

Oracle Sql Performance Tuning And Optimization Its All About The Cardinalities

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**Oracle Database 12c
Performance Tuning
Recipes** - Sam Alapati
2013-12-03

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 What you'll

learn Optimize the use of memory and storage Monitor performance and troubleshoot problems Identify and improve poorly-performing SQL statements Adjust the most important optimizer parameters to your advantage Create indexes that get used and make a positive impact upon performance Automate and stabilize using key features such as SQL Tuning Advisor and SQL Plan Baselines Who this book is for Oracle Database 12c Performance Tuning Recipes is aimed squarely at Oracle Database administrators. The book especially appeals to those administrators desiring to have at their side a ready-to-go set of solutions to common database performance problems. Table of Contents Optimizing Table Performance Choosing and Optimizing Indexes Optimizing Instance Memory Monitoring System Performance Minimizing System Contention Analyzing Operating System Performance

Troubleshooting the Database Creating Efficient SQL Manually Tuning SQL Tracing SQL Execution Automated SQL Tuning Execution Plan Optimization and Consistency Configuring the Optimizer Implementing Query Hints Executing SQL in Parallel

Optimizing Oracle Performance - Cary Millsap 2003-09-16

Oracle system performance inefficiencies often go undetected for months or even years--even under intense scrutiny--because traditional Oracle performance analysis methods and tools are fundamentally flawed. They're unreliable and inefficient. Oracle DBAs and developers are all too familiar with the outlay of time and resources, blown budgets, missed deadlines, and marginally effective performance fiddling that is commonplace with traditional methods of Oracle performance tuning. In this crucial

book, Cary Millsap, former VP of Oracle's System Performance Group, clearly and concisely explains how to use Oracle's response time statistics to diagnose and repair performance problems. Cary also shows how "queueing theory" can be applied to response time statistics to predict the impact of upgrades and other system changes. Optimizing Oracle Performance eliminates the time-consuming, trial-and-error guesswork inherent in most conventional approaches to tuning. You can determine exactly where a system's performance problem is, and with equal importance, where it is not, in just a few minutes--even if the problem is several years old. Optimizing Oracle Performance cuts a path through the complexity of current tuning methods, and streamlines an approach that focuses on optimization techniques that any DBA can use quickly and successfully to make

noticeable--even dramatic--improvements. For example, the one thing database users care most about is response time. Naturally, DBAs focus much of their time and effort towards improving response time. But it is entirely too easy to spend hundreds of hours to improve important system metrics such as hit ratios, average latencies, and wait times, only to find users are unable to perceive the difference. And an expensive hardware upgrade may not help either. It doesn't have to be that way. Technological advances have added impact, efficiency, measurability, predictive capacity, reliability, speed, and practicality to the science of Oracle performance optimization. Optimizing Oracle Performance shows you how to slash the frustration and expense associated with unraveling the true root cause of any type of performance problem, and

reliably predict future performance. The price of this essential book will be paid back in hours saved the first time its methods are used.

Expert Oracle RAC Performance Diagnostics and Tuning - Murali

Vallath 2014-10-13
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

MongoDB Performance

Tuning - Guy Harrison
2021-04-19

Use this fast and complete guide to optimize the performance of MongoDB databases and the applications that depend on them. You will be able to turbo-charge the performance of your MongoDB applications to provide a better experience for your users, reduce your running costs, and avoid application growing pains. MongoDB is the world's most popular document database and the foundation for thousands of mission-critical applications. This book helps you get the best possible performance from MongoDB. MongoDB Performance Tuning takes a methodical and comprehensive approach to performance tuning that begins with application and schema design and goes on to cover optimization of code at all levels of an application. The book also explains how to

configure MongoDB hardware and cluster configuration for optimal performance. The systematic approach in the book helps you treat the true causes of performance issues and get the best return on your tuning investment. Even when you're under pressure and don't know where to begin, simply follow the method in this book to set things right and get your MongoDB performance back on track. What You Will Learn Apply a methodical approach to MongoDB performance tuning Understand how to design an efficient MongoDB application Optimize MongoDB document design and indexing strategies Tune MongoDB queries, aggregation pipelines, and transactions Optimize MongoDB server resources: CPU, memory, disk Configure MongoDB Replica sets and Sharded clusters for optimal performance Who This Book Is For Developers and administrators of high-performance MongoDB applications who want to be sure they are getting

the best possible performance from their MongoDB system. For developers who wish to create applications that are fast, scalable, and cost-effective. For administrators who want to optimize their MongoDB server and hardware configuration.

Database Performance Tuning and Optimization

- Sitansu S. Mittra
2006-04-18

Presents an ideal mix of theory and practice, which allows the reader to understand the principle behind the application.; Coverage of performance tuning of datawarehouses offers readers the principles and tools they need to handle large reporting databases.; Material can also be used in a non-Oracle environment; Highly experienced author.

Oracle SQL High-performance Tuning - Guy Harrison 2001

Canada was young during the First World War, and with as many as 20,000 underage soldiers leaving their homes to join the war effort, the

country's army was, too. Jim, at 17, was one of them, and he penned countless letters home. But these weren't the writings of an ordinary boy. They were the letters of a lad who left a small farming community for the city on July 15, 1915, a boy who volunteered to serve with the 79th Queen's Own Cameron Highlanders. Jim's letters home gloss over the horrors of war, focusing instead on issues of the home front: of harvesting, training the horses, and the price of hogs. Rarely do these letters, especially those to his mother and father, mention the mud and rats, the lice and stench of the trenches, or the night duty of cutting barbed wire in no man's land. For 95 years his letters remained in a shoebox decorated by his mother. Jim was just 18 when he was wounded and died during the Battle of the Somme. Hold the Oxo! tells the story that lies between the lines of his letters, filling

in the historical context and helping us to understand what it was like to be Jim.

Mastering Oracle PL/SQL

- Christopher Beck
2008-01-01

If you have mastered the fundamentals of the PL/SQL language and are now looking for an in-depth, practical guide to solving real problems with PL/SQL stored procedures, then this is the book for you.

Troubleshooting Oracle Performance

- Christian Antognini
2008-08-20

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.

Oracle Tuning Power

Scripts - Harry Conway
2005

Targeted at Oracle professionals who need fast and accurate working examples of complex issues, Oracle In-focus books target specific areas of Oracle technology in a concise manner. Plenty of working code is provided without a lot of theory, allowing database managers to solve their problems quickly without reviewing data that they already know. All code scripts are available for instant download from a companion web site.

Oracle PL/SQL Performance Tuning Tips & Techniques - Michael

Rosenblum 2014-08-29

Proven PL/SQL Optimization Solutions In Oracle PL/SQL Performance Tuning Tips & Techniques, Oracle ACE authors with decades of experience building complex production systems for government,

industry, and educational organizations present a hands-on approach to enabling optimal results from PL/SQL. The book begins by describing the discovery process required to pinpoint performance problems and then provides measurable and repeatable test cases. In-depth coverage of linking SQL and PL/SQL is followed by deep dives into essential Oracle Database performance tuning tools. Real-world examples and best practices are included throughout this Oracle Press guide. Follow a request-driven nine-step process to identify and address performance problems in web applications Use performance-related database tools, including data dictionary views, logging, tracing, PL/SQL Hierarchical Profiler, PL/Scope, and RUNSTATS Instrument code to pinpoint performance issues using call stack APIs, error stack APIs, and timing markers Embed

PL/SQL in SQL and manage user-defined functions Embed SQL in PL/SQL using a set-based approach to handle large volumes of data Properly write and deploy data manipulation language triggers to avoid performance problems Work with advanced datatypes, including LOBs and XML Use caching techniques to avoid redundant operations Effectively use dynamic SQL to reduce the amount of code needed and streamline system management Manage version control and ensure that performance fixes are successfully deployed Code examples in the book are available for download.

SQL Performance Tuning - Peter Gulutzan 2003

A very practical guide to making databases run faster and better. A poorly performing database application can cost each user time, and have an impact on other applications running on the same computer or the same network. This book will help DBAUs and programmers improve the

performance of their databases.

SQL Performance

Explained - Markus Winand 2012

Toad for Oracle

Unleashed - Bert Scalzo 2015-06-29

Bert Scalzo and Dan Hotka have written the definitive, up-to-date guide to Version 12.x, Dell's powerful new release of Toad for Oracle. Packed with step-by-step recipes, detailed screen shots, and hands-on exercises, Toad for Oracle Unleashed shows both developers and DBAs how to maximize their productivity. Drawing on their unsurpassed experience running Toad in production Oracle environments, Scalzo and Hotka thoroughly cover every area of Toad's functionality. You'll find practical insights into each of Toad's most useful tools, from App Designer to Doc Generator, ER Diagrammer to Code Road Map. The authors offer proven solutions you can apply immediately to solve a

wide variety of problems, from maintaining code integrity to automating performance and scalability testing. Learn how to... Install and launch Toad, connect to a database, and explore Toad's new features Customize Toad to optimize productivity in your environment Use the Editor Window to execute SQL and PL/SQL, and view, save, or convert data Browse your schema, and create and edit objects Quickly generate useful reports with FastReport and Report Manager Clarify your database's tables and data with the powerful Entity Relationship Diagrammer (ERD) and HTML documentation generator Work more efficiently with PL/SQL using code templates, snippets, and shortcuts Automate actions and applications with Automation Designer Perform key DBA tasks including database health checks, tablespace management, database and schema comparisons, and object

rebuilding Identify and optimize poorlyperforming SQL and applications ON THE WEB: Download all examples and source code presented in this book from informit.com/title/9780134131856 as it becomes available.

IBM Business Process Manager V8.5 Performance Tuning and Best Practices - Mike Collins
2015-02-24

This IBM® Redbooks® publication provides performance tuning tips and best practices for IBM Business Process Manager (IBM BPM) V8.5.5 (all editions) and IBM Business Monitor V8.5.5. These products represent an integrated development and runtime environment based on a key set of service-oriented architecture (SOA) and business process management (BPM) technologies. Such technologies include Service Component Architecture (SCA), Service Data Object (SDO), Business Process Execution Language (BPEL) for web services,

and Business Processing Modeling Notation (BPMN). Both IBM Business Process Manager and Business Monitor build on the core capabilities of the IBM WebSphere® Application Server infrastructure. As a result, Business Process Manager solutions benefit from tuning, configuration, and best practices information for WebSphere Application Server and the corresponding platform Java virtual machines (JVMs). This book targets a wide variety of groups, both within IBM (development, services, technical sales, and others) and customers. For customers who are either considering or are in the early stages of implementing a solution incorporating Business Process Manager and Business Monitor, this document proves a useful reference. The book is useful both in terms of best practices during application development and deployment and as a reference for setup,

tuning, and configuration information. This book talks about many issues that can influence performance of each product and can serve as a guide for making rational first choices in terms of configuration and performance settings. Similarly, customers who already implemented a solution with these products can use the information presented here to gain insight into how their overall integrated solution performance can be improved.

Practical Oracle SQL -

Kim Berg Hansen

2020-02-19

Write powerful queries using as much of the feature-rich Oracle SQL language as possible, progressing beyond the simple queries of basic SQL as standardized in SQL-92. Both standard SQL and Oracle's own extensions to the language have progressed far over the decades in terms of how much you can work with your data in a single, albeit

sometimes complex, SQL statement. If you already know the basics of SQL, this book provides many examples of how to write even more advanced SQL to huge benefit in your applications, such as: Pivoting rows to columns and columns to rows, Recursion in SQL with MODEL and WITH clauses, Answering Top-N questions, Forecasting with linear regressions, Row pattern matching to group or distribute rows, Using MATCH_RECOGNIZE as a row processing engine, The process of starting from simpler statements in SQL, and gradually working those statements stepwise into more complex statements that deliver powerful results, is covered in each example. By trying out the recipes and examples for yourself, you will put together the building blocks into powerful SQL statements that will make your application run circles around your competitors. What You Will Learn Take full advantage of

advanced and modern features in Oracle SQL. Recognize when modern SQL constructs can help create better applications. Improve SQL query building skills through stepwise refinement. Apply set-based thinking to process more data in fewer queries. Make cross-row calculations with analytic functions. Search for patterns across multiple rows using row pattern matching. Break complex calculations into smaller steps with subquery factoring. Who This Book Is For Oracle Database developers who already know some SQL, but rarely use features of the language beyond the SQL-92 standard. And it is for developers who would like to apply the more modern features of Oracle SQL, but don't know where to start. The book also is for those who want to write increasingly complex queries in a stepwise and understandable manner. Experienced developers will use the book to develop more efficient queries using

the advanced features of the Oracle SQL language.
SQL Tuning - Dan Tow
2003-11-19

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.

Performance Tuning with SQL Server Dynamic Management Views - Louis Davidson 2010
Dynamic Management Views (DMVs) are a significant

and valuable addition to the DBA's troubleshooting armory, laying bare previously unavailable information regarding the under-the-covers activity of your database sessions and transactions. Why, then, aren't all DBAs using them? Why do many DBAs continue to ignore them in favour of "tried and trusted" tools such as sp_who2, DBCC OPENTRAN, and so on, or make do with the "ready made" reports built into SSMS? Why do even those that do use the DMVs speak wistfully about "good old sysprocesses"? There seem to be two main factors at work. Firstly, some DBAs are simply unaware of the depth and breadth of the information that is available from the DMVs, or how it might help them troubleshoot common issues. This book investigates all of the DMVs that are most frequently useful to the DBA in investigating query execution, index usage, session and transaction activity, disk IO, and how SQL

Server is using or abusing the operating system. Secondly, the DMVs have a reputation of being difficult to use. In the process of exposing as much useful data as possible, sysprocesses has been de-normalized, and many new views and columns have been added. This fact, coupled with the initially-baffling choices of what columns will be exposed where, has lead to some DBAs to liken querying DMVs to "collecting mystic spells." In fact, however, once you start to write your own scripts, you'll see the same tricks, and similar join patterns, being used time and again. As such, a relatively small core set of scripts can be readily adapted to suit any requirement. This book is here to demystify the process of collecting the information you need to troubleshoot SQL Server problems. It will highlight the core techniques and "patterns" that you need to master, and will

provide a core set of scripts that you can use and adapt for your own systems, including how to:

- * Root out the queries that are causing memory or CPU pressure on your system
- * Investigate caching, and query plan reuse
- * Identify index usage patterns
- * Track fragmentation in clustered indexes and heaps
- * Get full details on blocking and blocked transactions, including the exact commands being executed, and by whom.
- * Find out where SQL Server is spending time waiting for resources to be released, before proceeding
- * Monitor usage and growth of tempdb

The DMVs don't make existing, built-in, performance tools obsolete. On the contrary, they complement these tools, and offer a flexibility, richness and granularity that are simply not available elsewhere. Furthermore, you don't need to master a new GUI, or a new language in order to use them; it's all done in a

language all DBAs know and mostly love: T-SQL.

Oracle SQL Performance Tuning and Optimization
- Kevin Meade 2014-09-16

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 -

Darl Kuhn 2012-03-23

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 *Cost-Based Oracle Fundamentals* - Jonathan Lewis 2006-11-10 Jonathan Lewis is one of the world's foremost authorities in this field (he is frequently quoted and reference by other leading experts, such as Tom Kyte - see

for example
http://asktom.oracle.com/pls/ask/download_file?p_file=306717181350836660
1 Book will be strongly co-promoted with Tom Kyte's Expert Oracle Database Architecture (1-59059-530-0) Highlights traps for those migrating from Oracle 8i to 9i to 10g, potentially averting often disastrous performance issues and downtime (=lost revenue) The first comprehensive book written to investigate, describe, and demonstrate the methods used by the Cost Based Optimizer Jonathan is one of very few Oracle authors to maintain online enhancements, errata and addenda pages, so the reader will be supported long after the book is published

Oracle Database 12c Release 2 Performance Tuning Tips & Techniques
- Richard Niemiec
2017-03-22
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

Oracle Database 10g Performance Tuning Tips & Techniques - Richard Niemiec 2007-07-16

"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

Troubleshooting Oracle Performance - Christian Antognini 2014-06-14

Troubleshooting Oracle Performance, 2nd Edition is your systematic guide to diagnosing and resolving performance problems in database-backed applications involving Oracle's database engine.

Christian Antognini brings a decade and a half experience to his topic. His first edition is one of the most well-respected books in its field. This second edition has been rigorously updated to cover the latest developments in Oracle Database 11g Release 2 through Oracle Database 12c. What do you do when your database application isn't running fast enough? You troubleshoot, of course. Finding the slow part of an application is often the easy part of the battle. It's finding a solution that's difficult.

Troubleshooting Oracle Performance, 2nd Edition helps by providing a systematic approach to

addressing the underlying causes of poor database application performance. The author freely shares his experience while explaining the underlying foundations of how SQL statements are executed by the Oracle database engine. You'll be able to draw a solid foundation of theory and shared experience as you face head-on the performance challenges in your daily work. Written for developers by an application developer who has learned by doing Gives a systematic approach to solving database application performance problems Helps you plan for performance as you would for any other application requirement

ORACLE High-Performance SQL Tuning - DONALD K. BURLESON

Oracle SQL Tuning & CBO Internals - Kimberly Floss 2004-04-28
As Oracle professionals are challenged to create SQL statements that will support thousands of

concurrent executions with sub-second response time, this book's timing is critical as tuning Oracle SQL has become the single most important skill of the Oracle professional. While not appropriate for the beginner, this book allows senior Oracle professionals to explore important internal mechanisms within Oracle and the powerful and complex internals of Oracle SQL execution. Topics include the internals of Oracle cost-based SQL optimizer, SQL execution internals within the library cache, Oracle SQL coding and optimization techniques, and Oracle index internals. Also included is a ready-to-use code depot full of working SQL tuning scripts, which allow for quick optimization of the SQL and indexes inside the Oracle database.

Oracle Wait Interface: A Practical Guide to Performance Diagnostics & Tuning - Richmond Shee 2004-07-16
Troubleshoot, tune, and

optimize your Oracle database efficiently and successfully every time. This book explains how to take full advantage of the revolutionary Oracle Wait Interface to quickly pinpoint--and solve--core problems and bottlenecks, and increase productivity exponentially.

Oracle Performance Survival Guide - Guy Harrison 2009-10-09
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

Effective Oracle by Design - Thomas Kyte
2003-09-12

Tom Kyte of Oracle Magazine's "Ask Tom" column has written the definitive guide to designing and building high-performance, scalable Oracle applications. The book covers schema design, SQL and PL/SQL, tables and indexes, and much more. From the exclusive

publisher of Oracle Press books, this is a must-have resource for all Oracle developers and DBAs.

Oracle SQL and PL/SQL Performance Tuning -

Niraj Gupta 2015-11-17
SQL and PL/SQL Query Tuning and Optimization Tips and Tricks

Expert Oracle SQL - Tony Hasler 2014-07-05

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 SQL Server Query Performance Tuning - Grant Fritchey 2014-09-16 Queries not running fast enough? Wondering about the in-memory database features in 2014? Tired of phone calls from frustrated users? Grant Fritchey's book SQL Server Query Performance Tuning is the answer to your SQL Server query performance problems. The book is revised to cover the very latest in performance optimization features and techniques, especially including the

newly-added, in-memory database features formerly known under the code name Project Hekaton. This book provides the tools you need to approach your queries with performance in mind. SQL Server Query Performance Tuning leads you through understanding the causes of poor performance, how to identify them, and how to fix them. You'll learn to be proactive in establishing performance baselines using tools like Performance Monitor and Extended Events. You'll learn to recognize bottlenecks and defuse them before the phone rings. You'll learn some quick solutions too, but emphasis is on designing for performance and getting it right, and upon heading off trouble before it occurs. Delight your users. Silence that ringing phone. Put the principles and lessons from SQL Server Query Performance Tuning into practice today. Covers the in-memory features from Project Hekaton

Helps establish performance baselines and monitor against them
Guides in troubleshooting and eliminating of bottlenecks that frustrate users
Inside the SQL Server Query Optimizer - Benjamin Nevarez 2011-03
The SQL Server Query Optimizer is perceived by many to be a magic black box, transforming SQL queries into high performance execution plans in the blink of an eye through some unknowable process. The truth is that, while the Query Optimizer is indeed the highly-complex result of decades of research, learning how it works its magic is not only possible, but immensely useful to DBAs and Developers alike. A better understanding of what the Query Optimizer does behind the scenes can help you to improve the performance of your databases and applications, and this book explains the core concepts behind how the SQL Server Query

Optimizer works. With this knowledge, you'll be able to write superior queries, provide the Query Optimizer with all the information it needs to produce efficient execution plans, and troubleshoot the cases when the Query Optimizer is not giving you the best plan possible. With over 15 years of experience in the use of Relational Databases (including SQL Server since version 6.5), Benjamin has watched the SQL Server Query Optimizer grow and evolve. His insight will leave you with an excellent foundation in the practicalities of the Query Optimizer, and everything you need to know to start tuning your queries to perfection.

Oracle Disk I/O Tuning - Mike Ault 2004-04
Covering all aspects of Oracle disk I/O tuning, this book explores disk performance, RAID management, Oracle data file performance, and Oracle data segment internals. Also explored

is physical disk I/O, which includes disk device internals, detecting disk bottlenecks, disk organization techniques, and disk striping and disk load balancing. Highlighted are RAID and Oracle performance as well as techniques for effective use of RAID with Oracle.

Additionally, Oracle data file internals are considered and how to use multiple data block sizes to detect and repair Oracle data segment bottlenecks and segment waits is described. Oracle segment management is illustrated, and the effective use of Oracle segment partitioning, segment slot internals, and monitoring segment I/O is explained.

Oracle Tuning - Alexey B. Danchenkov 2006-02-01
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, Oracle10g 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. Oracle Database 11g Performance Tuning Recipes - Sam Alapati 2011-10-18 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

Oracle 11g New Features

- Brian Carr 2008

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.

Oracle Performance

Tuning - Mark Gurry

1996-11

A complete revision of the original title, this second edition adds new material on Oracle 7.3 and many Oracle 8 features. It explores new Oracle capabilities like parallel server, parallel query, and distributed database. It

contains more detail on constraints and triggers, many more examples, and information on new tuning tools like the Oracle Performance Pack, Oracle Trace, and Oracle Expert.

Oracle PL/SQL

Programming - Steven Feuerstein 2002

The authors have revised and updated this bestseller to include both the Oracle8i and new Oracle9i Internet-savvy database products.

Optimizing Oracle Performance - Cary Millsap 2003-09-16

Oracle system

performance

inefficiencies often go

undetected for months or even years--even under intense scrutiny--

because traditional

Oracle performance

analysis methods and

tools are fundamentally

flawed. They're

unreliable and

inefficient. Oracle DBAs

and developers are all

too familiar with the

outlay of time and

resources, blown

budgets, missed

deadlines, and

marginally effective performance fiddling that is commonplace with traditional methods of Oracle performance tuning. In this crucial book, Cary Millsap, former VP of Oracle's System Performance Group, clearly and concisely explains how to use Oracle's response time statistics to diagnose and repair performance problems. Cary also shows how queueing theory can be applied to response time statistics to predict the impact of upgrades and other system changes. Optimizing Oracle Performance eliminates the time-consuming, trial-and-error guesswork inherent in most conventional approaches to tuning. You can determine exactly where a system's performance problem is, and with equal importance, where it is not, in just a few minutes--even if the problem is several years old. Optimizing Oracle Performance cuts a path through the complexity of current tuning

methods, and streamlines an approach that focuses on optimization techniques that any DBA can use quickly and successfully to make noticeable--even dramatic--improvements. For example, the one thing database users care most about is response time. Naturally, DBAs focus much of their time and effort towards improving response time. But it is entirely too easy to spend hundreds of hours to improve important system metrics such as hit ratios, average latencies, and wait times, only to find users are unable to perceive the difference. And an expensive hardware upgrade may not help either. It doesn't have to be that way. Technological advances have added impact,

efficiency, measurability, predictive capacity, reliability, speed, and practicality to the science of Oracle performance optimization. Optimizing Oracle Performance shows you how to slash the frustration and expense associated with unraveling the true root cause of any type of performance problem, and reliably predict future performance. The price of this essential book will be paid back in hours saved the first time its methods are used.

Java Performance Tuning

- Jack Shirazi

2003-01-21

Helps readers eliminate performance problems, covering topics including bottlenecks, profiling tools, strings, algorithms, distributed systems, and servlets.