

Sql Server Tuning Scripts Performance Optimization Secrets It In Focus

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 led 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 de-mystify 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.

Take a deep dive into perhaps the single most important facet of good performance: indexes, and how to best use them. Recent updates to SQL Server have made it possible to create indexes in situations that in the past would have prevented their use. Other improvements covered in this book include new dynamic management views, the ability to pause and resume index maintenance, and the ability to more easily recover from failures during index creation and maintenance operations. This new edition also brings new content around the indexing of columnstore and in-memory tables, showing how these new types of tables and the queries that execute against them can also benefit from good indexing practices. The book begins with explanations of the types of indexes and how they are stored in databases. Moving deeper into the topic, and further into the book, you will look at the statistics

that are accumulated both by indexes and on indexes. You will better understand what indexes are doing in the database and what can be done to mitigate and improve their effect on performance. You will get a look at the Index Advisor now available in Azure SQL Database, and learn how to review and maintain the health of your indexes. The final chapters present a guided tour through a number of scenarios showing approaches you can take to investigate, mitigate, and improve the performance of your database. What You Will Learn Properly index row store, columnstore, and in-memory tables Review statistics to understand indexing choices made by the optimizer Apply indexing strategies such as covering indexes, included columns, and index intersections Recognize and remove unnecessary indexes Design effective indexes for full-text, spatial, and XML data types Manage the big picture: Encompass all indexes in a database, and all database instances on a server Who This Book Is For Database administrators and developers who are ready to lift the performance of their database environment by thoughtfully building indexes to speed up queries that matter the most and make a difference to the business

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.

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

This book is a deep dive into perhaps the single-most important facet of good performance: indexes, and how to best use them. The book begins in the shallow waters with explanations of the types of indexes and how they are stored in databases. Moving deeper into the topic, and further into the book, you will look at the statistics that are accumulated both by indexes and on indexes. You'll better understand what indexes are doing in the database and what can be done to mitigate and improve their effect on performance. The final destination is a guided tour through a number of real life scenarios showing approaches you can take to investigate, mitigate, and improve the performance of your database. Defines the types of indexes and their implementation options Provides use cases and common patterns in applying indexing Describes and explain the index metadata and statistics Provides a framework of strategies and approaches for indexing databases

* Gives a fresh perspective in a stale market segment: "How to be a good SQL Server DBA", rather than "This is SQL Server, this is feature A, here is an example of feature A". * Only book on the market to provide complete coverage of the core jobs and roles involved in SQL Server DBA. Therefore, has broad, general appeal to novices who are browsing shelves, and looking for a book that makes sense of SQL Server entirely. * Written by an expert DBA who lets the reader know exactly what the essential aspects of a DBAs job are, the sort of issues that novices commonly run into and provides effective solutions and troubleshooting tips for all of the most common problems.

Queries not running fast enough? Tired of the phone calls from frustrated users? Grant Fritchey's book SQL Server 2012 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. It is current with SQL Server 2012. It provides the tools you need to approach your queries with performance in mind. SQL Server 2012 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 2012 Query Performance Tuning into practice today. Establish performance baselines and monitor against them Troubleshoot and eliminate bottlenecks that frustrate users Plan ahead to achieve the right level of performance

Design and configure SQL Server instances and databases in support of high-throughput applications that are mission-critical and

provide consistent response times in the face of variations in user numbers and query volumes. Learn to configure SQL Server and design your databases to support a given instance and workload. You'll learn advanced configuration options, in-memory technologies, storage and disk configuration, and more, all toward enabling your desired application performance and throughput. Configuration doesn't stop with implementation. Workloads change over time, and other impediments can arise to thwart desired performance. High Performance SQL Server covers monitoring and troubleshooting to aid in detecting and fixing production performance problems and minimizing application outages. You'll learn a variety of tools, ranging from the traditional wait analysis methodology to the new query store, and you'll learn how improving performance is really an iterative process. High Performance SQL Server is based on SQL Server 2016, although most of its content can be applied to prior versions of the product. This book is an excellent complement to performance tuning books focusing on SQL queries, and provides the other half of what you need to know by focusing on configuring the instances on which mission-critical queries are executed. Covers SQL Server instance-configuration for optimal performance Helps in implementing SQL Server in-memory technologies Provides guidance toward monitoring and ongoing diagnostics What You Will Learn Understand SQL Server's database engine and how it processes queries Configure instances in support of high-throughput applications Provide consistent response times to varying user numbers and query volumes Design databases for high-throughput applications with focus on performance Record performance baselines and monitor SQL Server instances against them Troubleshoot and fix performance problems Who This Book Is For SQL Server database administrators, developers, and data architects. The book is also of use to system administrators who are managing and are responsible for the physical servers on which SQL Server instances are run.

If you're a SQL Server DBA who wants to get proactive and organized with performance monitoring and tuning, then this book is for you. Written by a widely read DBA and SQL Server internals expert, Robin Schumacher offers real-world advice, an easy to follow performance strategy, and lots of SQL diagnostics scripts in a superb book that shows how to quickly diagnose and optimize SQL Server performance problems. Robin Schumacher has written the internals for some of the world's most powerful SQL Server performance software, and now he shows you how to make your database servers run as fast as possible.

Effectively query and modify data using Transact-SQL Master T-SQL fundamentals and write robust code for Microsoft SQL Server and Azure SQL Database. Itzik Ben-Gan explains key T-SQL concepts and helps you apply your knowledge with hands-on exercises. The book first introduces T-SQL's roots and underlying logic. Next, it walks you through core topics such as single-table queries, joins, subqueries, table expressions, and set operators. Then the book covers more-advanced data-query topics such as window functions, pivoting, and grouping sets. The book also explains how to modify data, work with temporal tables, and handle transactions, and provides an overview of programmable objects. Microsoft Data Platform MVP Itzik Ben-Gan shows you how to: Review core SQL concepts and its mathematical roots Create

tables and enforce data integrity Perform effective single-table queries by using the SELECT statement Query multiple tables by using joins, subqueries, table expressions, and set operators Use advanced query techniques such as window functions, pivoting, and grouping sets Insert, update, delete, and merge data Use transactions in a concurrent environment Get started with programmable objects—from variables and batches to user-defined functions, stored procedures, triggers, and dynamic SQL

Every action in SQL Server - queries, updates, whatever - leaves a set of tiny footprints; SQL Server records all that valuable data and makes it visible through Dynamic Management Views, or DMVs. A DBA or developer can use this incredibly detailed information to significantly improve the performance of queries and better understand what's really going on inside a SQL Server system SQL Server DMVs in Action is a practical guide that shows how to obtain, interpret, and act on the information captured by DMVs to keep SQL Server in top shape. The 100+ samples provided in this book will help readers master DMVs and also give them a tested, working, and instantly reusable SQL code library. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

Buy the print version of Microsoft SQL Server 2012 Unleashed and get the eBook version for free! eBook version includes chapters 44-60 not included in the print. See inside the book for access code and details. With up-to-the-minute content, this is the industry's most complete, useful guide to SQL Server 2012. You'll find start-to-finish coverage of SQL Server's core database server and management capabilities: all the real-world information, tips, guidelines, and samples you'll need to create and manage complex database solutions. The additional online chapters add extensive coverage of SQL Server Integration Services, Reporting Services, Analysis Services, T-SQL programming, .NET Framework integration, and much more. Authored by four expert SQL Server administrators, designers, developers, architects, and consultants, this book reflects immense experience with SQL Server in production environments. Intended for intermediate-to-advanced-level SQL Server professionals, it focuses on the product's most complex and powerful capabilities, and its newest tools and features. Understand SQL Server 2012's newest features, licensing changes, and capabilities of each edition Manage SQL Server 2012 more effectively with SQL Server Management Studio, the SQLCMD command-line query tool, and Powershell Use Policy-Based Management to centrally configure and operate SQL Server Utilize the new Extended Events trace capabilities within SSMS Maximize performance by optimizing design, queries, analysis, and workload management Implement new best practices for SQL Server high availability Deploy AlwaysOn Availability Groups and Failover Cluster Instances to achieve enterprise-class availability and disaster recovery Leverage new business intelligence improvements, including Master Data Services,

Data Quality Services and Parallel Data Warehouse Deliver better full-text search with SQL Server 2012's new Semantic Search Improve reporting with new SQL Server 2012 Reporting Services features Download the following from informit.com/title/9780672336928: Sample databases and code examples

SQL Server Tuning Scripts: Performance Optimization Secrets Rampant Techpress

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.

Beginning SQL Server 2008 Administration is essential for anyone wishing to learn about implementing and managing SQL Server 2008 database. From college students, to experienced database administrators from other platforms, to those already familiar with SQL Server and wanting to fill in some gaps of knowledge, this book will bring all readers up to speed on the enterprise platform Microsoft SQL Server 2008. Clearly describes relational database concepts Explains the SQL Server database engine and supporting tools Shows various database maintenance scenarios

SQL Server 2008 Query Performance Tuning Distilled presents a direct trouble-shooting methodology for identifying poorly-performing stored procedures and queries, isolating the causes of that poor performance, and fixing the underlying problems. Each chapter is dedicated to one of the top causes of poorly performing queries and shows methods for identifying and dealing with the problems in that chapter's domain. Emphasis is always put upon or placed upon practical methods that you can put to immediate use in your day-to-day work. SQL Server 2008 functionality, tips, and tricks are emphasized in each subject area. Emphasizes the practical. Does not bury readers in theory. Gives readers practical techniques to immediately apply in their daily work. Dedicates a chapter to each of the most common, performance-related problem areas.

Execution plans show you what's going on behind the scenes in SQL Server. They can provide you with a wealth of information on how your queries are being executed by SQL Server, including: Which indexes are being used, and where no indexes are being used at all. How the data is being retrieved, and joined, from the tables defined in your query. How aggregations in GROUP BY queries are put together. The anticipated load and the estimated cost that all these operations place upon the system. Grant Fritchey's book is the only in-depth look at how

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to improve your SQL query performance through careful design of execution plans. Sample chapters of the ebook have garnered stunning reviews, such as: "All I can say is WOW. This has to be the best reference I have ever seen on Execution Plans in SQL Server. My hats off to Grant Fritchey" Jonathan Kehayias.

"Congratulations! You are going to WIN your next SQL Server interview. "SQL The One" book can guide you to achieve the success in your next interview. This book covers Microsoft SQL Server interview experiences, questions and answers for a range of SQL DBA's and SQL Server Professionals. All of these questions have been collected from the people who attended interviews at various multinational companies across the world. It also covers "How to prepare for a SQL DBA interview?" and "How to become an expert in your career?" Salient Features of Book All interview questions are asked in various MNC Covers 1090 real time questions and answers 254 questions on SQL Server Performance Tuning Covers all SQL Server HA & DR features 316 questions on SQL Server HA & DR features Lots of scenario based questions Covers SQL Server 2005, 2008, 2008 R2, 2012, 2014 and 2016 Questions are categorized In-depth explanations An Interview Experience with Microsoft Useful as a reference guide for SQL DBA Interview preparation

For the first time, SQL Server 2005 provides features that can support large-scale enterprise databases. With this powerful new release, you may find yourself being called upon to perform duties that are no longer strictly "administrative," duties that have become much more complicated and difficult. With that in mind, a team of experienced Microsoft Certified Professionals provides you with the necessary information to be a more competent and successful database developer or administrator. Beginning with a foundation that features detailed coverage of typical administrative duties, the authors proceed to explain how to build complex data transformations for data import, build distributed data solutions, and maintain the security and integrity of the database. You will be able to apply what you learn to real-world scenarios, and smoothly navigate the vastly changed landscape of SQL Server 2005 administration. What you will learn from this book How to install, maintain, and manage an SQL Server 2005 installation, including high availability and security considerations Various features such as the Common Language Runtime, SQL Server Integration Services, Notification Service, and the Service Broker How to use the tools that are necessary to manage configuration, backups, restores, security, availability, performance, and monitoring A sampling of some of the more advanced areas and complex jobs of the broadening role of a database administrator in the enterprise Who this book is for This book is for both developers and administrators who are responsible for the management and maintenance of an SQL Server 2005 database. Familiarity with relational database concepts and SQL is assumed. Wrox Beginning guides are crafted to make learning programming languages and technologies easier than you think, providing a structured, tutorial format that will guide you through all the techniques involved. Enhance Your Knowledge Advance Your Career

This book provides a comprehensive overview on best practices for troubleshooting and performance tuning in SQL Server. It reviews how to identify performance issues, how to troubleshoot the system in a holistic fashion, and how to properly prioritize tuning efforts in order to induce the best system performance possible. The book also discusses interdependencies between database components, while spotlighting ways to avoid the bottlenecks that can be triggered by those dependencies. The troubleshooting and performance tuning techniques presented in the book are compatible with any version of SQL Server. They cover both on-premise and Cloud-based SQL Server installations, including Microsoft Azure SQL Databases and Amazon SQL Server RDS. Reflecting the approaches used by many high-end SQL Server consultants, SQL Server Advanced Troubleshooting and Performance Tuning is a valuable resource that will help readers master troubleshooting and performance tuning skills and get the best performance out of SQL Server.

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If a query is performing poorly, and you can't understand why, then that query's execution plan will tell you not only what data set is coming back, but also what SQL Server did, and in what order, to get that data. It will reveal how the data was retrieved, and from which tables and indexes, what types of joins were used, at what point filtering, sorting and aggregation occurred, and a whole lot more. These details will often highlight the likely source of any problem. I wrote this book with the singular goal of teaching you how to read SQL Server Execution plans It will explain, among many other things, the following: How to capture execution plans using manual and automatic methods A documented method for reading and interpreting execution plans How common SQL Server objects, such as indexes, views, stored procedures, and so on, appear in execution plans How to control execution plans with hints and plan guides, and why this is a double-edged sword How the Query Store works with, and collects data on, execution plans With this knowledge, you'll have everything you need to read the execution plan, for any query of your own, regardless of complexity, and understand what it does and what is causing the bad performance. It is still your job to work out how best to fix it, but your new understanding of execution plans will give a much better chance of success!

This is not an ordinary SQL Server Book. SQL Server MVP Deep Dives brings together the world's most highly-regarded SQL Server experts to create a masterful collection of tips, techniques, and experience-driven best practices for SQL Server development and administration. These SQL Server MVPs-53 in all-each selected a topic of great interest to them, and in this unique book, they share their knowledge and passion with you. SQL Server MVP Deep Dives is organized into five parts: Design and Architecture, Development, Administration, Performance Tuning and Optimization, and Business Intelligence. Within each part, you'll find a collection of brilliantly concise and focused chapters that take on key topics like mobile data strategies, Dynamic Management Views, or query performance. The range of subjects covered is comprehensive, from database design tips to data profiling strategies for BI. Additionally, the authors of this book have generously donated 100% of their royalties to support War Child International. War Child International is a network of independent organizations, working across the world to help children affected by war. War Child was founded upon a fundamental goal: to advance the cause of peace through investing hope in the lives of children caught up in the horrors of war. War Child works in many different conflict areas around the world, helping hundreds of thousands of children every year. Visit www.warchild.org for more information. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book.

This book explains how to use this versatile tool to capture, analyze, and report on your database as well as how to monitor, tune, and optimize system performance. Get complete coverage of STATSPACK with this official guide -- includes ready-to-use STATSPACK scripts to collect and analyze system data and achieve peak performance.

Pro SQL Server Internals explains how different SQL Server components work "under the hood" and how they communicate with each other. This is the practical book with a large number of examples that will show you how various design and implementation decisions affect the behavior and performance of your systems. Pro SQL Server Internals covers a multiple SQL Server versions starting with SQL Server 2005 all the way up to the recently released SQL Server 2014. You'll learn about new SQL Server 2014 features including the new Cardinality Estimator, In-Memory OLTP Engine (codename Hekaton), and Clustered Columnstore Indexes. With Pro SQL Server Internals, you have a solid roadmap for understanding the depth and power of the SQL Server database backend, regardless of the version and edition of SQL Server you use. Pro SQL Server Internals does the following: Explains how to design efficient database schema, indexing, and transaction strategies. Shows how various database objects and technologies are implemented internally and when they should or should not be used. Demonstrates how SQL Server executes queries and works with data and transaction logs.

MCSA GUIDE TO MICROSOFT SQL SERVER 2012 (Exam #70-462) provides a thorough introduction to essential database administration principles and practices to prepare readers for certification and career success. Ideal for formal courses, self-study, or professional reference, this detailed text employs a lab-based approach to help users develop the core knowledge and practical skills they need to master Microsoft SQL Server administration in an enterprise environment and pass Microsoft Certified Solutions Associate Exam 70-462. The text opens with information on the latest version of Microsoft SQL Server, offering step-by-step guidance on selecting an edition and completing initial installation and configuration. Several chapters then explore key topics such as database programming, security, performance tuning, backup and recovery, data integration, and system monitoring. Within each chapter, numerous resources and features reinforce teaching and learning, including learning objectives, summaries of key ideas, hands-on activities, discussion questions, definitions of important terms, and case studies to provide real-world context. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

T-SQL insiders help you tackle your toughest queries and query-tuning problems Squeeze maximum performance and efficiency from every T-SQL query you write or tune. Four leading experts take an in-depth look at T-SQL's internal architecture and offer advanced practical techniques for optimizing response time and resource usage. Emphasizing a correct understanding of the language and its foundations, the authors present unique solutions they have spent years developing and refining. All code and techniques are fully updated to reflect new T-SQL enhancements in Microsoft SQL Server 2014 and SQL Server 2012. Write faster, more efficient T-SQL code: Move from procedural programming to the language of sets and logic Master an efficient top-down tuning methodology Assess algorithmic complexity to predict performance Compare data aggregation techniques, including new grouping sets Efficiently perform data-analysis calculations Make the most of T-SQL's optimized bulk import tools Avoid date/time pitfalls that lead to buggy, poorly performing code Create optimized BI statistical queries without additional software Use programmable objects to accelerate queries Unlock major performance improvements with In-Memory OLTP Master useful and elegant approaches to manipulating graphs About This Book For experienced T-SQL practitioners Includes coverage updated from Inside Microsoft SQL Server 2008 T-SQL Querying and Inside Microsoft SQL Server 2008 T-SQL Programming Valuable to developers, DBAs, BI professionals, and data scientists Covers many MCSE 70-464 and MCSA/MCSE 70-461 exam topics For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT media network.

This is the industry's most comprehensive and useful guide to SQL Server 2008 and 2008 R2. It presents start-to-finish coverage of SQL Server's core database server and management capabilities, plus complete introductions to Integration, Reporting, and Analysis Services, application development, and much more. Four expert SQL Server administrators, developers, and consultants have packed this book with real-world information, tips, guidelines, and samples drawn from their own extensive experience

creating and managing complex database solutions. Writing for intermediate-to-advanced-level SQL Server professionals, they focus on the product's most complex and powerful capabilities, and its newest tools and features. For example, you'll find invaluable information on administering SQL Server more efficiently, analyzing and optimizing queries, implementing data warehouses, ensuring high availability, and tuning performance. The accompanying CD-ROM contains an extraordinary library of practical tools and information including sample databases and all code examples. Whether you're responsible for SQL Server 2008 analysis, design, implementation, support, administration, or troubleshooting, no other book offers you this much value. Understand the Microsoft SQL Server 2008 environment, R2's newest features, and each edition's capabilities Manage SQL Server 2008 more effectively with SQL Server Management Studio, the SQLCMD command-line query tool, and Powershell Efficiently manage security, users, backup/restore, replication, Database Mail, and database objects—from tables and indexes to stored procedures and triggers Increase availability with clustering, database mirroring, and other features Use new Policy-Based Management to centrally configure and operate SQL Server throughout the organization Use SQL Server Profiler to capture queries and identify bottlenecks Improve performance by optimizing queries, design more effective databases, and manage workloads with the new Resource Governor Develop applications using SQL Server 2008's enhancements to T-SQL and SQLCLR, .NET integration, LINQ to SQL, XML, and XQuery Make the most of Analysis Services, Integration Services, and Reporting Services—especially Microsoft's new R2 reporting improvements Improve data security using Column-level and Transparent Data Encryption CD-ROM includes: 15 additional chapters Code samples, scripts, and databases utilized within the book Free version of SQL Shot (performance & tuning software)

Donald Knuth is Professor Emeritus of the Art of Computer Programming at Stanford University, and is well-known worldwide as the creator of the Tex typesetting language. Here he presents the third volume of his guide to computer programming.

Database professionals will find that this new edition aids in mastering the latest version of Microsoft's SQL Server. Developers and database administrators (DBAs) use SQL on a daily basis in application development and the subsequent problem solving and fine tuning. Answers to SQL issues can be quickly located helping the DBA or developer optimize and tune a database to maximum efficiency. Basic questions are easily located on the topics of filtering, sorting, operators, conditionals, pseudo columns, single row functions, joins, grouping functions, sub queries, composite queries, hierarchies, flashback queries, parallel queries, expressions and regular expressions. Assistance on DML, data types (including collections), XML, DDL for basic database objects such as tables, views and indexes, partitioning, and security is also considered. * Identifies and discusses the most common issues database administrators (DBAs) face day-to-day *Provides DBAs with solutions actually used by the authors in enterprise environments *Explores new features which add more control but reduce performance

A guide to performance tuning with SQL Server 2005 describes how to discover bottlenecks, identify and remove problems that are causing poor performance, avoid performance problems through preventative measures, and ways to achieve better performance.

A guide to troubleshooting and correcting SQL Server performance problems, this book provides a methodology for use in analyzing any SQL Server database. The most recent advances in SQL Server 8i and 9i are covered to make a SQL Server database run as fast as possible. Properly using ratio-based and bottleneck analysis, designing a fast-running database from the ground up, and establishing methods for making storage and reorganization problems a thing of the past are demonstrated. Also presented are new techniques for monitoring and optimizing memory usage and improved methods for uncovering session-related bottlenecks.

If you're a SQL Server DBA who wants to get proactive and organized with performance monitoring and tuning, then you've come to the right place. Written by one of the world's top DBAs and SQL Server internals experts, Robin Schumacher offers real-world advice, an easy-to-follow performance strategy, and lots of SQL diagnostics scripts in a superb book that shows how to quickly diagnose and optimize SQL Server performance problems. As a Vice President at Embarcadero Technologies, Robin Schumacher has written the internals for some of the world's most powerful SQL Server performance software, and now he shows you how to use the most recent advancements in SQL Server 2005, as well as SQL Server 7 and 2000, to make your database servers run as fast as possible.

This book describes, diagnoses, and solves the most common problems with SQL Server 2005, 2008, and 2008 R2. The authors explain a basic approach to troubleshooting and the essential tools. They explore areas in which problems arise with regularity: high disk I/O (RAID misconfiguration, inadequate I/O throughput, poor workload distribution, SAN issues, disk partition misalignment); high CPU usage (insufficient memory, poorly written queries, inadequate indexing, inappropriate configuration option settings); memory mismanagement; missing indexes; blocking (caused mainly by poorly designed databases that lack proper keys and indexing, and applications that apply needlessly restrictive transaction isolation levels); deadlocking (Bookmark Lookup, Serializable Range Scan, Cascading Constraint); full transaction logs (lack of log backups, hefty index maintenance operations, long running transaction, problems with replication and mirroring environments); and accidentally-lost data. Finally, the authors discuss diagnosing tools such as the Performance Monitor, Dynamic Management Views, and server-side tracing. -- Provides information on how to quickly troubleshoot Oracle performance problems, covering such topics as designing databases, storage and reorganization, memory usage, and SQL.

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.

Shows database administrators how to optimize and tune applications running on MS SQL Server 7. The book shows the network administrator and database administrator within a large company to ensure their systems are working as best they can.

Pro SQL Server 2012 Practices is an anthology of high-end wisdom from a group of accomplished database administrators who are quietly but relentlessly pushing the performance and feature envelope of Microsoft SQL Server 2012. With an emphasis upon performance—but also branching into release management, auditing, and other issues—the book helps you deliver the most value for your company's investment in Microsoft's flagship database system. Goes beyond the manual to cover good techniques and best practices Delivers knowledge usually gained only by hard experience Focuses upon performance, scalability, reliability Helps achieve the predictability needed to be in control at all times

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

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