# *Professional Sql Server 2008 Internals And Troubleshooting*

**Hands-on troubleshooting methods on the most recent release of SQL Server The 2012 release of SQL Server is the most significant one since 2005 and introduces an abundance of new features. This critical book provides in-depth coverage of best practices for troubleshooting performance problems based on a solid understanding of both SQL Server and Windows internals and shows experienced DBAs how to ensure reliable performance. The team of authors shows you how to master the use of specific troubleshooting tools and how to interpret their output so you can quickly identify and resolve any performance issue on any server running SQL Server. Covers the core technical topics required to understand how SQL Server and Windows should be working Shares best practices so that you know how to proactively monitor and avoid problems Shows how to use tools to quickly gather, analyze, and effectively respond to the source of a system-wide performance issue Professional SQL Server 2012 Internals and Troubleshooting helps you to quickly become familiar with the changes of this new release so that you can best handle database performance and troubleshooting.**
**Gain a solid understanding of T-SQL—and write better queries Master the fundamentals of Transact-SQL—and develop your own code for querying and modifying data in Microsoft SQL Server 2012. Led by a SQL Server expert, you'll learn the concepts behind T-SQL querying and programming, and then apply your knowledge with exercises in each chapter. Once you understand the logic behind T-SQL, you'll quickly learn how to write effective code—whether you're a programmer or database**

**administrator. Discover how to: Work with programming practices unique to T-SQL Create database tables and define data integrity Query multiple tables using joins and subqueries Simplify code and improve maintainability with table expressions Implement insert, update, delete, and merge data modification strategies Tackle advanced techniques such as window functions, pivoting and grouping sets Control data consistency using isolation levels, and mitigate deadlocks and blocking Take T-SQL to the next level with programmable objects**

**Beginning T-SQL is a performance-oriented introduction to the T-SQL language underlying the Microsoft SQL Server database engine. T-SQL is essential in writing SQL statements to get data into and out of a database. T-SQL is the foundation for business logic embedded in the database in the form of stored procedures and functions. Beginning T-SQL starts you on the path to mastering T-SQL, with an emphasis on best-practices and sound coding techniques leading to excellent performance. This new edition is updated to cover the essential features of T-SQL found in SQL Server 2014, 2012, and 2008. Beginning T-SQL begins with an introduction to databases, normalization, and to SQL Server Management Studio. Attention is given to Azure SQL Database and how to connect to remote databases in the cloud. Each subsequent chapter teaches an aspect of T-SQL, building on the skills learned in previous chapters. Exercises in most chapters provide an opportunity for the hands-on practice that leads to true learning and distinguishes the competent professional. Important techniques such as windowing functions are covered to help write fast executing queries that solve real business problems. A stand-out feature in this book is that most chapters end with a "Thinking About Performance" section. These sections cover aspects of query performance relative to the content just presented. They'll help you avoid beginner mistakes by knowing about and thinking about**

**performance from Day 1. Imparts best practices for writing T-SQL Helps you avoid common errors Shows how to write scalable code for good performance**

**Improve your ability to develop, manage, and troubleshoot SQL Server solutions by learning how different components work "under the hood," and how they communicate with each other. The detailed knowledge helps in implementing and maintaining high-throughput databases critical to your business and its customers. You'll learn how to identify the root cause of each problem and understand how different design and implementation decisions affect performance of your systems. New in this second edition is coverage of SQL Server 2016 Internals, including In-Memory OLTP, columnstore enhancements, Operational Analytics support, Query Store, JSON, temporal tables, stretch databases, security features, and other improvements in the new SQL Server version. The knowledge also can be applied to Microsoft Azure SQL Databases that share the same code with SQL Server 2016. Pro SQL Server Internals is a book for developers and database administrators, and it covers multiple SQL Server versions starting with SQL Server 2005 and going all the way up to the recently released SQL Server 2016. The book provides a solid road map for understanding the depth and power of the SQL Server database server and teaches how to get the most from the platform and keep your databases running at the level needed to support your business. The book: • Provides detailed knowledge of new SQL Server 2016 features and enhancements • Includes revamped coverage of columnstore indexes and In-Memory OLTP • Covers 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 log What You Will Learn Design and develop database solutions with SQL Server.**

**Troubleshoot design, concurrency, and performance issues. Choose the right database objects and technologies for the job. Reduce costs and improve availability and manageability. Design disaster recovery and high-availability strategies. Improve performance of OLTP and data warehouse systems through in-memory OLTP and Columnstore indexes. Who This Book Is For Developers and database administrators who want to design, develop, and maintain systems in a way that gets the most from SQL Server. This book is an excellent choice for people who prefer to understand and fix the root cause of a problem rather than applying a 'band aid' to it.**
**Microsoft SQL Server 2005 Integration Services**
**Programming Microsoft SQL Server 2012**
**Professional SQL Server 2008 Internals and Troubleshooting**
**Professional Microsoft SQL Server 2014 Integration Services**
**Learn SQL Server Administration in a Month of Lunches**
Teach yourself the Multidimensional Expressions (MDX) query language—one step at a time. With this practical, learn-by-doing tutorial, you'll build the core techniques for using MDX with Analysis Services to deliver high-performance business intelligence solutions. Discover how to: Construct and execute MDX queries Work with tuples, sets, and expressions Build complex sets to retrieve the exact data users need Perform aggregation functions and navigate data hierarchies Assemble time-based business metrics Customize an Analysis Services cube through the MDX script Implement dynamic security to control data access Develop MDX-driven reports in SQL Server Reporting Services CD features: Practice exercises Database and code

samples Fully searchable eBook
Get the end-to-end instruction you need to design,
develop, and deploy more effective data integration,
reporting, and analysis solutions using SQL Server
2008—whether you're new to business intelligence
(BI) programming or a seasoned pro. With real-world
examples and insights from an expert team, you'll
master the concepts, tools, and techniques for
building solutions that deliver intelligence—and
business value—exactly where users want it.
Discover how to: Manage the development life cycle
and build a BI team Dig into SQL Server Analysis
Services, Integration Services, and Reporting
Services Navigate the Business Intelligence
Development Studio (BIDS) Write queries that rank,
sort, and drill down on sales data Develop extract,
transform, and load (ETL) solutions Add a source
code control system Help secure packages for
deployment via encryption and credentials Use MDX
and DMX Query Designers to build reports based on
OLAP cubes and data mining models Create and
implement custom objects using .NET code View
reports in Microsoft Office Excel and Office
SharePoint Serverook
Explore the impressive storage and analytic tools
available with the in-cloud and on-premises versions
of Microsoft SQL Server 2019. Key FeaturesGain
insights into what's new in SQL Server
2019Understand use cases and customer scenarios

that can be implemented with SQL Server 2019Discover new cross-platform tools that simplify management and analysisBook Description Microsoft SQL Server comes equipped with industry-leading features and the best online transaction processing capabilities. If you are looking to work with data processing and management, getting up to speed with Microsoft Server 2019 is key. Introducing SQL Server 2019 takes you through the latest features in SQL Server 2019 and their importance. You will learn to unlock faster querying speeds and understand how to leverage the new and improved security features to build robust data management solutions. Further chapters will assist you with integrating, managing, and analyzing all data, including relational, NoSQL, and unstructured big data using SQL Server 2019. Dedicated sections in the book will also demonstrate how you can use SQL Server 2019 to leverage data processing platforms, such as Apache Hadoop and Spark, and containerization technologies like Docker and Kubernetes to control your data and efficiently monitor it. By the end of this book, you'll be well versed with all the features of Microsoft SQL Server 2019 and understand how to use them confidently to build robust data management solutions. What you will learnBuild a custom container image with a DockerfileDeploy and run the SQL Server 2019 container imageUnderstand how to use SQL server

on LinuxMigrate existing paginated reports to Power BI Report ServerLearn to query Hadoop Distributed File System (HDFS) data using Azure Data StudioUnderstand the benefits of In-Memory OLTPWho this book is for This book is for database administrators, architects, big data engineers, or anyone who has experience with SQL Server and wants to explore and implement the new features in SQL Server 2019. Basic working knowledge of SQL Server and relational database management system (RDBMS) is required.

Teach yourself to use SQL Server 2008 Analysis Services for business intelligence—one step at a time. You'll start by building your understanding of the business intelligence platform enabled by SQL Server and the Microsoft Office System, highlighting the role of Analysis Services. Then, you'll create a simple multidimensional OLAP cube and progressively add features to help improve, secure, deploy, and maintain an Analysis Services database. You'll explore core Analysis Services 2008 features and capabilities, including dimension, cube, and aggregation design wizards; a new attribute relationship designer; designer AMO warnings; and using dynamic management views to monitor resources. And as you complete each lesson, you can hone your skills using the practice exercises from the companion CD. Plus, you can review and download code samples illustrating the author's

own, professional techniques—direct from the companion Web site. For customers who purchase an ebook version of this title, instructions for downloading the CD files can be found in the ebook. The Real MCTS SQL Server 2008 Exam 70-433 Prep Kit

SQL Server MVP Deep Dives

SQL Server 2019 Administration Inside Out

Pro SQL Server 2008 Service Broker

Professional Microsoft SQL Server 2008 Administration

Conquer SQL Server 2019 administration–from the inside out Dive into SQL Server 2019 administration–and really put your SQL Server DBA expertise to work. This supremely organized reference packs hundreds of timesaving solutions, tips, and workarounds–all you need to plan, implement, manage, and secure SQL Server 2019 in any production environment: on-premises, cloud, or hybrid. Six experts thoroughly tour DBA capabilities available in SQL Server 2019 Database Engine, SQL Server Data Tools, SQL Server Management Studio, PowerShell, and Azure Portal. You'll find extensive new coverage of Azure SQL, big data clusters, PolyBase, data protection, automation, and more. Discover how experts tackle today's essential tasks–and challenge yourself to new levels of mastery. Explore SQL Server 2019's toolset, including the improved SQL Server Management Studio, Azure Data Studio, and Configuration

Manager Design, implement, manage, and govern on-premises, hybrid, or Azure database infrastructures Install and configure SQL Server on Windows and Linux Master modern maintenance and monitoring with extended events, Resource Governor, and the SQL Assessment API Automate tasks with maintenance plans, PowerShell, Policy-Based Management, and more Plan and manage data recovery, including hybrid backup/restore, Azure SQL Database recovery, and geo-replication Use availability groups for high availability and disaster recovery Protect data with Transparent Data Encryption, Always Encrypted, new Certificate Management capabilities, and other advances Optimize databases with SQL Server 2O19's advanced performance and indexing features Provision and operate Azure SQL Database and its managed instances Move SQL Server workloads to Azure: planning, testing, migration, and post-migration

All medium to large companies have to deal with data being stored in a number of databases, spreadsheets and proprietary applications. Bringing all this data together into one system can be useful to analyzing the business; but can also be quite difficult to do. Integration Services is the next big bet in Microsoft's business intelligence lineup, providing you with true enterprise extract transform and load features (ETL). Microsoft SQL Server 2OO5 Integration Services concentrates on providing you with real world solutions to real world problems,

giving you a head start on various projects. If you are only evaluating Integration Services, you'll be able to focus on the early chapters with the option of drilling down into details in the later chapters where some of the more complex concepts will be discussed in detail. The interesting sidebars peppered throughout the book provide insight into the processes, people and decisions that yielded the final IS product.

A database administrator's duties include ensuring that a database can be restored and recovered in the event of error or disaster. This book discusses how to perform backup and restore operations using SQL Server Management Studio (SSMS), basic T-SQL scripts and Red Gate's SQL Backup tool. Capturing backups using SSMS or simple scripts is fine for one-off backup operations, but any backups that form part of the recovery strategy for any given database must be automated with some built-in checks that, for example, alert the responsible database administrator immediately if a problem arises. The tool of choice in this book for backup automation is Red Gate SQL Backup. Building an automated solution will take a lot of work, but this book offers some advice on possible options, such as PowerShell scripting, T-SQL scripts and SQL Server Agent jobs. --

* First book on the market to show how to effectively exploit the new .NET capabilities of the SQL Server 2OO5 database. * Broad audience, with strong appeal to SQL Server developers as well as to VB.NET and

C# programmers. * Provides a detailed and example-driven tutorial on how to build and use .NET assemblies. Shows not only what you can do with assemblies, but what you should, and should not, do.

T-SQL Querying

Microsoft SQL Server 2012 T-SQL Fundamentals

Pro SQL Server Internals

Professional Microsoft SQL Server 2008 Programming

SQL Server Backup and Restore

*SQL Server 2008 is the latest update to Microsoft's flagship database management system. This is the largest update since SQL Server 2005, and it brings increased ability to deliver data across more platforms, and thus many different types of devices. New functionality also allows for easy storage and retrieval of digitized images and video. These attributes address the recent explosion in the popularity of web-based video and server and desktop virtualization. The Real MCTS SQL Server 2008 Exam 70-433 Prep Kit prepares readers for the Microsoft Certified Technology Specialist exam: SQL Server 2008, Database Development. This is a new exam in the SQL Server product family, and is comprised of some objectives from exam 70-431 from SQL Server 2005, and covers new, expanded*

*query capabilities in SQL Server 2008.
According to Microsoft: Exam 70-431 for
SQL Server 2005 was passed by over 35,000
people. ~ 150,000 people passed a similar
exam for SQL Server 2000. Additionally,
this exam is a pre-requisite for those
going on to obtain the MCITP: Database
Developer 2008: Successful candidates for
the SQL Server 2005 MCITP ~ 2,500. This is
The 'Real' Microsoft Exam Prep Kit, and
provides the reader with independent and
unbiased exam tips and warnings everything
they need to know to ensure certification
success. Authored by Mark Horninger, a
nationally recognized leader in SQL Server
with over 50 Microsoft certifications to
his credit; Mark knows what it takes to
successfully navigate Microsoft exams.
bull; Contains the most depth and breadth
of coverage of any book on SQL Server
architecture, internals, and tuning bull;
Will be a key reference for anyone working
with SQL Server, no matter what their
skill level bull; The latest book in the
bestselling series of Guru's Guides from
Ken Henderson
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.*

*Tackle the toughest set-based querying and query tuning problems—guided by an author team with in-depth, inside knowledge of T-*

*SQL. Deepen your understanding of architecture and internals—and gain practical approaches and advanced techniques to optimize your code's performance. Discover how to: Move from procedural programming to the language of sets and logic Optimize query tuning with a top-down methodology Assess algorithmic complexity to predict performance Compare data-aggregation techniques, including new grouping sets Manage data modification—insert, delete, update, merge—for performance Write more efficient queries against partitioned tables Work with graphs, trees, hierarchies, and recursive queries Plus—Use pure-logic puzzles to sharpen your problem-solving skills*

*Pro SQL Server Always On Availability Groups*
*SQL Server 2017 Administration Inside Out*
*Pro SQL Server 2008 Replication*
*Programming Microsoft SQL Server 2008*
*Pro SQL Server 2005 Assemblies*

**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 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. Pro SQL Server 2008 Replication is for Microsoft database developers and administrators who want to learn about the different types of replication and those best suited to SQL Server 2008. This book will also cover advanced topics like replication with heterogeneous databases, backup and recovery of replicated databases,**

**database mirroring with replication, log shipping with replication, troubleshooting, plus optimization and tuning. Tools like tablediff, SQLCMD, DTA, SQL Profiler, and Replication Monitor will be discussed to demonstrate the different techniques used in monitoring, administering, and troubleshooting replication. Examines the detailed configuration and the internal workings of the different replication types using real–life scenarios Covers replication with database mirroring and troubleshooting Discusses replication administration using different tools**

**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.**
**Professional SQL Server 2005 Reporting Services**
**Reliability, scalability, and security both on premises and in the cloud**
**Database Design**
**Professional Microsoft SQL Server 2014 Administration**
**Beginning SQL Server 2008 Administration**
**Summary Learn SQL Server Administration in a Month of Lunches is the perfect way to get started with SQL Server operations, including maintenance, backup and recovery, high availability, and performance monitoring. In about an hour a day over a month, you'll learn exactly what you can do, and what you shouldn't touch. Most importantly, you'll learn the day-to-day tasks and techniques you need to keep SQL Server humming along smoothly. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Book Microsoft SQL Server is used by millions of businesses, ranging in size from Fortune 500s to small shops worldwide. Whether you're just getting started as a DBA, supporting a SQL Server-driven application, or you've been drafted by your office as the SQL Server admin, you do not need a thousand-page book to get up and running. Learn SQL Server**

**Administration in a Month of Lunches is the perfect way to get started with SQL Server. This concise, easy-to-read book skips academic introductions and teaches you day-to-day techniques for maintenance, backup and recovery, performance monitoring, and more. Each of the 21 short lessons gives you practical takeaways you'll use over and over. What's Inside Master the basics—indexes, logins, backup, recovery ... and more Learn what you can and cannot do when supporting a third-party application Monitor and improve performance Written by expert trainer and bestselling author Don Jones Accessible to readers of any level of experience, the book covers techniques for all versions of SQLServer 2005-2014. About the Author Don Jones is a Microsoft MVP, speaker, and trainer. He is the creator of the Month of Lunches series and author of over 50 books on PowerShell, IIS, Active Directory, SCCM, SQL Server, and more. Table of Contents Before you begin Server assessment and configuration T-SQL crash course Managing databases Backup and recovery Authentication: who are you? Authorization: what are you allowed to do? Accounting: what did you do? Analyzing indexes Maintaining indexes Tuning index designs Reading query execution plans Block and deadlock analysis Automating management with SQL Server Agent Multiserver management Windows PowerShell and SQL Server Using Extended Events Monitoring and analyzing performance Options for high availability**

**Virtualizing SQL Server Moving, migrating, and upgrading databases SQL Server performance checklist Never the end Fill the gap between planning and doing with SSIS 2014 The 2014 release of Microsoft's SQL Server Integration Services provides enhancements for managing extraction, transformation, and load operations, plus expanded in-memory capabilities, improved disaster recovery, increased scalability, and much more. The increased functionality will streamline your ETL processes and smooth out your workflow, but the catch is that your workflow must change. New tools come with new best practices, and Professional Microsoft SQL Server 2014 Integration Services will keep you ahead of the curve. SQL Server MVP Brian Knight is the most respected name in the business, and your ultimate guide to navigating the changes to use Microsoft SQL Server Integration Services 2014 to your utmost advantage. Implement new best practices for effective use of SSIS Work through tutorials for hands-on learning of complex techniques Read case studies that illustrate the more advanced concepts Learn directly from the foremost authority on SSIS SQL Server Integration Services is a complex tool, but it's the lifeblood of your work. You need to know it inside out, and you must understand the full potential of its capabilities in order to use it effectively. You need to make sure the right architecture is in place. Professional Microsoft SQL**

**Server 2014 Integration Services is your roadmap to understanding SSIS on a fundamental level, and setting yourself up for success.**

**Extend your programming skills with a comprehensive study of the key features of SQL Server 2008. Delve into the new core capabilities, get practical guidance from expert developers, and put their code samples to work. This is a must-read for Microsoft .NET and SQL Server developers who work with data access—at the database, business logic, or presentation levels. Discover how to: Query complex data with powerful Transact-SQL enhancements Use new, non-relational features: hierarchical tables, native file streaming, and geospatial capabilities Exploit XML inside the database to design XML-aware applications Consume and deliver your data using Microsoft LINQ, Entity Framework, and data binding Implement database-level encryption and server auditing Build and maintain data warehouses Use Microsoft Excel to build front ends for OLAP cubes, and MDX to query them Integrate data mining into applications quickly and effectively. Get code samples on the Web.**

**Your essential guide to key programming features in Microsoft SQL Server 2012 Take your database programming skills to a new level—and build customized applications using the developer tools introduced with SQL Server 2012. This hands-on reference shows you how to design, test, and deploy SQL**

**Server databases through tutorials, practical examples, and code samples. If you're an experienced SQL Server developer, this book is a must-read for learning how to design and build effective SQL Server 2012 applications. Discover how to: Build and deploy databases using the SQL Server Data Tools IDE Query and manipulate complex data with powerful Transact-SQL enhancements Integrate non-relational features, including native file streaming and geospatial data types Consume data with Microsoft ADO.NET, LINQ, and Entity Framework Deliver data using Windows Communication Foundation (WCF) Data Services and WCF RIA Services Move your database to the cloud with Windows Azure SQL Database Develop Windows Phone cloud applications using SQL Data Sync Use SQL Server BI components, including xVelocity in-memory technologies**
**Professional SQL Server 2005 Performance Tuning**
**Microsoft SQL Server 2008 Internals**
**Introducing Microsoft SQL Server 2019**
**The Go Faster Book**
**Learning SQL**

This book is written for SQL Server 2008. However, it does maintain roots going back a few versions and looks out for backward compatibility issues with SQL Server 2005 and SQL Server 2000. These versions are old enough that there is little to no time spent on them except in passing. The book is oriented around developing on SQL server. Most of the concepts are agnostic to what client language you use although the

examples that leverage a client language general do so in C#. For those who are migrating from early versions of SQL Server, some "gotchas" that exist any time a product has versions are discussed to the extent that they seem to be a genuinely relevant issue. This book assumes that you have some experience with SQL Server and are at an intermediate to advanced level. The orientation of the book is highly developer focused. While there is a quick reference-oriented appendix, there is very little coverage given to beginner level topics. It is assumed that you already have experience with data manipulation language (DML) statements and know the basics of the mainstream SQL Server objects (views, stored procedures, user defined functions, etc.). If you would like to brush up on your knowledge before diving into this book, the author recommends reading Beginning SQL Server 2008 Programming first. There is very little overlap between the Beginning and Professional books and they are designed to work as a pair.

Delve inside the core SQL Server engine—and put that knowledge to work—with guidance from a team of well-known internals experts. Whether database developer, architect, or administrator, you'll gain the deep knowledge you need to exploit key architectural changes—and capture the product's full potential. Discover how SQL Server works behind the scenes, including: What happens internally when SQL Server builds, expands, shrinks, and moves databases How to use event tracking—from triggers to the Extended Events Engine Why the right indexes can drastically reduce your query execution time How to transcend normal row-size limits with new storage capabilities How the Query Optimizer operates Multiple techniques for

troubleshooting problematic query plans When to force SQL Server to reuse a cached query plan—or create a new one What SQL Server checks internally when running DBCC How to choose among five isolation levels and two concurrency models when working with multiple concurrent users

Conquer SQL Server 2017 administration—from the inside out Dive into SQL Server 2017 administration—and really put your SQL Server DBA expertise to work. This supremely organized reference packs hundreds of timesaving solutions, tips, and workarounds—all you need to plan, implement, manage, and secure SQL Server 2017 in any production environment: on-premises, cloud, or hybrid. Four SQL Server experts offer a complete tour of DBA capabilities available in SQL Server 2017 Database Engine, SQL Server Data Tools, SQL Server Management Studio, and via PowerShell. Discover how experts tackle today's essential tasks—and challenge yourself to new levels of mastery. • Install, customize, and use SQL Server 2017's key administration and development tools • Manage memory, storage, clustering, virtualization, and other components • Architect and implement database infrastructure, including IaaS, Azure SQL, and hybrid cloud configurations • Provision SQL Server and Azure SQL databases • Secure SQL Server via encryption, row-level security, and data masking • Safeguard Azure SQL databases using platform threat protection, firewalling, and auditing • Establish SQL Server IaaS network security groups and user-defined routes • Administer SQL Server user security and permissions • Efficiently design tables using keys, data types, columns, partitioning, and views • Utilize BLOBs and external, temporal, and memory-optimized tables • Master

powerful optimization techniques involving concurrency, indexing, parallelism, and execution plans • Plan, deploy, and perform disaster recovery in traditional, cloud, and hybrid environments For Experienced SQL Server Administrators and Other Database Professionals • Your role: Intermediate-to-advanced level SQL Server database administrator, architect, developer, or performance tuning expert • Prerequisites: Basic understanding of database administration procedures SQL Server 2008 is how-to guide for experienced DBAs. Tutorial-based, this book will get you over the learning curve of how to configure and administer SQL Server 2008. Whether you're an administrator or developer using SQL Server, you can't avoid wearing a DBA hat at some point. The book is loaded with unique tips and workarounds for the most difficult SQL Server admin issues, including managing and monitoring SQL Server, automating administration, security, performance tuning, scaling and replications, clustering, and backup and recovery. A companion website is also available.

Smart Business Intelligence Solutions with Microsoft SQL Server 2008

Beginning T-SQL

Microsoft SQL Server 2008 MDX Step by Step

Professional SQL Server 2012 Internals and Troubleshooting

Microsoft SQL Server 2008 Analysis Services Step by Step

With the growing prevalence of the Internet, rootkit technology has taken center stage in the battle between White Hats and Black Hats. Adopting an approach that favors full disclosure, The Rootkit Arsenal presents the most accessible, timely, and complete coverage of

rootkit technology. This book covers more topics, in greater depth, than any other currently available. In doing so, the author forges through the murky back alleys of the Internet, shedding light on material that has traditionally been poorly documented, partially documented, or intentionally undocumented. Service Broker is a key Microsoft product in support of message–based processing between applications. Pro SQL Server 2008 Service Broker helps you to take full advantage of this key Microsoft technology, beginning from the fundamentals, moving through installation and application development, and ultimately showing you how to develop highly available and scalable applications based upon the service–oriented architecture that is quickly gaining ground as the way forward in application development. Comprehensive approach to developing with Service Broker Strong focus on best practices and real–world scenarios Covers the key aspects of distributed application design 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 A hands-on resource for SQL Server 2008

troubleshooting methods and tools SQL Server administrators need to ensure that SQL Server remains running 24/7. Authored by leading SQL Server experts and MVPs, this book provides in-depth coverage of best practices based on a deep understanding of the internals of both SQL Server and the Windows operating system. You'll get a thorough look at the SQL Server database architecture and internals as well as Windows OS internals so that you can approach troubleshooting with a solid grasp of the total processing environment. Armed with this comprehensive understanding, readers will then learn how to use a suite of tools for troubleshooting performance problems whether they originate on the database server or operating system side. Topics Covered: SQL Server Architecture Understanding Memory SQL Server Waits and Extended Events Working with Storage CPU and Query Processing Locking and Latches Knowing Tempdb Defining Your Approach To Troubleshooting Viewing Server Performance with PerfMon and the PAL Tool Tracing SQL Server with SQL Trace and Profiler Consolidating Data Collection with SQLDiag and the PerfStats Script Introducing RML Utilities for Stress Testing and Trace File Analysis Bringing It All Together with SQL Nexus Using Management Studio Reports and the Performance Dashboard Using SQL Server Management Data Warehouse Shortcuts to Efficient Data Collection and Quick Analysis Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

The Guru's Guide to SQL Server Architecture and

Delve inside the core SQL Server engine--and
put that knowledge to work--with guidance
from a team of well-known internals experts.
Whether database developer, architect, or
administrator, you'll gain the deep knowledge
you need to exploit key architectural
changes--and capture the product's full
potential. Discover how SQL Server works
behind the scenes, including: What happens
internally when SQL Server builds, expands,
shrinks, and moves databases How to use event
tracking--from triggers to the Extended
Events Engine Why the right indexes can
drastically reduce your query execution time
How to transcend normal row-size limits with
new storage capabilities How the Query
Optimizer operates Multiple techniques for
troubleshooting problematic query plans When
to force SQL Server to reuse a cached query
plan--or create a new one What SQL Server
checks internally when running DBCC How to
choose among five isolation levels and two
concurrency models when working with multiple
concurrent users
If you need to deploy, manage, or secure
Microsoft SQL Server 2008, this is the
complete, fast-paced, task-based reference

you've been searching for. Authored by a world-class expert on SQL Server in the enterprise, this book goes far beyond the basics, taking on the complex tasks that DBAs need to make the most of Microsoft's flagship database platform. SQL Server MVP, Ross Mistry presents proven techniques for SQL Server 2008 installation, upgrades, backup/restore, data transfer, indexing, high availability, security, and much more. He draws on extensive testing in high-profile production environments to offer step-by-step solutions and powerful tips you won't find anywhere else. Every chapter begins with a section identifying SQL Server 2008's most significant new improvements, and concludes with a convenient summary of best practices. Each chapter also outlines the benefits of leveraging Windows Server 2008. Understand how to: Master DBA tips, tricks, and best practices proven in actual enterprise environments Install, upgrade or transition to SQL Server 2008. Harden and Secure an implementation. Encrypt SQL Server from an end-to-end perspective. Implement high availability—and leverage SQL Server 2008's major improvements to failover clustering and database mirroring Save time with SQL Server 2008's new policy-based management tools Performance tune and troubleshoot a SQL Server 2008 environment. Optimize application performance and manage workloads with the powerful new Resource Governor Implement Performance Studio, maintenance plans,

Transparent Data Encryption and much more…
Bonus Content: The book is based on Windows
Server 2008 Step by step instructions of how
to implement a failover cluster on Windows
Server 2008 SQL Server PoweShell
Administration Tasks Consolidate and
virtualize SQL Server with Hyper-V Step by
step instructions on how to install Hyper-V
Proactively Monitor SQL Server with
Operations Manager Install Windows Server
2008 certificates to encrypt SQL Server data
Contributing Writers include: Hilary Cotter -
SQL Server MVP John Welch - SQL Server MVP
Marco Shaw - PowerShell MVP Maciej Pilecki -
SQL Server MVP Shirmattie Seenarine -
Technical Writer

This book is your field guide to planning,
deploying, managing, and troubleshooting
Always On Availability Groups. The Always On
Availability Groups feature is an enterprise-
level solution for high availability and
disaster recovery. Always On provides a rich
set of options that reduce overhead and
resource usage and enable database
administrators to implement and manage high
availability and disaster recovery solutions
far more easily than by implementing the log-
shipping and database-mirroring solutions of
the past. Pro SQL Server Always On
Availability Groups shows how to reduce
downtime, maximize application availability,
and provide data protection. The goal is
always to have your SQL Server databases up
and running whenever you need them, rain or

shine, disaster or otherwise. With a focus on real-world experiences and war stories, authors Uttam Parui and Vivek Sanil offer you: Tips, tricks, and best practices for architecting and deploying availability groups. The confidence required to manage and monitor availability groups. Techniques to troubleshoot common issues that you may face during and after deploying availability groups in a mission-critical production environment. What You Will Learn Grasp important concepts underlying high-availability and disaster recovery. Plan and deploy Always On Availability Groups in your corporate environment. Manage Availability Groups to ensure constant readiness and high throughput. Monitor Availability Group performance and troubleshoot problems fast. Build on the cloud and make Windows Azure part of your availability solution. Employ proven techniques and best practices as tested and shared by the authors. Audience Pro SQL Server Always On Availability Groups is aimed at SQL Server architects, database administrators, and IT professionals who are tasked with architecting and deploying a high-availability and disaster recovery solution involving Microsoft SQL Server. This book is also for SQL Server support staff who will be managing and supporting existing availability group deployments.

Learn to take advantage of the opportunities offered by SQL Server 2014 Microsoft's SQL Server 2014 update means big changes for

database administrators, and you need to get up to speed quickly because your methods, workflow, and favorite techniques will be different from here on out. The update's enhanced support of large-scale enterprise databases and significant price advantage mean that SQL Server 2014 will become even more widely adopted across the industry. The update includes new backup and recovery tools, new AlwaysOn features, and enhanced cloud capabilities. In-memory OLTP, Buffer Pool Extensions for SSDs, and a new Cardinality Estimator can improve functionality and smooth out the workflow, but only if you understand their full capabilities. Professional Microsoft SQL Server 2014 is your comprehensive guide to working with the new environment. Authors Adam Jorgensen, Bradley Ball, Ross LoForte, Steven Wort, and Brian Knight are the dream team of the SQL Server community, and they put their expertise to work guiding you through the changes. Improve oversight with better management and monitoring Protect your work with enhanced security features Upgrade performance tuning, scaling, replication, and clustering Learn new options for backup and recovery Professional Microsoft SQL Server 2014 includes a companion website with sample code and efficient automation utilities, plus a host of tips, tricks, and workarounds that will make your job as a DBA or database architect much easier. Stop getting frustrated with administrative issues and

start taking control. Professional Microsoft
SQL Server 2014 is your roadmap to mastering
the update and creating solutions that work.
The Rootkit Arsenal: Escape and Evasion
Inside the SQL Server Query Optimizer
*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 Troubleshot 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.*
*Updated for the latest database management systems -- including MySQL 6.0, Oracle 11g, and Microsoft's SQL Server 2008 -- this introductory guide will get you up and running with SQL quickly. Whether you need to write database applications, perform administrative tasks, or generate reports, Learning SQL, Second Edition, will help you easily master all the SQL fundamentals. Each chapter presents a self-contained lesson on a key SQL concept or technique, with numerous illustrations and annotated examples.*

*Exercises at the end of each chapter let you practice the skills you learn. With this book, you will: Move quickly through SQL basics and learn several advanced features Use SQL data statements to generate, manipulate, and retrieve data Create database objects, such as tables, indexes, and constraints, using SQL schema statements Learn how data sets interact with queries, and understand the importance of subqueries Convert and manipulate data with SQL's built-in functions, and use conditional logic in data statements Knowledge of SQL is a must for interacting with data. With Learning SQL, you'll quickly learn how to put the power and flexibility of this language to work.*