSystem 840 to be configured in capacity points as low as 2 TB in protected RAID 5 mode. Coupled with 10 GB iSCSI, the FlashSystem is positioned to bring extreme performance to small and medium-sized businesses (SMB) and growth markets. Implementing the IBM FlashSystem® 840 provides value that goes beyond those benefits that are seen on disk-based arrays. These benefits include better user experience, server and application consolidation, development cycle reduction, application scalability, data center footprint savings, and improved price performance economics. This IBM Redbooks® publication discusses IBM FlashSystem 840 version 1.3. It provides in-depth knowledge of the product architecture, software and hardware, its implementation, and hints and tips. Also illustrated are use cases that show real-world solutions for tiering, flash-only, and preferred read, as well as examples of the benefits gained by integrating the FlashSystem storage into business environments. Also described are product integration scenarios running the IBM FlashSystem 840 with the IBM SAN Volume Controller, and the IBM Storwize® family of products such V7000, V5000, and the V3700, as well as considerations when integrating with the IBM FlashSystem 840. The preferred practice guidance is provided for your FlashSystem environment with IBM 16 Gbps b-type products and features, focusing on Fibre Channel design. This book is intended for pre-sales and post-sales technical support professionals and storage administrators, and for anyone who wants to understand and learn how to implement this exciting technology.

IMS 11 Open Database-Paolo Bruni 2010-08-12 IMSTM Version 11 continues to provide the leadership in performance, reliability, and security that is expected from the product of choice for critical online operational applications. IMS 11 also offers new functions to help you keep pace with the evolving IT industry. Through the introduction of the new IMS Enterprise Suite application developers with minimal knowledge of IMS Connect can start developing client applications to communicate with IMS. With Open Database, IMS 11 also provides direct SQL access to IMS data from programs that run on any distributed platform, unlocking DL/I data to the world of SQL application programmers. In this IBM® Redbooks® publication, system programmers get the steps for installing the new IMS components, and the application programmer can follow scenarios of how client applications can take advantage of SQL to access IMS data. We describe the installation of prerequisites, such as IMS Connect and the Structured Call Interface component of Common Service Layer address space and document the set up of the three new IMS drivers: - Universal DB resource adapter - Universal JDBC driver - Universal DL/I driver Our scenarios use the JDBC driver for type-4 access from Windows® to a remote DL/I database and DB2® tables and extend it to use IBM Mashup Center to provide an effective Web interface and to integrate with Open Database. Important: IMS Enterprise Suite V2.1 is the last release of the IMS Enterprise Suite that includes the DLIModel utility plug-in. Customers should migrate to using IMS Enterprise Suite V2.2 or later, which includes the IMS Enterprise Suite Explorer for Development. DLIModel utility projects can be imported into new IMS Explorer projects. In this book, any references to generating IMS metadata classes by using the DLIModel utility are comparable to the actions used to generate the classes using the IMS Explorer for Development.

IBM Netcool Operations Insight: A Scenarios Guide-Vasfi Gucer 2016-07-20 IBM® Netcool® Operations Insight empowers your IT

operations to use real-time and historical analytics to identify, isolate, and resolve problems before they affect your business. Powered by IBM Tivoli® Netcool/OMNIbus and the transformative capabilities of cognitive analytics, Netcool Operations Insight consolidates millions of alerts from across local, cloud, and hybrid environments into a few actionable problems. This IBM Redbooks® publication gives a broad understanding of Netcool Operations Insight and describes several scenarios that show the capabilities of this solution in a real-life environment. Each scenario features a different capability of Netcool Operations Insight. The scenarios are documented by using step-by-step figures with explanations to make them easier to implement in your own environment. The scenarios in this book are broken into the following categories: - Network management related scenarios - Network event and cognitive related scenarios - Network event related scenarios The target audience of this book is network specialists, network administrators, and network operators.

Harness the Power of Big Data The IBM Big Data Platform-Paul Zikopoulos 2012-11-08 Boost your Big Data IQ! Gain insight into how to govern and consume IBM’s unique in-motion and at-rest Big Data analytic capabilities Big Data represents a new era of computing—an inflection point of opportunity where data in any format may be explored and utilized for breakthrough insights—whether that data is in-place, in-motion, or at-rest. IBM is uniquely positioned to help clients navigate this transformation. This book reveals how IBM is infusing open source Big Data technologies with IBM innovation that manifest in a platform capable of "changing the game." The four defining characteristics of Big Data—volume, variety, velocity, and veracity—are discussed. You’ll understand how IBM is fully committed to Hadoop and integrating it into the enterprise. Hear about how organizations are taking inventories of their existing Big Data assets, with search capabilities that help organizations discover what they could already know, and extend their reach into new data territories for unprecedented model accuracy and discovery. In this book you will also learn not just about the technologies that make up the IBM Big Data platform, but when to leverage its purpose-built engines for analytics on data in-motion and data at-rest. And you’ll gain an understanding of how and when to govern Big Data, and how IBM’s industry-leading InfoSphere integration and governance portfolio helps you understand, govern, and effectively utilize Big Data. Industry use cases are also included in this practical guide.

IBM Power Systems E870C and E880C Technical Overview and Introduction-Scott Vetter 2018-11-14 This IBM® RedpaperTM publication is a comprehensive guide that covers the IBM Power® System E870C (9080-MME) and IBM Power System E880C (9080-MHE) servers that support IBM AIX®, IBM i, and Linux operating systems. The objective of this paper is to introduce the major innovative Power E870C and Power E880C offerings and their relevant functions. The new Power E870C and Power E880C servers with OpenStack-based cloud management and open source automation enables clients to accelerate the transformation of their IT infrastructure for cloud while providing tremendous flexibility during the transition. In addition, the Power E870C and Power E880C models provide clients increased security, high availability, rapid scalability, simplified maintenance, and management, all while enabling business growth and dramatically reducing costs. The systems management capability of the Power E870C and Power E880C servers speeds up and simplifies cloud deployment by providing fast and automated VM deployments, prebuilt image templates, and self-service capabilities, all with an intuitive interface. Enterprise servers provide the highest levels of reliability, availability, flexibility, and performance to bring you a world-class enterprise private and hybrid cloud infrastructure. Through enterprise-class security, efficient built-in virtualization that drives industry-leading workload density, and dynamic resource allocation and management, the server consistently delivers the highest levels of service across hundreds of virtual workloads on a single system. The Power E870C and Power E880C server includes the cloud management software and services to assist with clients' move to the cloud, both private and hybrid. The following capabilities are included: Private cloud management with IBM Cloud PowerVC Manager, Cloud-based HMC Apps as a service, and open source cloud automation and configuration tooling for AIX Hybrid cloud support Hybrid infrastructure management tools Securely connect system of record workloads and data to cloud native applications IBM Cloud Starter Pack Flexible capacity on demand Power to Cloud Services This paper expands the current set of IBM Power SystemsTM documentation by providing a desktop reference that offers a detailed technical description of the Power E870C and Power E880C systems. This paper does not replace the latest marketing materials and configuration tools. It is intended as another source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

Understanding Big Data: Analytics for Enterprise Class Hadoop and Streaming Data-Paul Zikopoulos 2011-10-22 Big Data represents a new era in data exploration and utilization, and IBM is uniquely positioned to help clients navigate this transformation. This book reveals how IBM is leveraging open source Big Data technology, infused with IBM technologies, to deliver a robust, secure, highly available, enterprise-class Big Data platform. The three defining characteristics of Big Data--volume, variety, and velocity--are discussed. You'll get a primer on Hadoop and how IBM is hardening it for the enterprise, and learn when to leverage IBM InfoSphere BigInsights (Big Data at rest) and IBM InfoSphere Streams (Big Data in motion) technologies. Industry use cases are also included in this practical guide. Learn how IBM hardens Hadoop for enterprise-class scalability and reliability Gain insight into IBM's unique in-motion and at-rest Big Data analytics platform Learn tips and tricks for Big Data use cases and solutions Get a quick Hadoop primer

IBM Power System E980: Technical Overview and Introduction-Scott Vetter 2020-01-10 This IBM® RedpaperTM publication provides a broad understanding of a new architecture of the IBM Power System E980 (9080-M9S) server that supports IBM AIX®, IBM i, and Linux operating systems (OSes). The objective of this paper is to introduce the major innovative Power E980 offerings and relevant functions: The IBM POWER9TM processor, which is available at frequencies of 3.55 - 4.0 GHz. Significantly strengthened cores and larger caches. Supports up to 64 TB memory. Integrated I/O subsystem and hot-pluggable Peripheral Component Interconnect Express (PCIe) Gen4 slots, double the bandwidth of Gen3 I/O slots. Supports EXP12SX and ESP24SX external disk drawers, which have 12 Gb SAS interfaces and double the existing EXP24S drawer bandwidth. New IBM EnergyScaleTM technology offers new variable processor frequency modes that provide a significant performance boost beyond the static nominal frequency. This publication is for professionals who want to acquire a better understanding of IBM Power SystemsTM products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs) This paper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power E980 server. This paper does not replace the current marketing materials and configuration tools. It is intended as an extra source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

Understanding DB2-Raul F. Chong 2007-12-29 The Easy, Visual Way to Master IBM® DB2 for Linux®, UNIX®, and Windows®—Fully Updated for Version 9.5 IBM DB2 9 and DB2 9.5 provide breakthrough capabilities for providing Information on Demand, implementing Web services and Service Oriented Architecture, and streamlining information management. Understanding DB2: Learning Visually with Examples, Second Edition, is the easiest way to master the latest versions of DB2 and apply their full power to your business challenges. Written by four IBM DB2 experts, this book introduces key concepts with dozens of examples drawn from the authors' experience working with DB2 in enterprise environments. Thoroughly updated for DB2 9.5, it covers new innovations ranging from manageability to performance and XML support to API integration. Each concept is presented with easy-to-understand screenshots, diagrams, charts, and tables. This book is for everyone who works with DB2: database administrators, system administrators, developers, and consultants. With hundreds of well-designed review questions and answers, it will also help professionals prepare for the IBM DB2 Certification Exams 730, 731, or 736. Coverage includes Choosing the right version of DB2 for your needs Installing and configuring DB2 Understanding the DB2 environment, instances, and databases Establishing client and server connectivity Working with database objects Utilizing breakthrough pureXML™ technology, which provides for nativeXML support Mastering administration, maintenance, performance optimization, troubleshooting, and recovery Understanding improvements in the DB2 process, memory, and storage models Implementing effective database security Leveraging the power of SQL and XQuery

IBM Power System E850 Technical Overview and Introduction-Scott Vetter 2017-04-25 This IBM® RedpaperTM publication is a comprehensive guide covering the IBM Power System E850 (8408-E8E) server that supports IBM AIX®, and Linux operating systems. The objective of this paper is to introduce the major innovative Power E850 offerings and their relevant functions: The new IBM POWER8TM processor, available at frequencies of 3.02 GHz, 3.35 GHz, and 3.72 GHz Significantly strengthened cores and larger caches Two integrated memory controllers with improved latency and bandwidth Integrated I/O subsystem and hot-pluggable PCIe Gen3 I/O slots I/O drawer expansion options offer greater flexibility Improved reliability, serviceability, and availability (RAS) functions IBM EnergyScaleTM technology that provides features such as

power trending, power-saving, capping of power, and thermal measurement This publication is for professionals who want to acquire a better understanding of IBM Power SystemsTM products. The intended audience includes the following roles: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors This paper expands the current set of IBM Power Systems documentation by providing a desktop reference that offers a detailed technical description of the Power E850 system. This paper does not replace the latest marketing materials and configuration tools. It is intended as an additional source of information that, together with existing sources, can be used to enhance your knowledge of IBM server solutions.

DB2 Essentials-Raul F. Chong 2013 This book covers everything you need to get productive with the latest version of IBM DB2 and apply it to today's business challenges. It discusses key features introduced in DB2 Versions 10.5, 10.1, and 9.7, including improvements in manageability, integration, security, Big Data support, BLU Acceleration, and cloud computing. This book is for anyone who plans to work with DB2, including DBAs, system administrators, developers, and consultants. It will be a great resource whether you're upgrading from an older version of DB2, migrating from a competitive database, or learning your first database platform.

IBM Power Systems LC921 and LC922: Technical Overview and Introduction-Scott Vetter 2019-12-10 This IBM® RedpaperTM publication is a comprehensive guide that covers the IBM Power SystemsTM LC921 and LC922 (9006-12P and 9006-22P)) servers that use the current IBM POWER9TM processor-based technology and supports Linux operating systems (OSes). The objective of this paper is to introduce the offerings and their capacities and available features. These new Linux scale-out systems provide differentiated performance, scalability, and low acquisition cost, and include the following features: Superior throughput and performance for high-value Linux workloads. Low acquisition cost through system optimization (industry-standard memory and industry-standard three-year warranty). Rich I/O options in the system unit. There are 12 large form factor (LFF)/small form factor (SFF) bays for 12 SAS/SATA hard disk drives (HDDs) or solid-state drives (SSDs), and four bays that are available for Non-Volatile Memory Express (NVMe) Gen3 adapters. Includes Trusted Platform Module (TPM) 2.0 Nuvoton NPCT650ABAWX through I2C (for secure boot and trusted boot). Integrated MicroSemi PM8069 SAS/SATA 16-port Internal Storage Controller Peripheral Component Interconnect Express (PCIe) 3.0 x8 with RAID 0, 1, 5, and 10 support (no write cache). Integrated Intel XL710 Quad Port 10 GBase-T PCIe 3.0 x8 UIO built-in local area network (LAN) (one shared management port). Dedicated 1 Gb Intelligent Platform Management Interface (IPMI) port. This publication is for professionals who want to acquire a better understanding of IBM Power Systems products. The intended audience includes: Clients Sales and marketing professionals Technical support professionals IBM Business Partners Independent software vendors (ISVs)

Fast and Scalable Cloud Data Management-Felix Gessert 2020-05-15 The unprecedented scale at which data is both produced and consumed today has generated a large demand for scalable data management solutions facilitating fast access from all over the world. As one consequence, a plethora of non-relational, distributed NoSQL database systems have risen in recent years and today’s data management system landscape has thus become somewhat hard to overlook. As another consequence, complex polyglot designs and elaborate schemes for data distribution and delivery have become the norm for building applications that connect users and organizations across the globe – but choosing the right combination of systems for a given use case has become increasingly difficult as well. To help practitioners stay on top of that challenge, this book presents a comprehensive overview and classification of the current system landscape in cloud data management as well as a survey of the state-of-the-art approaches for efficient data distribution and delivery to end-user devices. The topics covered thus range from NoSQL storage systems and polyglot architectures (backend) over distributed transactions and Web caching (network) to data access and rendering performance in the client (end-user). By distinguishing popular data management systems by data model, consistency guarantees, and other dimensions of interest, this book provides an abstract framework for reasoning about the overall design space and the individual positions claimed by each of the systems therein. Building on this classification, this book further presents an application-driven decision guidance tool that breaks the process of choosing a set of viable system candidates for a given application scenario down into a straightforward decision tree.