

Db2 10 For Z Os Database Administration Certification Study Guide

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Co-locating Transactional and Data Warehouse Workloads on System z Mike Ebbers 2010-12-03 As business cycles speed up, many customers gain significant competitive advantage from quicker and more accurate business decision-making by using real data. For many customers, choosing the path to co-locate their transactional and analytical workloads on System z® better leverages their existing investment in hardware, software, and skills. We created a project to address a number of best practice questions on how to manage these newer, analytical type workloads, especially when co-located with traditional transactional workloads. The goal of this IBM® Redbooks® publication is to provide technical guidance and performance trade-offs associated with resource management and potentially DB2® data-sharing in a variety of mixed transactional / data warehouse System z topologies. The term co-location used here and in the rest of the book is specifically defined as the practice of housing both transactional (OLTP) and data warehouse (analytical) workloads within the same System z configuration. We also assumed that key portions of the transactional and data warehouse databases would reside on DB2 for z/OS®. The databases may or may not reside in a DB2 data-sharing environment; we discuss those pros and cons in this book. The intended audience includes DB2 data warehouse architects and practitioners who are facing choices in resource management and system topologies in the data warehouse arena. This specifically includes Business Intelligence (BI) administrators, DB2 database administrators (DBAs) and z/OS performance administrators / systems programmers. In addition, decision makers and architects can utilize this book to assist in making platform and database topology decisions. The book is divided into four parts. Part I, "Introducing the co-location project" covers the System z value proposition and why one should consider System z as the central platform for their data warehousing / business analytics needs. Some topics are risk avoidance via data consolidation, continuous availability, simplified disaster recovery, IBM Smart Analytics Optimizer, reduced network bandwidth requirements, and the unique virtualization and resource management capabilities of System z LPAR, z/VM® and WLM. Part I also provides some of the common System z co-location topologies along with an explanation of the general pros and cons of each. This would be useful input for an architect to understand where a customer is today and where they might consider moving to. Part II, "Project environment" covers the environment, products, workloads, workload drivers, and data models implemented for this study. The environment consisted of a logically partitioned z10™ 32way, running z/VM, Linux®, and z/OS operating system instances. On those instances we ran products such as z/OS DB2 V9, IBM Cognos® Business Intelligence Version 8.4 for Linux on System z, InfoSphere™ Warehouse for System z,

InfoSphere Change Data Capture, z/OS WebSphere® V7, Tivoli® Omegamon for DB2 Performance expert. Utilizing these products we created transactional (OLTP), data warehouse query, and data warehouse refresh workloads. All the workloads were based on an existing web-based transactional Bookstore workload, that's currently utilized for internal testing within the System p® and z labs. While some IBM Cognos BI and ISWz product usage and experiences information is covered in this book, we do not go into the depth typically found in IBM Redbooks publications, since there's another book focused specifically on that

DB2 11 System Administrator for Z/OS: Certification Study Guide Judy Nall 2016-11-01 This book provides an in-depth review of the skills required to pass IBM's DB2 11 for z/OS System Administration exam 317 certification exam. This book addresses the changes in this new release of the DB2 11 for z/OS System Administration certification test, specifically for the latest version of DB2 for z/OS, version 11. Each section of the exam addresses a detailed set of skills that a DB2 system administrator on DB2 11 for z/OS should have. This book takes those sections, chapter by chapter, and provides the information a DB2 for z/OS system administrator will need to know to pass the certification exam. Practice questions and answers follow each chapter. A new practice final exam has been added to the book. The reader will come away being fully prepared to pass exam 317 and acquire certification, an important milestone showing significant academic and/or professional achievement.

DB2 10 for z/OS Technical Overview Paolo Bruni 2014-07-16 IBM® DB2® Version 10.1 for z/OS® (DB2 10 for z/OS or just DB2 10 throughout this book) is the fourteenth release of DB2 for MVSTM. It brings improved performance and synergy with the System z® hardware and more opportunities to drive business value in the following areas: Cost savings and compliance through optimized innovations DB2 10 delivers value in this area by achieving up to 10% CPU savings for traditional workloads and up to 20% CPU savings for nontraditional workloads, depending on the environments. Synergy with other IBM System z platform components reduces CPU use by taking advantage of the latest processor improvements and z/OS enhancements. Streamline security and regulatory compliance through the separation of roles between security and data administrators, column level security access, and added auditing capabilities. Business insight innovations Productivity improvements are provided by new functions available for pureXML®, data warehousing, and traditional online TP applications Enhanced support for key business partners that allow you to get more from your data in critical business disciplines like ERP Bitemporal support for applications that need to correlate the validity of data with time. Business resiliency innovations Database on demand capabilities to ensure that information design can be changed dynamically, often without database outages DB2 operations and utility improvements enhancing performance, usability, and availability by exploiting disk storage technology. The DB2 10 environment is available either for brand new installations of DB2, or for migrations from DB2 9 for z/OS or from DB2 UDB for z/OS Version 8 subsystems. This IBM Redbooks® publication introduces the enhancements made available with DB2 10 for z/OS. The contents help you understand the new functions and performance enhancements, start planning for exploiting the key new capabilities, and justify the investment in installing or migrating or skip migrating to DB2 10.

Managing Ever-Increasing Amounts of Data with IBM DB2 for z/OS: Using Temporal Data Management, Archive Transparency, and the DB2 Analytics Accelerator Mehmet Cuneyt Goksu 2015-10-20 IBM® DB2® Version 11.1 for z/OS® (DB2 11 for z/OS or just DB2 11 throughout this book) is the fifteenth release of DB2 for IBM MVSTM. The DB2 11 environment is available either for new installations of DB2 or for migrations from DB2 10 for z/OS subsystems only. This IBM Redbooks® publication describes enhancements that are available with DB2 11 for z/OS. The contents help database administrators to understand the new extensions and performance enhancements, to

plan for ways to use the key new capabilities, and to justify the investment in installing or migrating to DB2 11. Businesses are faced with a global and increasingly competitive business environment, and they need to collect and analyze ever increasing amounts of data (Figure 1). Governments also need to collect and analyze large amounts of data. The main focus of this book is to introduce recent DB2 capability that can be used to address challenges facing organizations with storing and analyzing exploding amounts of business or organizational data, while managing risk and trying to meet new regulatory and compliance requirements. This book describes recent extensions to DB2 for z/OS in V10 and V11 that can help organizations address these challenges.

Solving Operational Business Intelligence with InfoSphere Warehouse Advanced Edition Whei-Jen Chen 2012-10-02 IBM® InfoSphere® Warehouse is the IBM flagship data warehouse platform for departmental data marts and enterprise data warehouses. It offers leading architecture, performance, backup, and recovery tools that help improve efficiency and reduce time to market through increased understanding of current data assets, while simplifying the daily operations of managing complex warehouse deployments. InfoSphere Warehouse Advanced Enterprise Edition delivers an enhanced set of database performance, management, and design tools. These tools assist companies in maintaining and increasing value from their warehouses, while helping to reduce the total cost of maintaining these complex environments. In this IBM Redbooks® publication we explain how you can build a business intelligence system with InfoSphere Warehouse Advanced Enterprise to manage and support daily business operations for an enterprise, to generate more income with lower cost. We describe the foundation of the business analytics, the Data Warehouse features and functions, and the solutions that can deliver immediate analytics solutions and help you drive better business outcomes. We show you how to use the advanced analytics of InfoSphere Warehouse Advanced Enterprise Edition and integrated tools for data modeling, mining, text analytics, and identifying and meeting the data latency requirements. We describe how the performance and storage optimization features can make building and managing a large data warehouse more affordable, and how they can help significantly reduce the cost of ownership. We also cover data lifecycle management and the key features of IBM Cognos® Business Intelligence. This book is intended for data warehouse professionals who are interested in gaining in-depth knowledge about the operational business intelligence solution for a data warehouse that the IBM InfoSphere Warehouse Advanced Enterprise Edition offers.

Getting Started with the IBM Smart Analytics System 9600 Lydia Parziale 2011-04-12 The IBM® Smart Analytics System 9600 is a single, end-to-end business analytics solution to accelerate data warehousing and business intelligence initiatives. It provides integrated hardware, software, and services that enable enterprise customers to quickly and cost-effectively deploy business-changing analytics across their organizations. As a workload-optimized system for business analytics, it leverages the strengths of the System z® platform to drive: Significant savings in hardware, software, operating, and people costs to deliver a complete range of data warehouse and BI capabilities Faster time to value with a reduction in the time and speed associated with deploying Business Intelligence Industry-leading scalability, reliability, availability, and security Simplified and faster access to the data on System z

Reliability and Performance with IBM DB2 Analytics Accelerator V4.1 Paolo Bruni 2015-05-11 The IBM® DB2® Analytics Accelerator for IBM z/OS® is a high-performance appliance that integrates the IBM zEnterprise® infrastructure with IBM PureData™ for Analytics, powered by IBM Netezza® technology. With this integration, you can accelerate data-intensive and complex queries in a DB2 for z/OS highly secure and available environment. DB2 and the Analytics Accelerator appliance form a self-managing hybrid environment running online transaction processing and online transactional analytical processing concurrently and efficiently. These online

transactions run together with business intelligence and online analytic processing workloads. DB2 Analytics Accelerator V4.1 expands the value of high-performance analytics. DB2 Analytics Accelerator V4.1 opens to static Structured Query Language (SQL) applications and row set processing, minimizes data movement, reduces latency, and improves availability. This IBM Redbooks® publication provides technical decision-makers with an understanding of the benefits of version 4.1 of the Analytics Accelerator with DB2 11 for z/OS. It describes the installation of the new functions, and the advantages to existing analytical processes as measured in our test environment. This book also introduces the DB2 Analytics Accelerator Loader V1.1, a tool that facilitates the data population of the DB2 Analytics Accelerator.

Streamline Business with Consolidation and Conversion to DB2 for z/OS Paolo Bruni 2014-11-05 Time to market, flexibility, and cost reduction are among the top concerns common to all IT executives. If significant resource investments are placed in mature systems, IT organizations need to balance old and new technology. Older technology, such as non-IBM pre-relational databases, is costly, inflexible, and non-standard. Users store their information on the mainframe and thus preserve the skills and qualities of service their business needs. But users also benefit from standards-based modernization by migrating to IBM® DB2® for z/OS®. With this migration, users deliver new application features quickly and respond to changing business requirements more effectively. When migrating, the main decision is choosing between conversion and re-engineering. Although the rewards associated with rebuilding mature applications are high, so are the risks and customers that are embarking on a migration need that migration done quickly. In this IBM Redbooks® publication, we examine how to best approach the migration process by evaluating the environment, assessing the application as a conversion candidate, and identifying suitable tools. This publication is intended for IT decision makers and database administrators who are considering migrating their information to a modern database management system.

DB2 10 for z/OS Performance Topics Paolo Bruni 2013-08-23 DB2® 10 for z/OS can reduce the total DB2 CPU demand from 5-20%, compared to DB2 9, when you take advantage of all the enhancements. Many CPU reductions are built in directly to DB2, requiring no application changes. Some enhancements are implemented through normal DB2 activities through rebinding, restructuring database definitions, improving applications, and utility processing. The CPU demand reduction features have the potential to provide significant total cost of ownership savings based on the application mix and transaction types. Improvements in optimization reduce costs by processing SQL automatically with more efficient data access paths. Improvements through a range-list index scan access method, list prefetch for IN-list, more parallelism for select and index insert processing, better work file usage, better record identifier (RID) pool overflow management, improved sequential detection, faster log I/O, access path certainty evaluation for static SQL, and improved distributed data facility (DDF) transaction flow all provide more efficiency without changes to applications. These enhancements can reduce total CPU enterprise costs because of improved efficiency in the DB2 10 for z/OS. DB2 10 includes numerous performance enhancements for Large Objects (LOBs) that save disk space for small LOBs and that provide dramatically better performance for LOB retrieval, inserts, load, and import/export using DB2 utilities. DB210 can also more effectively REORG partitions that contain LOBs. This IBM Redbooks® publication® provides an overview of the performance impact of DB2 10 for z/OS discussing the overall performance and possible impacts when moving from version to version. We include performance measurements that were made in the laboratory and provide some estimates. Keep in mind that your results are likely to vary, as the conditions and work will differ. In this book, we assume that you are somewhat familiar with DB2 10 for z/OS. See DB2 10 for z/OS Technical Overview, SG24-7892-00, for an introduction to the new functions.

Managing Ever-increasing Amounts of Data with IBM DB2 for Z/OS Mehmet Cuneyt Goksu 2015

DB2-Administration Jens Orhanovic 2004

z/OS Identity Propagation Karan Singh 2011-09-29 This IBM® Redbooks® publication explores various implementations of z/OS® Identity Propagation where the distributed identity of an end user is passed to z/OS and used to map to a RACF® user ID, and any related events in the audit trail from RACF show both RACF and distributed identities. This book describes the concept of identity propagation and how it can address the end-to-end accountability issue of many customers. It describes, at a high level, what identity propagation is, and why it is important to us. It shows a conceptual view of the key elements necessary to accomplish this. This book provides details on the RACMAP function, filter management and how to use the SMF records to provide an audit trail. In depth coverage is provided about the internal implementation of identity propagation, such as providing information about available callable services. This book examines the current exploiters of z/OS Identity Propagation and provide several detailed examples covering CICS® with CICS Transaction Gateway, DB2®, and CICS Web services with Datapower.

Managing IBM DB2 10 for z/OS Using the IBM DB2 Administration Tool for z/OS Version 10 Paolo Bruni 2011-04-22 Today's business environment has increased in the complexity and rate of change that a database administrator must control. The ability to respond quickly to a changing environment is constantly challenged by the explosion of data growth combined with a decline in an experienced work staff. The IBM® DB2® Administration Tool for z/OS® Version 10 helps you become productive from Day 1 with DB2 10 for z/OS by using performance savings right away, lowering the CPU costs while reducing the batch window. Users experience higher data availability by easily managing online schema changes, including additional columns to indexes to use index-only access. Customers are able to experience higher data availability through simplified recovery operations: Access new functionality in DB2 10 for z/OS to lower costs and improve efficiency both before, during, and after the DB2 migration process. Maximize the performance of your key DB2 business applications to speed their deployment in DB2 10 for z/OS. Improve the productivity and efficiency of your staff when DB2 10 for z/OS is running. This IBM Redbooks® publication highlights the data administration enhancements introduced by DB2 Administration Tool for z/OS Version 10 by providing scenarios of their use with the new functions provided by DB2 10 for z/OS.

DB2 10 for Z/OS Database Administration Susan Lawson 2011-11-01 The key to mastering IBM's DB2 for z/OS Written primarily for database administrators who work on z/OS and who are taking the IBM DB2 10 for z/OS Database Administration certification exam (Exam 612), this resource also appeals to those who simply want to master the skills needed to be an effective database administrator of z/OS mainframes. The guide covers all the topics on the exam, including database design and implementation, operation and recovering, security and auditing, performance, and installation and migration. Complete with sample questions and detailed answers as well as a full-length practice exam this study guide serves as an essential tool. Programmers will learn how to create, maintain, and administer DB2 10 databases on the z/OS platform and how to implement XML with a DB2 10 database, making them successful database administrators after they pass certification.

Extremely pureXML in DB2 10 for z/OS Paolo Bruni 2011-01-28 The DB2® pureXML® feature offers sophisticated capabilities to store, process and manage XML data in its native hierarchical format. By integrating XML data intact into a relational database structure, users can take full advantage of DB2's relational data management features. In this IBM® Redbooks® publication, we document the steps for the implementation of a simple but meaningful XML application scenario. We have chosen to provide samples in COBOL and Java™ language. The purpose is to provide an easy path to follow to integrate the XML data type for the traditional DB2 for z/OS®

user. We also add considerations for the data administrator and suggest best practices for ease of use and better performance.

The Business Value of DB2 for Z/OS John Campbell 2013-05-28 Celebrating the 30th anniversary of the first release of DB2, this book highlights the important milestones, capabilities, and impacts of the database management software for IBM's mainframe operating system. Special focus is given to IBM DB2 Analytics Accelerator, covering the key design and operational aspects that enable IBM DB2 for z/OS clients to benefit from faster performance, reduced CPU usage, and lower costs. The second half of the book discusses performance enhancements and cost-saving measures in the version 10 release and is rich with hints and tips for a successful upgrade. A special section on query performance and IBM DB2 Optimizer illustrates how DB2 10 addresses customer issues such as reducing total cost of ownership while maintaining stability and reliability. The final section is a collection of case studies in which DB2 10 for z/OS customers share their migration experiences and articulate the business benefits they are seeing since upgrading to the new release.

Hybrid Analytics Solution using IBM DB2 Analytics Accelerator for z/OS V3.1 Paolo Bruni 2013-09-27 The IBM® DB2® Analytics Accelerator Version 3.1 for IBM z/OS® (simply called Accelerator in this book) is a union of the IBM System z® quality of service and IBM Netezza® technology to accelerate complex queries in a DB2 for z/OS highly secure and available environment. Superior performance and scalability with rapid appliance deployment provide an ideal solution for complex analysis. In this IBM Redbooks® publication, we provide technical decision-makers with a broad understanding of the benefits of Version 3.1 of the Accelerator's major new functions. We describe their installation and the advantages to existing analytical processes as measured in our test environment. We also describe the IBM zEnterprise® Analytics System 9700, a hybrid System z solution offering that is surrounded by a complete set of optional packs to enable customers to custom tailor the system to their unique needs..

Extremely PureXML in DB2 10 for Z/OS 2011

DB2 SQL PL Zamil Janmohamed 2005 The accompanying CD-ROM contains source code, DB2 product documentation, and a complete trial version of DB2 Enterprise Server Edition for Windows version 8.2.

Data Studio and DB2 for z/OS Stored Procedures Paolo Bruni 2011-03-15 Stored procedures can provide major benefits in the areas of application performance, code re-use, security, and integrity. DB2® has offered ever-improving support for developing and operating stored procedures. This IBM® Redpaper™ publication is devoted to tools that can be used for accelerating the development and debugging process, in particular to the stored procedure support provided by the latest and fastest evolving IBM product: Data Studio. We discuss topics related to handling stored procedures across different platforms. We concentrate on how to use tools for deployment of stored procedures on z/OS®, but most considerations apply to the other members of the DB2 family. This paper is a major update of Part 6, "Cool tools for an easier life," of the IBM Redbooks® publication DB2 9 for z/OS Stored Procedures: Through the CALL and Beyond, SG24-7604.

Optimizing DB2 Queries with IBM DB2 Analytics Accelerator for z/OS Paolo Bruni 2012-12-20 The IBM® DB2® Analytics Accelerator Version 2.1 for IBM z/OS® (also called DB2 Analytics Accelerator or Query Accelerator in this book and in DB2 for z/OS documentation) is a marriage of the IBM System z® Quality of Service and Netezza® technology to accelerate complex queries in a DB2 for z/OS highly secure and available environment. Superior performance and scalability with rapid appliance deployment provide an ideal solution for complex analysis. This IBM Redbooks® publication provides technical decision-makers with a broad understanding of the IBM DB2 Analytics Accelerator architecture and its exploitation by documenting the steps for the installation of this solution in an existing DB2 10 for z/OS environment. In this book we define a business analytics scenario, evaluate the potential benefits

of the DB2 Analytics Accelerator appliance, describe the installation and integration steps with the DB2 environment, evaluate performance, and show the advantages to existing business intelligence processes.

DB2 10 for Linux on System z Using z/VM v6.2, Single System Image Clusters and Live Guest Relocation Lydia Parziale 2012-11-03 IBM® z/VM® 6.2 introduced significant changes to z/VM with a multi-system clustering technology that allows up to four z/VM instances in a single system image (SSI) cluster. This technology is important because it offers you an attractive alternative to vertical growth by adding new z/VM systems. In the past, this capability required duplicate efforts to install, maintain, and manage each system. With SSI, these duplicate efforts are reduced or eliminated. Support for live guest relocation (LGR) allows you to move Linux virtual servers without disrupting your business or incurring loss of service, thus reducing planned outages. The z/VM systems are aware of each other and take advantage of their combined resources. LGR enables you to relocate guests from a system requiring maintenance to a system that will remain active during maintenance. A major advantage for DB2 v10 customers is that using z/VM 6.2 does not require any changes to existing DB2 structures. This remarkable benefit is due to the fact that DB2 v10 is installed as part of the Linux guest on z/VM and is fully integrated into LGR. This allows you to smoothly move DB2 v10 when you move Linux virtual servers, without interrupting either DB2 v10 or z/VM operations and services. This IBM Redbooks® publication will help you understand how DB2 10 on Linux for System z® behaves while running on a z/VM that is being relocated using z/VM's 6.2 Live Guest Relocation feature. In this book, we explore memory management, the DB2 Self-tuning memory manager feature, time synchronization, networking, and storage and performance considerations with regards to relocation. We also offer some best practices found during a live guest relocation for DB2 v10.

DB2 Developer's Guide Craig S. Mullins 2012-05-01 DB2 Developer's Guide is the field's #1 go-to source for on-the-job information on programming and administering DB2 on IBM z/OS mainframes. Now, three-time IBM Information Champion Craig S. Mullins has thoroughly updated this classic for DB2 v9 and v10. Mullins fully covers new DB2 innovations including temporal database support; hashing; universal tablespaces; pureXML; performance, security and governance improvements; new data types, and much more. Using current versions of DB2 for z/OS, readers will learn how to: * Build better databases and applications for CICS, IMS, batch, CAF, and RRSAP * Write proficient, code-optimized DB2 SQL * Implement efficient dynamic and static SQL applications * Use binding and rebinding to optimize applications * Efficiently create, administer, and manage DB2 databases and applications * Design, build, and populate efficient DB2 database structures for online, batch, and data warehousing * Improve the performance of DB2 subsystems, databases, utilities, programs, and SQL stat DB2 Developer's Guide, Sixth Edition builds on the unique approach that has made previous editions so valuable. It combines: * Condensed, easy-to-read coverage of all essential topics: information otherwise scattered through dozens of documents * Detailed discussions of crucial details within each topic * Expert, field-tested implementation advice * Sensible examples

Accelerating Data Transformation with IBM DB2 Analytics Accelerator for z/OS Ute Baumbach 2015-12-11 Transforming data from operational data models to purpose-oriented data structures has been commonplace for the last decades. Data transformations are heavily used in all types of industries to provide information to various users at different levels. Depending on individual needs, the transformed data is stored in various different systems. Sending operational data to other systems for further processing is then required, and introduces much complexity to an existing information technology (IT) infrastructure. Although maintenance of additional hardware and software is one component, potential inconsistencies and individually managed refresh cycles are others. For decades, there was no simple and efficient way to perform data transformations on the source system of operational

data. With IBM® DB2® Analytics Accelerator, DB2 for z/OS is now in a unique position to complete these transformations in an efficient and well-performing way. DB2 for z/OS completes these while connecting to the same platform as for operational transactions, helping you to minimize your efforts to manage existing IT infrastructure. Real-time analytics on incoming operational transactions is another demand. Creating a comprehensive scoring model to detect specific patterns inside your data can easily require multiple iterations and multiple hours to complete. By enabling a first set of analytical functionality in DB2 Analytics Accelerator, those dedicated mining algorithms can now be run on an accelerator to efficiently perform these modeling tasks. Given the speed of query processing on an accelerator, these modeling tasks can now be performed much quicker compared to traditional relational database management systems. This speed enables you to keep your scoring algorithms more up-to-date, and ultimately adapt more quickly to constantly changing customer behaviors. This IBM Redbooks® publication describes the new table type that is introduced with DB2 Analytics Accelerator V4.1 PTF5 that enables more efficient data transformations. These tables are called accelerator-only tables, and can exist on an accelerator only. The tables benefit from the accelerator performance characteristics, while maintaining access through existing DB2 for z/OS application programming interfaces (APIs). Additionally, we describe the newly introduced analytical capabilities with DB2 Analytics Accelerator V5.1, putting you in the position to efficiently perform data modeling for online analytical requirements in your DB2 for z/OS environment. This book is intended for technical decision-makers who want to get a broad understanding about the analytical capabilities and accelerator-only tables of DB2 Analytics Accelerator. In addition, you learn about how these capabilities can be used to accelerate in-database transformations and in-database analytics in various environments and scenarios, including the following scenarios: Multi-step processing and reporting in IBM DB2 Query Management Facility™, IBM Campaign, or Microstrategy environments In-database transformations using IBM InfoSphere® DataStage® Ad hoc data analysis for data scientists In-database analytics using IBM SPSS® Modeler

DB2 for z/OS and WebSphere Integration for Enterprise Java Applications Paolo Bruni 2013-08-07 IBM DB2® for z/OS® is a high-performance database management system (DBMS) with a strong reputation in traditional high-volume transaction workloads that are based on relational technology. IBM WebSphere® Application Server is web application server software that runs on most platforms with a web server and is used to deploy, integrate, execute, and manage Java Platform, Enterprise Edition applications. In this IBM® Redbooks® publication, we describe the application architecture evolution focusing on the value of having DB2 for z/OS as the data server and IBM z/OS® as the platform for traditional and for modern applications. This book provides background technical information about DB2 and WebSphere features and demonstrates their applicability presenting a scenario about configuring WebSphere Version 8.5 on z/OS and type 2 and type 4 connectivity (including the XA transaction support) for accessing a DB2 for z/OS database server taking into account high-availability requirements. We also provide considerations about developing applications, monitoring performance, and documenting issues. DB2 database administrators, WebSphere specialists, and Java application developers will appreciate the holistic approach of this document.

Security Functions of IBM DB2 10 for Z/OS Paolo Bruni 2011 IBM® DB2® 9 and 10 for z/OS® have added functions in the areas of security, regulatory compliance, and audit capability that provide solutions for the most compelling requirements. DB2 10 enhances the DB2 9 role-based security with additional administrative and other finer-grained authorities and privileges. This authority granularity helps separate administration and data access that provide only the minimum appropriate authority. The authority profiles provide better separation of duties while limiting or eliminating blanket authority over all aspects of a table and its data. In addition,

DB2 10 provides a set of criteria for auditing for the possible abuse and overlapping of authorities within a system. In DB2 10, improvements to security and regulatory compliance focus on data retention and protecting sensitive data from privileged users and administrators. Improvements also help to separate security administration from database administration. DB2 10 also lets administrators enable security on a particular column or particular row in the database complementing the privilege model. This IBM Redbooks® publication provides a detailed description of DB2 10 security functions from the implementation and usage point of view. It is intended to be used by database, audit, and security administrators.

IBM DB2 11 for z/OS Buffer Pool Monitoring and Tuning Jeff Berger 2014-07-31 IBM® DB2® buffer pools are still a key resource for ensuring good performance. This has become increasingly important as the difference between processor speed and disk response time for a random access I/O widens in each new generation of processor. An IBM System z® processor can be configured with large amounts of storage, which if used wisely, can help compensate by using storage to avoid synchronous I/O. Several changes in buffer pool management have been provided by DB2 10 and DB2 11. The purpose of this IBM Redpaper™ is to cover the following topics: Describe the functions of the DB2 11 buffer pools Introduce a number of matrixes for read and write performance of a buffer pool Provide information about how to set up and monitor the DB2 buffer pools The paper is intended to be read by DB2 system administrators, but it might be of interest to any IBM z/OS® performance specialist. It is assumed that the reader is familiar with DB2 and performance tuning. In this paper, we also assume that you are familiar with DB2 11 for z/OS performance. See DB2 11 for z/OS Technical Overview, SG24-8180; and DB2 11 for z/OS Performance Topics, SG24-8222, for more information about DB2 11 functions and their performance.

Managing DB2 for z/OS Utilities with DB2 Tools Solution Packs Paolo Bruni 2013-07-16 IBM® DB2® Tools for z/OS® support and take advantage of the latest versions of DB2 for z/OS. These tools are integral for the administration of the DB2 for z/OS environment and for optimization of data performance. In addition, the IBM portfolio addresses additional client requirements in the areas of data governance and version upgrade acceleration. Underlying the operation of any database management system are the utilities. With the number of database objects growing exponentially, managing utility jobs, meeting service level agreements (SLAs), and ensuring recoverability can be overwhelming. IBM offers DB2 Tools solution packs that assist in the DB2 utilities management process. Solution packs combine several products into a single consolidated solution providing everything necessary to ensure the execution of a set of database administration functions. The goals are to reduce the operational complexity and reduce cost. The objective of this IBM Redbooks® publication is to document the added value in terms of productivity and performance for database administrators when using the IBM DB2 Utilities Solution Pack and the IBM DB2 Fast Copy Solution Pack. We show the functions of the tools provided by the solution packs as used in real-life scenarios and adopting utilities best practices.

DB2 11 for z/OS Technical Overview Paolo Bruni 2016-05-05 IBM® DB2® Version 11.1 for z/OS® (DB2 11 for z/OS or just DB2 11 throughout this book) is the fifteenth release of DB2 for IBM MVSTM. It brings performance and synergy with the IBM System z® hardware and opportunities to drive business value in the following areas. DB2 11 can provide unmatched reliability, availability, and scalability - Improved data sharing performance and efficiency - Less downtime by removing growth limitations - Simplified management, improved autonomies, and reduced planned outages DB2 11 can save money and save time - Aggressive CPU reduction goals - Additional utilities performance and CPU improvements - Save time and resources with new autonomic and application development capabilities DB2 11 provides simpler, faster migration - SQL compatibility, divorce system migration from application migration - Access path

stability improvements - Better application performance with SQL and XML enhancements DB2 11 includes enhanced business analytics - Faster, more efficient performance for query workloads - Accelerator enhancements - More efficient inline database scoring enables predictive analytics The DB2 11 environment is available either for new installations of DB2 or for migrations from DB2 10 for z/OS subsystems only. This IBM Redbooks® publication introduces the enhancements made available with DB2 11 for z/OS. The contents help database administrators to understand the new functions and performance enhancements, to plan for ways to use the key new capabilities, and to justify the investment in installing or migrating to DB2 11.

In-Place Analytics with Live Enterprise Data with IBM DB2 Query Management Facility Doug Anderson 2016-10-21 IBM® DB2® Query Management Facility™ for z/OS® provides a zero-footprint, mobile-enabled, highly secure business analytics solution. IBM QMF™ V11.2.1 offers many significant new features and functions in keeping with the ongoing effort to broaden its usage and value to a wider set of users and business areas. In this IBM Redbooks® publication, we explore several of the new features and options that are available within this new release. This publication introduces TSO enhancements for QMF Analytics for TSO and QMF Enhanced Editor. A chapter describes how the QMF Data Service component connects to multiple mainframe data sources to accomplish the consolidation and delivery of data. This publication describes how self-service business intelligence can be achieved by using QMF Vision to enable self-service dashboards and data exploration. A chapter is dedicated to JavaScript support, demonstrating how application developers can use JavaScript to extend the capabilities of QMF. Additionally, this book describes methods to take advantage of caching for reduced CPU consumption, wider access to information, and faster performance. This publication is of interest to anyone who wants to better understand how QMF can enable in-place analytics with live enterprise data.

Security Functions of IBM DB2 10 for z/OS Paolo Bruni 2011-09-14 IBM® DB2® 9 and 10 for z/OS® have added functions in the areas of security, regulatory compliance, and audit capability that provide solutions for the most compelling requirements. DB2 10 enhances the DB2 9 role-based security with additional administrative and other finer-grained authorities and privileges. This authority granularity helps separate administration and data access that provide only the minimum appropriate authority. The authority profiles provide better separation of duties while limiting or eliminating blanket authority over all aspects of a table and its data. In addition, DB2 10 provides a set of criteria for auditing for the possible abuse and overlapping of authorities within a system. In DB2 10, improvements to security and regulatory compliance focus on data retention and protecting sensitive data from privileged users and administrators. Improvements also help to separate security administration from database administration. DB2 10 also lets administrators enable security on a particular column or particular row in the database complementing the privilege model. This IBM Redbooks® publication provides a detailed description of DB2 10 security functions from the implementation and usage point of view. It is intended to be used by database, audit, and security administrators.

Key Management Deployment Guide: Using the IBM Enterprise Key Management Foundation Axel Buecker 2014-10-12 In an increasingly interconnected world, data breaches grab headlines. The security of sensitive information is vital, and new requirements and regulatory bodies such as the Payment Card Industry Data Security Standard (PCI-DSS), Health Insurance Portability and Accountability Act (HIPAA), and Sarbanes-Oxley (SOX) create challenges for enterprises that use encryption to protect their information. As encryption becomes more widely adopted, organizations also must contend with an ever-growing set of encryption keys. Effective management of these keys is essential to ensure both the availability and security of the encrypted information. Centralized management of keys and certificates is necessary to perform the complex tasks that are related to key and certificate generation, renewal, and

backup and recovery. The IBM® Enterprise Key Management Foundation (EKMF) is a flexible and highly secure key management system for the enterprise. It provides centralized key management on IBM zEnterprise® and distributed platforms for streamlined, efficient, and secure key and certificate management operations. This IBM Redbooks® publication introduces key concepts around a centralized key management infrastructure and depicts the proper planning, implementation, and management of such a system using the IBM Enterprise Key Management Foundation solution.

DB2 10 for Z/OS Database Administration Susan Lawson 2006

DB2 12 for z/OS Technical Overview and Highlights Gareth Jones 2017-07-12 This paper provides a high-level overview of the functions, features, and improvements that were introduced in IBM DB2® 12 for z/OS®. These businesses gain a competitive advantage, improve business efficiency and effectiveness, and discover business insights from their existing data. The paper is intended for DB2 system administrators, database administrators, and application programmers, but might also be of interest to IT managers and executives. A more detailed description of DB2 12 is available in IBM DB2 12 for z/OS Technical Overview, SG24-8383. The purpose of this paper is to provide the reader with an understanding of some of the key changes that were introduced in DB2 12 for z/OS, including the following topics: Performance for traditional workloads Performance enablers for modern applications Application Enablement Reliability, availability, and scalability Security Migration and prerequisites

Considerations for Transitioning Highly Available Applications to System z Alex Louwe Kooijmans 2011-10-14 You may have several triggers to investigate the feasibility of moving a workload or set of workloads to the IBM® System z® platform. These triggers could be concerns about operational cost, manageability, or delivering the agreed service levels, among others. Investigating the feasibility of a possible migration or transition to any other platform, including System z, requires a number of basic steps. These steps usually start with an understanding of the current workload and its pain points, and end with a business case to move the workload. It is important to find out how easy a migration is going to be and how much risk will be involved. In this IBM Redbooks® publication we offer thoughts on how to move through these steps. We also include a chapter with a System z technology summary to help you understand how a migrated workload may fit on the platform. Our focus in this book is on workloads that are mission-critical and require a high level of availability, including disaster recovery.

DB2 9 for z/OS and Storage Management Paolo Bruni 2010-09-17 This IBM® Redbooks® publication can help you tailor and configure DFSMS constructs to be used in an IBM DB2® 9 for z/OS® environment. In addition, it provides a broad understanding of new disk architectures and their impact in DB2 data set management for large installations. This book addresses both the DB2 administrator and the storage administrator. The DB2 administrator can find information about how to use DFSMS for managing DB2 data sets; the storage administrator can find information about the characteristics of DB2 data sets and how DB2 uses the disks. This book describes optimal use of disk storage functions in DB2 for z/OS environments that can best make productive use of the synergy with I/O subsystem on IBM System z®. This book covers the following topics: - Using SMS to manage DB2 catalog, log, data, indexes, image copies, archives, work files - Taking advantage of IBM FlashCopy® for DB2 utilities, striping, copy pools - Setting page sizes and using sliding allocation - A description of PAV, MA, MIDAW, EF, EA, EAV, zHPF and why they are helpful - Compressing data and the use disk and tape for large data sets - Backup and restore, and remote copy services

Complete Analytics with IBM DB2 Query Management Facility: Accelerating Well-Informed Decisions Across the Enterprise Kristi Ramey 2012-08-20 There is enormous pressure today for businesses across all industries to cut costs, enhance business

performance, and deliver greater value with fewer resources. To take business analytics to the next level and drive tangible improvements to the bottom line, it is important to manage not only the volume of data, but the speed with which actionable findings can be drawn from a wide variety of disparate sources. The findings must be easily communicated to those responsible for making both strategic and tactical decisions. At the same time, strained IT budgets require that the solution be self-service for everyone from DBAs to business users, and easily deployed to thin, browser-based clients. Business analytics hosted in the Query Management Facility™ (QMF™) on DB2® and System z® allow you to tackle these challenges in a practical way, using new features and functions that are easily deployed across the enterprise and easily consumed by business users who do not have prior IT experience. This IBM® Redbooks® publication provides step-by-step instructions on using these new features: Access to data that resides in any JDBC-compliant data source OLAP access through XMLA 150+ new analytical functions Graphical query interfaces and graphical reports Graphical, interactive dashboards Ability to integrate QMF functions with third-party applications Support for the IBM DB2 Analytics Accelerator A new QMF Classic perspective in QMF for Workstation Ability to start QMF for TSO as a DB2 for z/OS stored procedure New metadata capabilities, including ER diagrams and capability to federate data into a single virtual source

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 unlimited capacity

DB2 Administration Solution Pack for z/OS: Streamlining DB2 for z/OS Database Administration Paolo Bruni 2013-08-27 IBM® DB2® tools for z/OS® support and exploit the most current versions of DB2 for z/OS. These tools are integral for the administration of the DB2 for z/OS environment and optimization of data performance. DB2 Administration Solution Pack for z/OS V1.1 (5697-DAM) offers features, functions, and processes that database administrators (DBAs) can use to more effectively and efficiently manage DB2 environments. DB2 Administration Solution Pack for z/OS is composed of the following tools: IBM DB2 Administration Tool for z/OS IBM DB2 Object Comparison Tool for z/OS IBM InfoSphere® Optim™ Configuration Manager for DB2 for z/OS IBM DB2 Table Editor for z/OS This IBM Redbooks® publication shows how the delivered capabilities can help DBAs to more easily complete tasks associated with object management, change management, application management, and configuration management.

Mastering ArcGIS Enterprise Administration Chad Cooper 2017-10-27 Learn how to confidently install, configure, secure, and fully utilize your ArcGIS Enterprise system. About This Book Install and configure the components of ArcGIS Enterprise to meet your organization's requirements Administer all aspects of ArcGIS Enterprise through user interfaces and APIs Optimize and Secure ArcGIS Enterprise to make it run efficiently and effectively Who This Book Is For This book will be geared toward senior GIS analysts, GIS managers, GIS administrators, DBAs, GIS architects, and GIS

engineers that need to install, configure, and administer ArcGIS Enterprise 10.5.1. What You Will Learn Effectively install and configure ArcGIS Enterprise, including the Enterprise geodatabase, ArcGIS Server, and Portal for ArcGIS Incorporate different methodologies to manage and publish services Utilize the security methods available in ArcGIS Enterprise Use Python and Python libraries from Esri to automate administrative tasks Identify the common pitfalls and errors to get your system back up and running quickly from an outage In Detail ArcGIS Enterprise, the next evolution of the ArcGIS Server product line, is a full-featured mapping and analytics platform. It includes a powerful GIS web services server and a dedicated Web GIS infrastructure for organizing and sharing your work. You will learn how to first install ArcGIS Enterprise to then plan, design, and finally publish and consume GIS services. You will install and configure an Enterprise geodatabase and learn how to administer ArcGIS Server, Portal, and Data Store through user interfaces, the REST API, and Python scripts. This book starts off by explaining how ArcGIS Enterprise 10.5.1 is different from earlier versions of ArcGIS Server and covers the installation of all the components required for ArcGIS Enterprise. We then move on to geodatabase administration and content publication, where you will learn how to use ArcGIS Server Manager to view the server logs, stop and start services, publish services, define users and roles for security, and perform other administrative tasks. You will also learn how to apply security mechanisms on ArcGIS Enterprise and safely expose services to the public in a secure manner. Finally, you'll use the RESTful administrator API to automate server management tasks using the Python scripting language. You'll learn all the best practices and troubleshooting methods to streamline the management of all the interconnected parts of ArcGIS Enterprise. Style and approach The book takes a pragmatic approach, starting with installation & configuration of ArcGIS Enterprise to finally building a robust GIS web infrastructure for your organization.