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Oracle Database 10g Performance Tuning Tips & Techniques Oracle Database 11g Performance Tuning Recipes Oracle Database 11g R2 Oracle Database 11g R2 Oracle Database 11g Release 2 Performance Tuning Tips & Techniques **Oracle Database 12c Performance Tuning Recipes Oracle Database 11g New Features** Oracle Tuning Oracle Performance Survival Guide Oracle SQL Tuning Pocket Reference Oracle SQL Tuning with Oracle SQLTXPLAIN Oracle Database 11g R2 Oracle Database 11gR2 Performance Tuning Cookbook Expert Indexing in Oracle Database 11g SQL Tuning 1Z0-117, Oracle Database 11G Release 2 Oracle Database 11g Oracle 11g For Dummies Oracle 11g New Features Oracle 11G: SQL SQL Performance Explained Oracle Tuning OCP Oracle Database 11g New Features for Administrators Exam Guide (Exam 1Z0-050) Troubleshooting Oracle Performance Expert Oracle SQL Beginning Oracle Database 11g Administration Oracle Database 11g The Complete Reference Oracle Database 11 G Release 2 Performance Tuning Tips & Techniques Oracle 11G Administration In Simple Steps Oracle Database XE 11gR2 Jump Start Guide Oracle Database 12c Release 2 Performance Tuning Tips & Techniques Oracle Database 11g DBA Handbook Oracle Database 12c DBA Handbook OCP: Oracle Database 11g Administrator Certified Professional Study Guide Oracle SQL Performance Tuning and Optimization Dynamic Oracle Performance Analytics Oracle Database 11g SQL Advanced Oracle Utilities: The Definitive Reference Expert Oracle RAC Performance Diagnostics and Tuning Oracle Database 11g DBA Handbook

For Oracle tuning professionals wishing to add more tools to their Oracle tuning toolbox, this guidebook introduces the various tuning analytical tools and helpful strategies to make the database easier to use. Details describe how to extract information from the database and use it to determine and increase efficiency. It also provides specific steps with detailed information on how to congeal large amounts of database performance information into one pool from which the DBA can carefully choose tuning options based on what is predicted, all to give them the biggest improvement in performance for the least time and money investment. Sample code, sample code results, and guidelines on how to interpret the results help users manipulate code in an effective way. With countless hints, tips, and tools, the guide fully explains how to work with the Oracle system on order to achieve database performance excellence. This updated study guide for the latest release of the most popular database software in the world—Oracle Database 11g—reviews using the RMAN recovery catalog, handling Flashback technology, managing memory and resources, automating tasks, diagnosing the database, and much more. Plus, more than 100 pages of workbook exercises help prepare you to take the 1Z0-053 exam. Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file. A poorly performing

database application not only costs users time, but also has an impact on other applications running on the same computer or the same network. SQL Tuning provides an essential next step for SQL developers and database administrators who want to extend their SQL tuning expertise and get the most from their database applications. There are two basic issues to focus on when tuning SQL: how to find and interpret the execution plan of an SQL statement and how to change SQL to get a specific alternate execution plan. SQL Tuning provides answers to these questions and addresses a third issue that's even more important: how to find the optimal execution plan for the query to use. Author Dan Tow outlines a timesaving method he's developed for finding the optimum execution plan--rapidly and systematically--regardless of the complexity of the SQL or the database platform being used. You'll learn how to understand and control SQL execution plans and how to diagram SQL queries to deduce the best execution plan for a query. Key chapters in the book include exercises to reinforce the concepts you've learned. SQL Tuning concludes by addressing special concerns and unique solutions to "unsolvable problems." Whether you are a programmer who develops SQL-based applications or a database administrator or other who troubleshoots poorly tuned applications, SQL Tuning will arm you with a reliable and deterministic method for tuning your SQL queries to gain optimal performance.

Expert Oracle SQL: Optimization, Deployment, and Statistics is about optimizing individual SQL statements, especially on production database systems. This Oracle-specific book begins by assuming you have already identified a particular SQL statement and are considering taking steps to improve its performance. The book describes a systematic process by which to diagnose a problem statement, identify a fix, and to implement that fix safely in a production system. You'll learn not only to improve performance when it is too slow, but also to stabilize performance when it is too variable. You'll learn about system statistics and how the Cost-Based Optimizer uses them to determine a suitable execution plan for a given statement. That knowledge provides the foundation from which to identify the root cause, and to stabilize and improve performance. Next after identifying a problem and the underlying root cause is to put in place a solution. Expert Oracle SQL: Optimization, Deployment, and Statistics explains how to apply various remedies such as changing the SQL statement, adding hints, changing the physical design, and more, and how they can be brought to bear on fixing a problem once and for all. Rolling a change out smoothly is an important topic when dealing with tuning and optimization. Expert Oracle SQL: Optimization, Deployment, and Statistics does not let you down in this critical area. The book contains two chapters of good information from an experienced professional on how to safely deploy changes into production so that your systems remaining running and available throughout the deployment process. Describes a systematic approach to tuning Oracle SQL Explains how things are supposed to work, what can go wrong, and how to fix it Takes you through the steps needed to stabilize performance in your production systems Performance problems are rarely "problems" per se. They are more often "crises" during which you're pressured for results by a manager standing outside your cubicle while your phone rings with queries from the help desk. You won't have the time for a leisurely perusal of the manuals, nor to lean back and read a book on theory. What you need in that situation is a book of solutions, and solutions are precisely what Oracle Database 12c Performance Tuning Recipes delivers. Oracle Database 12c Performance Tuning Recipes is a ready

reference for database administrators in need of immediate help with performance issues relating to Oracle Database. The book takes an example-based approach, wherein each chapter covers a specific problem domain. Within each chapter are "recipes," showing by example how to perform common tasks in that chapter's domain. Solutions in the recipes are backed by clear explanations of background and theory from the author team. Whatever the task, if it's performance-related, you'll probably find a recipe and a solution in this book. Provides proven solutions to real-life Oracle performance problems Offers relevant background and theory to support each solution Gets straight to the point for when you're under pressure for results

ORACLE 11G: SQL is an introduction to the fundamental SQL language used in all relational databases today. This textbook is not simply a study guide; it is written for those who have just a basic knowledge of databases and can be used in a course on this latest implementation of SQL from Oracle. Learning these concepts and techniques prepares students for the first exam in both the Oracle Database Administrator and Oracle Developer Certification Exam paths and offers a solid understanding of using Oracle 11g SQL effectively. The first part of **ORACLE 11G: SQL** focuses on creating database objects, including tables, constraints, indexes, sequences, synonyms, and users, and manipulating data. The second part explores data query techniques, such as row filtering, joins, single-row functions, aggregate functions, subqueries, and views. Several advanced query topics, such as ROLLUP, CUBE, and TOP-N analysis, are also introduced. To help students bridge these SQL topics to further studies, appendixes introduce SQL tuning, compare Oracle's SQL syntax with other databases (MS SQL Server and MySQL), and explain how to embed SQL in applications (ASP.NET). An overview of the two Oracle connection interface tools, SQL Developer and SQL Plus, is also provided. Important

Notice: Media content referenced within the product description or the product text may not be available in the ebook version. Written by a Senior Database Administrator who has worked with the Oracle RDBMS for thirty years, this is a book which teaches the skill of SQL Tuning for the Oracle Database. Not a list of one-off tricks or tips, nor a glossing over of topics; this book offers an in-depth process covering discovery, analysis, and problem resolution. Learn the science behind SQL Tuning. Learn and apply the FILTERED ROWS PERCENTAGE Cardinality based method of tuning Determine a query's Driving Table and Join Order Construct Query Diagrams, Data Models, and Join Trees Build and use Count / Filter / and Reconstruction Queries Identify Waste in a Query Execution Plan Zero in on Cardinality Divergence using Estimated vs. Actuals Use the ACCESS / FILTER / COVERAGE strategy to build indexes for Problem Queries Exploit THE 2% RULE in analyzing Access method and Join method Classify queries as Precision Style or Warehouse Style Understand Hash Join mechanics and make Hash Joins go faster Make HINTS work as Detection Tools rather than clubs Avoid early Database Design flaws Manage Statistics and deal with common Statistics problems (NDV, Uniform Distribution, Independence, Dynamic Sampling) (Staleness, Skew, Dependence, Defaulting, Out-Of-Bounds, Transiency, Bloat) Perfect your Question Based Analysis Technique and more Included are: a special chapter for EXADATA, a LAB which demonstrates the cardinality based process of SQL Tuning, and twenty three magical SQL scripts that make the process of SQL Tuning easy to do. Learn the skill of SQL Tuning as taught by an expert who does it for a living, and become the go-to specialist in your company. Chapter 1: DRIVING TABLE and JOIN

ORDER Chapter 2: Ways to Use a Query Execution Plan Chapter 3: The Best Indexes for a Query Chapter 4: JOINS Chapter 5: HINTS Chapter 6: BASICS Chapter 7: ROW COUNTS and RUN TIMES Chapter 8: EXADATA LAB: Reverse Engineering the QEP Appendix: Know Your Scripts Scripts for analyzing queries and plans Scripts for examining an active database Scripts for looking at metadata showplan showplanshort showplanconstraints showplancountqueries showplandatamodel showplandrivingtable showplanfilterqueries showplanfrpspreadsheetcode showplanindexes showplannumrows showplanquerydiagram showplantables showplantablesunique loadplanfromcache loadplanfromhist showtopcpu showowner showindexes showconstraints showcolstats showhistograms showallscanrates showallworkareas It's all about the Cardinalities Expert Indexing in Oracle Database 11g is about the one database structure at the heart of almost all performance concerns: the index. Database system performance is one of the top concerns in information technology today. Administrators struggle to keep up with the explosion of access and activity driven by the proliferation of computing into everything from phones to tablets to PCs in our increasingly connected world. At the heart of any good-performing database lies a sound indexing strategy that makes appropriate use of indexing, and especially of the vendor-specific indexing features on offer. Few databases fully exploit the wealth of data access mechanisms provided by Oracle. Expert Indexing in Oracle Database 11g helps by bringing together information indexing and how to use it into one, convenient and blissfully short volume that you can read quickly and have at your fingertips for reference. Learn the different types of indices available and when each is best applied. Recognize when queries aren't using indices as you intend. Manage your indexing for maximum performance. Let Expert Indexing in Oracle Database 11g be your guide to deep mastery of the most fundamental performance optimization structure in Oracle Database. Explains how indices work, how they help, and how they hinder Demystifies the various index choices Describes the database administration chores associated with indices Build and manage your Oracle Database XE environment with this fast paced, practical guide Proven Database Optimization Solutions?Fully Updated for Oracle Database 12c Release 2 Systematically identify and eliminate database performance problems with help from Oracle Certified Master Richard Niemiec. Filled with real-world case studies and best practices, Oracle Database 12c Release 2 Performance Tuning Tips and Techniques details the latest monitoring, troubleshooting, and optimization methods. Find out how to identify and fix bottlenecks on premises and in the cloud, configure storage devices, execute effective queries, and develop bug-free SQL and PL/SQL code. Testing, reporting, and security enhancements are also covered in this Oracle Press guide. • Properly index and partition Oracle Database 12c Release 2 • Work effectively with Oracle Cloud, Oracle Exadata, and Oracle Enterprise Manager • Efficiently manage disk drives, ASM, RAID arrays, and memory • Tune queries with Oracle SQL hints and the Trace utility • Troubleshoot databases using V\$ views and X\$ tables • Create your first cloud database service and prepare for hybrid cloud • Generate reports using Oracle's Statspack and Automatic Workload Repository tools • Use sar, vmstat, and iostat to monitor operating system statistics This Study Guide is targeted at IT professionals who are working towards the OCE certification: Oracle Certified Expert, Oracle Database 11g Release 2 SQL Tuning. The book provides information covering all of the exam topics for the Oracle certification

exam: "1Z0-117: Oracle Database 11g Release 2: SQL Tuning." The books in the Oracle Certification Prep series are built in lockstep with the test topics provided by Oracle Education's certification program. Each book is intended to provide the information that will be tested in a clean and concise format. The guides introduce the subject you'll be tested on, follow that with the information you'll need to know for it, and then move on to the next topic. They contain no drills or unrealistic self-tests to bump the page count without adding value. The series is intended to provide a concentrated source of exam information that is compact enough to be read through multiple times. This series is ideal for experienced Oracle professionals that are familiar with the topic being tested, but want a means to rapidly reinforce their existing skills and bridge any gaps in their knowledge. It is also an excellent option as a second source of information for candidates pursuing certification.

The Essential Resource for Oracle DBAs--Fully Updated and Expanded
Manage a flexible, highly available Oracle database with help from the expert information contained in this exclusive Oracle Press guide. Fully revised to cover every new feature and utility, **Oracle Database 11g DBA Handbook** shows how to perform a new installation, upgrade from previous versions, configure hardware and software for maximum efficiency, and employ bulletproof security. You will learn to automate the backup and recovery process, provide transparent failover capability, audit and tune performance, and distribute your enterprise databases with Oracle Net. Plan and deploy permanent, temporary, and bigfile tablespaces Optimize disk allocation, CPU usage, I/O throughput, and SQL queries Develop powerful database management applications Guard against human errors using Oracle Flashback and Oracle Automatic Undo Management Diagnose and tune system performance using Oracle Automatic Workload Repository and SQL Tuning Sets Implement robust security using authentication, authorization, fine-grained auditing, and fine-grained access control Maintain high availability using Oracle Real Application Clusters and Oracle Active Data Guard Respond more efficiently to failure scenarios by leveraging the Oracle Automatic Diagnostic Repository and the Oracle Repair Advisor Back up and restore tables, tablespaces, and databases with Oracle Recovery Manager and Oracle Data Pump Export and Import Work with networked databases, data warehouses, and VLDBs Put the latest Oracle Database 11g tools to work--Oracle Total Recall, Oracle Flashback Data Archive, and more Oracle Performance Survival Guide A Systematic Approach to Database Optimization The fast, complete, start-to-finish guide to optimizing Oracle performance Oracle Performance Survival Guide offers a structured, systematic, start-to-finish methodology for optimizing Oracle performance as efficiently as possible. Leading Oracle expert Guy Harrison shows how to maximize your tuning investment by focusing on causes rather than symptoms, and by quickly identifying the areas that deliver the greatest "bang for the buck." Writing for DBAs and developers with all levels of experience, Harrison covers every area of Oracle performance management, from application design through SQL tuning, contention management through memory and physical IO management. He also presents up-to-the-minute guidance for optimizing the performance of the Oracle 11g Release 2. You'll start by mastering Oracle structured performance tuning principles and tools, including techniques for tracing and monitoring Oracle execution. Harrison illuminates the interaction between applications and databases, guides you through choosing tuning tools, and introduces upfront design techniques that

lead to higher-performance applications. He also presents a collection of downloadable scripts for reporting on all aspects of database performance. Coverage includes • “Tuning by layers,” the most effective, highest-value approach to Oracle performance optimization • Making the most of Oracle’s core tools for tracing, monitoring, and diagnosing performance • Highly efficient database logical and physical design, indexing, transaction design, and API use • SQL and PL/SQL tuning, including the use of parallel SQL techniques • Minimizing contention for locks, latches, shared memory, and other database resources • Optimizing memory and physical disk IO • Tuning Real Application Cluster (RAC) databases guyharrison.net informit.com/ph When your database application isn’t running fast enough, troubleshooting is usually your first move. Finding the slow part of an application is often easy, but discovering a solution can prove much more difficult. *Troubleshooting Oracle Performance* helps by providing a systematic approach to addressing the underlying causes of poor database application performance. Written for developers by an application developer who has learned by doing, this book shows you how to plan for performance as you would for any other application requirement. This book, written by veteran Oracle database administrator Iggy Fernandez, a regular on the Oracle conference circuit and the editor of NoCOUG Journal, is a manageable introduction to key Oracle database administration topics including planning, installation, monitoring, troubleshooting, maintenance, and backups, to name just a few. As is clear from the table of contents, this book is not simply a recitation of Oracle Database features such as what you find in the reference guides available for free download on the Oracle web site. For example, the chapter on database monitoring explains how to monitor database availability, database changes, database security, database backups, database growth, database workload, database performance, and database capacity. The chapters of this book are logically organized into four parts that closely track the way your database administration career will naturally evolve. Part 1 gives you necessary background in relational database theory and Oracle Database concepts, Part 2 teaches you how to implement an Oracle database correctly, Part 3 exposes you to the daily routine of a database administrator, and Part 4 introduces you to the fine art of performance tuning. Each chapter has exercises designed to help you apply the lessons of the chapter. Each chapter also includes a list of reference works that contain more information on the topic of the chapter. In this book, you'll find information that you won't find in other books on Oracle Database. Here you'll discover not only technical information, but also guidance on work practices that are as vital to your success as technical skills. The author's favorite chapter is "The Big Picture and the Ten Deliverables." If you take the lessons in that chapter to heart, you can quickly become a much better Oracle database administrator than you ever thought possible. This Oracle 11g learning guide will equip database administrators and application developers to build efficient SQL statements and to tune database applications. When this effort is complemented by database server and PL/SQL application tuning, then a highly efficient application execution environment is created. One will learn about the internals of SQL statement execution, how to monitor the performance of such execution, and how one can influence the behavior of the database to achieve performance gains. This textbook is a mandatory reference for any database administrator or SQL database application developer. The following specific topics are among those considered: - Consider the unique and

differing tuning issues found in online database applications, enterprise resource and data warehouse environments and the important metrics of SQL statement performance; - Learn about the internal mechanisms use for SQL statement execution within a database instance and how these can affect performance for good or bad, including the Optimizer facilities known as the Transformation Engine, Estimator and Plan Generator; - Use a variety of techniques to examine the details of SQL statement execution, spotting trouble areas and bottlenecks which require tuning; - Learn about the Auto-Task framework and how to manage the automatic collection of Optimizer statistics and automatic SQL tuning using both the programmatic and Enterprise Manager interfaces; - Learn how statistic deficiencies can dramatically degrade performance, and how these problems are resolved through customized Optimizer statistics collection procedures using the DBMS_STATS() package, system statistics, histograms, expression statistics and MultiColumn statistics; - Influence the behavior of the Optimizer by setting database parameters and other SQL tuning techniques; - Utilize the database advisory framework and the SQL Tuning and SQL Access advisors;- Use plan management to achieve plan stability which is adaptive and even dynamic; - Understand the self-tuning infrastructure and the automatic SQL tuning capabilities found within the database; - Employ SQL hints embedded into the statement text to resolve unique tuning challenges; - Learn to identify poorly performing SQL statements using real-time SQL monitoring and application tracing techniques such as DBMS_MONITOR(), trcsess and tkprof. Expert Oracle RAC Performance Diagnostics and Tuning provides comprehensive coverage of the features, technology and principles for testing and tuning RAC databases. The book takes a deep look at optimizing RAC databases by following a methodical approach based on scientific analysis rather than using a speculative approach, twisting and turning knobs and gambling on the system. The book starts with the basic concepts of tuning methodology, capacity planning, and architecture. Author Murali Vallath then dissects the various tiers of the testing implementation, including the operating system, the network, the application, the storage, the instance, the database, and the grid infrastructure. He also introduces tools for performance optimization and thoroughly covers each aspect of the tuning process, using many real-world examples, analyses, and solutions from the field that provide you with a solid, practical, and replicable approach to tuning a RAC environment. The book concludes with troubleshooting guidance and quick reference of all the scripts used in the book. Expert Oracle RAC Performance Diagnostics and Tuning covers scenarios and details never discussed before in any other performance tuning books. If you have a RAC database, this book is a requirement. Get your copy today. Takes you through optimizing the various tiers of the RAC environment. Provides real life case studies, analysis and solutions from the field. Maps a methodical approach to testing, tuning and diagnosing the cluster The definitive reference for every Oracle DBA—completely updated for Oracle Database 12c Oracle Database 12c DBA Handbook is the quintessential tool for the DBA with an emphasis on the big picture—enabling administrators to achieve effective and efficient database management. Fully revised to cover every new feature and utility, this Oracle Press guide shows how to harness cloud capability, perform a new installation, upgrade from previous versions, configure hardware and software, handle backup and recovery, and provide failover capability. The newly revised material features high-level and practical content on cloud

integration, storage management, performance tuning, information management, and the latest on a completely revised security program. Shows how to administer a scalable, flexible Oracle enterprise database Includes new chapters on cloud integration, new security capabilities, and other cutting-edge features All code and examples available online A Fully Integrated Study System for OCP Exam 1Z0-050 Prepare for the Oracle Certified Professional Oracle Database 11g New Features for Administrators exam with help from this exclusive Oracle Press guide. In each chapter, you'll find challenging exercises, practice questions, a two-minute drill, and a chapter summary to highlight what you've learned. This authoritative guide will help you pass the test, and serve as your essential on-the-job reference. Get complete coverage of all OCP objectives for exam 1Z0-050, including:

- Installation and upgrades
- Partitioning and storage
- Intelligent infrastructure
- Diagnostics and fault management
- Performance Oracle Recovery Manager and Oracle Flashback Security
- Oracle SQL Performance Analyzer
- SQL plan management
- Automatic SQL tuning

On the CD-ROM: One full practice exam that simulates the actual OCP exam Detailed answers and explanations Score report performance assessment tool Complete electronic book Bonus exam available free with online registration

Performance problems are rarely "problems" per se. They are more often "crises" during which you're pressured for results by a manager standing outside your cubicle while your phone rings with queries from the help desk. You won't have the time for a leisurely perusal of the manuals, nor to lean back and read a book on theory. What you need in that situation is a book of solutions, and solutions are precisely what Oracle Database 11g Performance Tuning Recipes delivers. Oracle Database 11g Performance Tuning Recipes is a ready reference for database administrators in need of immediate help with performance issues relating to Oracle Database. The book takes an example-based approach, wherein each chapter covers a specific problem domain. Within each chapter are "recipes," showing by example how to perform common tasks in that chapter's domain. Solutions in the recipes are backed by clear explanations of background and theory from the author team. Whatever the task, if it's performance-related, you'll probably find a recipe and a solution in this book. Provides proven solutions to real-life Oracle performance problems Offers relevant background and theory to support each solution Written by a team of experienced database administrators successful in their careers

Are you a seasoned system administrator charged with setting up an Oracle database? Or did you suddenly become a DBA by default? If database administration with Oracle is part of your job, you'll be glad to have Oracle 11g For Dummies in your cubicle. This nuts-and-bolts guide walks you through the mysteries of Oracle and database administration. You'll learn how to understand Oracle database architecture, set up and manage an Oracle database, and keep it running in tiptop form. Oracle 11g For Dummies covers:

- The building blocks behind the database engine as well as Oracle's physical and logical structures
- Hardware, software, system, and storage requirements for implementation
- How to recognize and accommodate the differences between Oracle installations on Windows and on Linux/UNIX
- Daily and intermittent tasks necessary to keep your database running properly
- How to assess potential threats to your database, configure Oracle Recovery Manager, and set up backup and recovery procedures
- When to use online, offline, controlfile, and archive log backups
- Troubleshooting methodology and how to use Oracle database logs and other diagnostic utilities
- Different ways to manage your database
- How to

automate jobs with the Oracle Scheduler Using SQL in Oracle, and a great deal more

Completely up to date for the newest release of Oracle, Oracle 11g For Dummies will give you both the information and the confidence to set up and maintain an Oracle database for your organization. One of the most important challenges faced by Oracle database administrators and Oracle developers is the need to tune SQL statements so that they execute efficiently. Poorly tuned SQL statements are one of the leading causes of substandard database performance and poor response time. SQL statements that perform poorly result in frustration for users, and can even prevent a company from serving its customers in a timely manner. In this book, Mark Gurry shares his in-depth knowledge of Oracle's SQL statement optimizers. Mark's knowledge is the result of many hard-fought tuning battles during his many years of providing Oracle tuning services to clients. Mark provides insights into the workings of the rule-based optimizer that go well beyond what the rules tell you. Mark also provides solutions to many common problems that occur with both the rule-based and cost-based optimizers. In addition to the specific problem/solution scenarios for the optimizers, Mark provides a number of handy SQL tuning tips. He discusses the various optimizer hints, telling you when they can be used to good effect. Finally, Mark discusses the use of the DBMS_STATS package to manage database statistics, and the use of outlines to specify execution plans for SQL statements in third-party applications that you can't otherwise modify.

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Write powerful SQL statements and PL/SQL programs Learn to access Oracle databases through SQL statements and construct PL/SQL programs with guidance from Oracle expert, Jason Price. Published by Oracle Press, Oracle Database 11g SQL explains how to retrieve and modify database information, use SQL Plus and SQL Developer, work with database objects, write PL/SQL programs, and much more. Inside, you'll find in-depth coverage of the very latest SQL features and tools, performance optimization techniques, advanced queries, Java support, and XML. This book contains everything you need to master SQL. Explore SQL Plus and SQL Developer Use SQL SELECT, INSERT, UPDATE, and DELETE statements Write PL/SQL programs Create tables, sequences, indexes, views, and triggers Write advanced queries containing complex analytical functions Create database objects and collections to handle abstract data Use large objects to handle multimedia files containing music and movies Write Java programs to access an Oracle Database using JDBC Tune your SQL statements to make them execute faster Explore the XML capabilities of the Oracle Database Master the very latest Oracle Database 11g features, such as PIVOT and UNPIVOT, flashback archives, and much more Use an innovative approach that relies on big data and advanced analytical techniques to analyze and improve Oracle Database performance. The approach used in this book represents a step-change paradigm shift away from traditional methods. Instead of relying on a few hand-picked, favorite metrics, or wading through multiple specialized tables of information such as those found in an automatic workload repository (AWR) report, you will draw on all available data, applying big data methods and analytical techniques to help the performance tuner draw impactful, focused performance improvement conclusions. This book briefly reviews past and present practices, along with available tools, to help you recognize areas where improvements can

be made. The book then guides you through a step-by-step method that can be used to take advantage of all available metrics to identify problem areas and work toward improving them. The method presented simplifies the tuning process and solves the problem of metric overload. You will learn how to: collect and normalize data, generate deltas that are useful in performing statistical analysis, create and use a taxonomy to enhance your understanding of problem performance areas in your database and its applications, and create a root cause analysis report that enables understanding of a specific performance problem and its likely solutions. What You'll Learn

- Collect and prepare metrics for analysis from a wide array of sources
- Apply statistical techniques to select relevant metrics
- Create a taxonomy to provide additional insight into problem areas
- Provide a metrics-based root cause analysis regarding the performance issue
- Generate an actionable tuning plan prioritized according to problem areas
- Monitor performance using database-specific normal ranges

Who This Book Is For

Professional tuners: responsible for maintaining the efficient operation of large-scale databases who wish to focus on analysis, who want to expand their repertoire to include a big data methodology and use metrics without being overwhelmed, who desire to provide accurate root cause analysis and avoid the cyclical fix-test cycles that are inevitable when speculation is used

"Offers hundreds of hints, tips, and tricks of the trade that can be useful to any DBA wanting to achieve maximum performance of Oracle applications. No Oracle library would be complete without this book." --Ken (Dr. DBA) Jacobs, Vice President of Product Strategy for Server Technologies, Oracle Corporation

"Rich is the first and last stop for Oracle Database technology and performance tuning. His knowledge is a vital tool that you need to successfully negotiate the waters of Oracle database development." --Mike Frey, Principal Architect, Navteq

Oracle 10g has become the most complex database ever created and Oracle tuning has become increasingly complex. This book provides a complete step-by-step approach for holistic Oracle tuning and it is the accumulated knowledge from tuning thousands of Oracle databases. Incorporating the principles of artificial intelligence, Oracle 10g has developed a sophisticated mechanism for capturing and tracking database performance over time periods. This new complexity has introduced dozens of new v\$ and DBA views, plus dozens of Automatic Workload Repository (AWR) tables. The AWR and its interaction with the Automatic Database Diagnostic Monitor (ADDM) is a revolution in database tuning. By understanding the internal workings of the AWR tables, the senior DBA can develop time-series tuning models to predict upcoming outages and dynamically change the instance to accommodate the impending resource changes. This is not a book for beginners. Targeted at the senior Oracle DBA, this book dives deep into the internals of the v\$ views, the AWR table structures and the new DBA history views. Packed with ready-to-run scripts, you can quickly monitor and identify the most challenging performance issues.

Implement Proven Database Optimization Solutions

Systematically identify and eliminate database performance problems with help from Oracle Certified Master Richard Niemiec. Filled with real-world case studies and best practices, Oracle Database 11g Release 2 Performance Tuning Tips & Techniques details the latest monitoring, troubleshooting, and optimization methods. Find out how to find and fix bottlenecks, configure storage devices, execute effective queries, and develop bug-free SQL and PL/SQL code. Testing, reporting, and security enhancements are also covered in this Oracle Press guide. Properly index and partition Oracle Database 11g Release 2 Work with Oracle Exadata and Oracle Exalogic

Elastic Cloud Efficiently manage disk drives, RAID arrays, and memory Tune queries with Oracle SQL hints and the TRACE utility Troubleshoot databases using V\$ views and X\$ tables Distribute workload using Oracle Real Application Testing Generate reports using Oracle's Statspack and Automatic Workload Repository tools Use sar, vmstat, and iostat to monitor system statistics “This is a timely update of Rich’s classic book on Oracle Database performance tuning to cover hot new topics like Oracle Database 11g Release 2 and Oracle Exadata. This is a must-have for DBAs moving to these new products.” --Andrew Mendelsohn, Senior Vice President, Oracle Database Server Technologies

Oracle SQL Tuning with SQLTXPLAIN is a practical guide to SQL tuning the way Oracle's own experts do it, using a freely downloadable tool called SQLTXPLAIN. Using this simple tool you'll learn how to tune even the most complex SQL, and you'll learn to do it quickly, without the huge learning curve usually associated with tuning as a whole. Firmly based in real world problems, this book helps you reclaim system resources and avoid the most common bottleneck in overall performance, badly tuned SQL. You'll learn how the optimizer works, how to take advantage of its latest features, and when it's better to turn them off. Quickly tune any SQL statement no matter how complex. Build and tune test cases without affecting production. Use the latest tuning features with confidence. This brilliant new book gives readers the lowdown on the most important new features in the latest release of Oracle's flagship database product. Authors Sam Alapati and Charles Kim are experienced database administrators who go beyond regurgitating Oracle's new feature documentation to report on "what's new that really matters." Readers whose careers are bound up in Oracle's database system need to know what's new. Sam and Charles deliver with a rigor and candor that will help readers choose the best of the new features to apply in their own environments.

The Definitive Guide to Oracle Database 11g Get full details on the powerful features of Oracle Database 11g from this thoroughly updated Oracle Press guide. Oracle Database 11g: The Complete Reference explains how to use all the new features and tools, execute powerful SQL queries, construct PL/SQL and SQL*Plus statements, and work with large objects and object-relational databases. Learn how to implement the latest security measures, tune database performance, and deploy grid computing techniques. An invaluable cross-referenced appendix containing Oracle commands, keywords, features, and functions is also included. Install Oracle Database 11g or upgrade from an earlier version Create database tables, sequences, indexes, views, and user accounts Construct SQL statements, procedures, queries, and subqueries Optimize security using virtual private databases and transparent data encryption Import and export data using SQL*Loader and Oracle Data Pump Use SQL replay, change management, and result caching Avoid human errors using flashback and automatic undo management Build and tune PL/SQL triggers, functions, and packages Develop database applications using Java, JDBC, and XML Optimize availability and scalability with Oracle Real Application Clusters Tackling some of the more than 500 updates to Oracle 11g that are intended to automate the inherent complexity of the Oracle engine, this guidebook explores all of the new features from the perspective of a working Oracle professional. This valuable resource examines only the important Oracle 11g enhancements and includes expert discussion about each new feature, why the new feature is important, and how to use the new 11g functionality. Written by working Oracle experts for both current DBAs and Oracle

developers and programmers, this flagship book on Oracle 11g explores language and PL/SQL, DBA features, RAC and enhancements, performance features, new security features, and Enterprise Manager. This book contains the step by step information about the Oracle 11g database Administration. This book is for you if you are familiar with SQL and are looking for a book that effectively explains the concepts of the Oracle 11g database Administration. It gives the core information about administrating the Oracle 11g database using the new and improved Enterprise Manager GUI. The book contains lots of examples and helps you to perform the Oracle 11g administration in an easier way. You will also find information about the Grid Architecture in this book. FOREWORD by Tom Kyte Your Must-Have Guide to Everything New in Oracle Database 11g Realize the full potential of Oracle Database 11g with help from the experts. Written by Robert G. Freeman, and with insightful commentary throughout from Arup Nanda, this Oracle Press guide offers full details on the architectural changes, database administration upgrades, availability and recovery revisions, security enhancements, and programming innovations. Every new and updated feature is covered and presented with screenshots, code samples, tables, and charts. Find out how to take full advantage of all the new and improved capabilities of Oracle Database 11g, including: New Oracle Automatic Storage Management features, such as Fast Disk Resync, Compatibility Attributes, Preferred Mirror Read, and Rolling Upgrade components Improved Automated Memory Management capabilities New database design features, such as virtual columns, tablespace encryption, and true table-level data compression New Database Advisors for data recovery and repair, partitioning, and streams performance New tuning features, such as Automatic SQL Tuning and SQL Performance Analyzer Enhancements to Oracle RMAN, including active database duplication and UNDO backup optimization Improved auditing and security capabilities Advanced BI, data warehousing, and partitioning features New SQL and PL/SQL enhancements The Essential Resource for Oracle DBAs--Fully Updated and Expanded Manage a flexible, highly available Oracle database with help from the expert information contained in this exclusive Oracle Press guide. Fully revised to cover every new feature and utility, Oracle Database 11g DBA Handbook shows how to perform a new installation, upgrade from previous versions, configure hardware and software for maximum efficiency, and employ bulletproof security. You will learn to automate the backup and recovery process, provide transparent failover capability, audit and tune performance, and distribute your enterprise databases with Oracle Net. Plan and deploy permanent, temporary, and bigfile tablespaces Optimize disk allocation, CPU usage, I/O throughput, and SQL queries Develop powerful database management applications Guard against human errors using Oracle Flashback and Oracle Automatic Undo Management Diagnose and tune system performance using Oracle Automatic Workload Repository and SQL Tuning Sets Implement robust security using authentication, authorization, fine-grained auditing, and fine-grained access control Maintain high availability using Oracle Real Application Clusters and Oracle Active Data Guard Respond more efficiently to failure scenarios by leveraging the Oracle Automatic Diagnostic Repository and the Oracle Repair Advisor Back up and restore tables, tablespaces, and databases with Oracle Recovery Manager and Oracle Data Pump Export and Import Work with networked databases, data warehouses, and VLDBs Put the latest Oracle Database 11g tools to work--Oracle Total Recall, Oracle Flashback Data Archive,

and more In this book you will find both examples and theoretical concepts covered. Every recipe is based on a script/procedure explained step-by-step, with screenshots, while theoretical concepts are explained in the context of the recipe, to explain why a solution performs better than another. This book is aimed at software developers, software and data architects, and DBAs who are using or are planning to use the Oracle Database, who have some experience and want to solve performance problems faster and in a rigorous way. If you are an architect who wants to design better applications, a DBA who is keen to dig into the causes of performance issues, or a developer who wants to learn why and where the application is running slow, this is the book for you. Basic knowledge of SQL language is required and general knowledge of the Oracle Database architecture is preferable. This is the definitive guide to all Oracle utilities, and it is targeted at experienced Oracle professionals who need to perform powerful system-wide operating system internal operations on their Oracle databases. The authors approach Oracle Utilities from a functional perspective, adding value by explaining the "why" and "how" for the use of all Oracle Utilities. This comprehensive book includes details on all of the Oracle utilities, including experts-only sections on undocumented utilities, plus the Linux/UNIX utilities, Oracle command-line utilities, and the all-important DBA package utilities. This indispensable book covers all areas of Oracle database administration and includes secrets for database migration (with Data Pump and SQL*Loader) and detailed tips for using The Oracle OS utilities (e.g. BBED, dbv, orastack, orakill). The book also covers Oracle tuning utilities, including ADDM and the SQL tuning advisors as well as the traditional command-line tuning utilities such as dbms_alert and dbms_xplan, tkprof and dbms_debug. This book is special because noted Oracle experts supplement the operational considerations of Oracle utilities with expert insights and working scripts. The time savings from a single utility script is easily worth the price of this definitive book. This book is not for beginners. These are powerful utilities to be used only by experienced DBAs and developers who need to perform powerful system-wide operating system internal operations on their Oracle databases.

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