

Microsoft Sql Server 2012 Internals

SQL server is the most widely-used database platform in the world, and a large percentage of these databases are not properly secured, exposing sensitive customer and business data to attack. In *Securing SQL Server*, Third Edition, you will learn about the potential attack vectors that can be used to break into SQL server databases as well as how to protect databases from these attacks. In this book, Denny Cherry – a Microsoft SQL MVP and one of the biggest names in SQL server – will teach you how to properly secure an SQL server database from internal and external threats using best practices as well as specific tricks that the author employs in his role as a consultant for some of the largest SQL server deployments in the world. Fully updated to cover the latest technology in SQL Server 2014, this new edition walks you through how to secure new features of the 2014 release. New topics in the book include vLANs, setting up RRAS, anti-virus installs, key management, moving from plaintext to encrypted values in an existing application, securing Analysis Services Objects, Managed Service Accounts, OS rights needed by the DBA, SQL Agent Security, Table Permissions, Views, Stored Procedures, Functions, Service Broker Objects, and much more. Presents hands-on techniques for protecting your SQL Server database from intrusion and attack Provides the most in-depth coverage of all aspects of SQL Server database security, including a wealth of new material on Microsoft SQL Server 2014. Explains how to set up your database securely, how to determine when someone tries to break in, what the intruder has accessed or damaged, and how to respond and mitigate damage if an intrusion occurs.

Ace your preparation for Microsoft® Certification Exam 70-461 with this 2-in-1 Training Kit from Microsoft Press®. Work at your own pace through a series of lessons and practical exercises, and then assess your skills with practice tests on CD—featuring multiple, customizable testing options. Maximize your performance on the exam by learning how to: Create database objects Work with data Modify data Troubleshoot and optimize queries You also get an exam discount voucher—making this book an exceptional value and a great career investment. 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. 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 2019'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 Professional Microsoft SQL Server 2014 Integration Services

Windows Server 2012 Hyper-V Cookbook

Microsoft SQL Server 2012 Administration

Microsoft SQL Server 2012 T-SQL Fundamentals

SQL Server 2019 Administration Inside Out

Dive deep inside the architecture of SQL Server 2012 Explore the core engine of Microsoft SQL Server 2012—and put that practical knowledge to work. Led by a team of SQL Server experts, you'll learn the skills you need to exploit key architectural features. Go behind the scenes to understand internal operations for creating, expanding, shrinking, and moving databases—whether you're a database developer, architect, or administrator. Discover how to: Dig into SQL Server 2012 architecture and configuration Use the right recovery model and control transaction logging Reduce query execution time through proper index design Track events, from triggers to the Extended Event Engine Examine internal structures with database console commands Transcend row-size limitations with special storage capabilities Choose the right transaction isolation level and concurrency model Take control over query plan caching and reuse

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

"Windows Server 2012 Hyper-V Cookbook" is a practical cookbook packed with recipes showing and explaining all the features and components of Hyper-V. You'll learn from best practices, tips and tricks and examples of how to automate daily and common tasks. If you are an administrator who wants to master Microsoft Server Virtualization with Windows Server 2012 Hyper-V, then this book is for you. You should be comfortable with virtualization concepts and practices, and knowledge of previous versions of Windows Server would be an advantage.

Learn the basics of Microsoft Azure and see how SQL Server on Azure VMs (Infrastructure-as-a-Service) and Azure SQL Databases (Platform-as-a-Service) work. This concise book shows you how to deploy, operate, and maintain your data using any one or a combination of these offerings along with your on-premise environment. Pro SQL Server on Microsoft Azure is a quintessential book for any IT professional who is planning to host their data on Microsoft Azure. This book will not only equip you with the tips, tricks, and tools to manage SQL Server offerings on Azure, but will also help you in deciding between PaaS, IaaS, or hybrid. In the ever-changing world of operations, IT administrators and SQL Server DBAs often find that the biggest challenges occur once they've deployed to the cloud. This is precisely why Pro SQL Server on Microsoft Azure was written; it will help you master today's cloud world. What You'll Learn Understand the Microsoft Azure IaaS architecture Work with Azure Storage and Networking Deploy SQL Server on Azure VMs using best practices Apply effective security principles to SQL Azure Databases Measure and optimize the performance of SQL Server offerings on Azure Implement Business continuity and disaster recovery options with Azure SQL Databases Who This Book Is For This book is for IT admins and SQL Server DBAs who are managing or would be managing SQL Server deployments on Microsoft Azure. >

Introducing Microsoft SQL Server 2012

Pro SQL Server 2005 Assemblies

Microsoft SQL Server 2008 Management and Administration

Professional SQL Server 2012 Internals and Troubleshooting

Introducing Microsoft SQL Server 2016

With Microsoft SQL Server 2016, a variety of new features and enhancements to the data platform deliver breakthrough performance, advanced security, and richer, integrated reporting and analytics capabilities. In this ebook, we introduce new security features: Always Encrypted, Row-Level Security, and dynamic data masking; discuss enhancements that enable you to better manage performance and storage: TemDB configuration, query store, and Stretch Database; review several improvements to Reporting Services; and also describe AlwaysOn Availability Groups, tabular enhancements, and R integration.

Master SQL Server's Concurrency Model so you can implement high-throughput systems that deliver transactional consistency to your application customers. This book explains how to troubleshoot and address blocking problems and deadlocks, and write code and design database schemas to minimize concurrency issues in the systems you develop. SQL Server's Concurrency Model is one of the least understood parts of the SQL Server Database Engine. Almost every SQL Server system experiences hard-to-explain concurrency and blocking issues, and it can be extremely confusing to solve those issues without a base of knowledge in the internals of the Engine. While confusing from the outside, the SQL Server Concurrency Model is based on several well-defined principles that are covered in this book. Understanding the internals surrounding SQL Server's Concurrency Model helps you build high-throughput systems in multi-user environments. This book guides you through the Concurrency Model and elaborates how SQL Server supports transactional consistency in the databases. The book covers all versions of SQL Server, including Microsoft Azure SQL Database, and it includes coverage of new technologies such as In-Memory OLTP and Columnstore Indexes. What You'll Learn Know how transaction isolation levels affect locking behavior and concurrency Troubleshoot and address blocking issues and deadlocks Provide required data consistency while minimizing concurrency issues Design efficient transaction strategies that lead to scalable code Reduce concurrency problems through good schema design Understand concurrency models for In-Memory OLTP and Columnstore Indexes

Reduce blocking during index maintenance, batch data load, and similar tasks Who This Book Is For SQL Server developers, database administrators, and application architects who are developing highly-concurrent applications. The book is for anyone interested in the technical aspects of creating and troubleshooting high-throughput systems that respond swiftly to user requests.

Over 80 recipes to help you tune SQL Server 2012 and achieve optimal performance.

Get up to speed on the extensive changes to the newest release of Microsoft SQL Server The 2012 release of Microsoft SQL Server changes how you develop applications for SQL Server. With this comprehensive resource, SQL Server authority Robert Vieira presents the fundamentals of database design and SQL concepts, and then shows you how to apply these concepts using the updated SQL Server. Publishing time and date with the 2012 release, Beginning Microsoft SQL Server 2012 Programming begins with a quick overview of database design basics and the SQL query language and then quickly proceeds to show you how to implement the fundamental concepts of Microsoft SQL Server 2012. You'll explore the key additions and changes to this newest version, including conditional action constructs, enhanced controls for results paging, application integration with SharePoint and Excel, and development of BI applications. Covers new features such as SQL Azure for cloud computing, client-connectivity enhancements, security and compliance, data replication, and data warehouse performance improvements Addresses essential topics including managing keys, writing scripts, and working with store procedures Shares helpful techniques for creating and changing tables, programming with XML, and using SQL Server Reporting and Integration Services Beginning Microsoft SQL Server 2012 Programming demystifies even the most difficult challenges you may face with the new version of Microsoft SQL Server.

Microsoft SQL Server 2012 Internals

Beginning Microsoft SQL Server 2008 Programming

Microsoft SQL Server 2012 Integration Services

Professional SQL Server 2008 Internals and Troubleshooting

Real-World Skills for MCSA Certification and Beyond (Exams 70-461, 70-462, and 70-463)

This comprehensive introduction to SQL Server begins with an overview of database design basics and the SQL query language along with an in-depth look at SQL Server itself Progresses on to a clear explanation of how to implement fundamental concepts with the new 2008 version of SQL Server Discusses creating and changing tables, managing keys, writing scripts, working with stored procedures, programming with XML, using SQL Server Reporting and Integration Services, and more Features updated and new material, including new examples using Microsoft's AdventureWorks sample database

Implement, maintain, and repair SQL Server 2012databases As the most significant update since 2008, Microsoft SQL Server2012 boasts updates and new features that are critical tounderstand. Whether you manage and administer SQL Server 2012 orare planning to get your MCSA: SQL Server 2012 certification, thisbook is the perfect supplement to your learning and preparation.From understanding SQL Server's roles to implementing businessintelligence and reporting, this practical book explores tasks andscenarios that a working SQL Server DBA faces regularly and showsyou step by step how to handle them. Includes practice exams and coverage of exam objectives forthose seeking MSCA: SQL Server 2012 certification Explores the skills you'll need on the job as a SQL Server 2012DBA Discusses designing and implementing database solutions Walks you through administrating, maintaining, and securing SQLServer 2012 Addresses implementing high availability and datadistribution Includes bonus videos where the author walks you through someof the more difficult tasks expected of a DBA Featuring hands-on exercises and real-world scenarios, thisresource guides you through the essentials of implementing,maintaining, and repairing SQL Server 2012 databases.

Your hands-on, step-by-step guide to building applications with Microsoft SQL Server 2012 Teach yourself the programming fundamentals of SQL Server 2012—one step at a time. Ideal for beginning SQL Server database administrators and developers, this tutorial provides clear guidance and practical, learn-by-doing exercises for building database solutions that solve real-world business problems. Discover how to: Install and work with core components and tools Create tables and index structures Manipulate and retrieve data Secure, manage, back up, and recover databases Apply techniques for building high-performing applications Use clustering, database mirroring, and log shipping

Microsoft SQL Server 2012 InternalsMicrosoft Press

T-SQL Window Functions

Training Kit (Exam 70-461): Querying Microsoft SQL Server 2012

Beginning SQL Server 2008 Administration

Microsoft SQL Server 2012 Security Cookbook

Programming Microsoft SQL Server 2012

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.

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

Introducing Microsoft(r) SQL Server(r) 2012 explores the exciting enhancements and new capabilities engineered into SQL Server, ranging from improvements in operation to those in reporting and management. This book is for anyone who has an interest in SQL Server 2012 and wants to understand its capabilities, including database administrators, application developers, and technical decision makers. 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

Microsoft SQL Server 2012 Performance Tuning Cookbook

Troubleshooting SQL Server

Mission-Critical Applications, Deeper Insights, Hyperscale Cloud

T-SQL Querying

Microsoft SQL Server 2012 High-Performance T-SQL Using Window Functions

Each recipe comprises step-by-step instructions followed by an analysis of what was done in each task and other useful information. The book is designed so that you can read it chapter by chapter, or look at the list of recipes and refer to them in no particular order. Each example comes with its expected output to make your learning even easier thus enabling you to successfully secure your SQL Server 2012 database. This book is for SQL Server administrators, developers, and consultants who want to secure their SQL Server database with cutting edge techniques for data and code encryption, user authentication and authorization, protection against brute force attacks, denial-of-service attacks, and SQL Injection, securing business intelligence, and more. Working knowledge of SQL Server is expected.

The SQL Server 2014 In-Memory OLTP engine (a.k.a. Hekaton) is designed from the ground up to exploit terabytes of available memory and high numbers of processing cores. It allows us to work with memory-optimized tables and indexes, and natively compiled stored procedures, in addition to the disk-based tables and indexes, and T-SQL stored procedures, that SQL Server has always provided. Hekaton in-memory data is accessible, transparently, using familiar interfaces such as T-SQL and SSMS, but Hekaton's internal behavior and capabilities are very different than those of the standard relational engine. Everything you knew about how your SQL Server stores and accesses data is different in Hekaton. Everything you understood about how multiple concurrent processes are handled needs to be reconsidered. In this book, Kalen Delaney explains how the new In-Memory OLTP engine works, how it stores and manipulates data, and how, even with all data stored in memory and no locking or latching, it can still guarantee the ACID properties of all transactions. Kalen has been working with SQL Server since 1987, specializing in query performance tuning and SQL Server internals. The Hekaton internals knowledge she provides in this book will help you migrate existing tables or databases to Hekaton, and get faster performance from your SQL Server applications than you ever thought possible.

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 Included on two CD-ROMs are a 120 day evaluation copy of Microsoft SQL Server 2000 Enterprise Edition, a searchable electronic copy of the book, sample scripts, white papers and articles and tools and utilities.

*A Guide for the Accidental DBA
Administering Microsoft SQL Server 2012 Databases
Microsoft SQL Server 2012 Step by Step
Microsoft SQL Server 2014 Query Tuning & Optimization
Microsoft SQL Server 2008 MDX Step by Step*

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. --

Presents lessons covering exam objectives, practice exercises, real-world scenarios, and practice exams on the accompanying CD-ROM.

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

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 PowerShell 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
T-SQL Fundamentals

Learn SQL Server Administration in a Month of Lunches

Protecting Your Database from Attackers

Pro SQL Server Internals

Expert SQL Server Transactions and Locking

"Most T-SQL developers recognize the value of window functions for data analysis calculations. But they can do far more, and recent optimizations make them even more powerful. In T-SQL Window Functions, renowned T-SQL expert Itzik Ben-Gan introduces breakthrough techniques for using them to handle many common T-SQL querying tasks with unprecedented elegance and power. Using extensive code examples, he guides you through window aggregate, ranking, distribution, offset, and ordered set functions. You'll find a detailed section on optimization, plus an extensive collection of business solutions -- including novel techniques available in no other book."--provided by publisher.

Apply powerful window functions in T-SQL—and increase the performance and speed of your queries Optimize your queries—and obtain simple and elegant solutions to a variety of problems—using window functions in Transact-SQL. Led by T-SQL expert Itzik Ben-Gan, you'll learn how to apply calculations against sets of rows in a flexible, clear, and efficient manner. Ideal whether you're a database administrator or developer, this practical guide demonstrates ways to use more than a dozen T-SQL querying solutions to address common business tasks. Discover how to: Go beyond traditional query approaches to express set calculations more efficiently Delve into ordered set functions such as rank, distribution, and offset Implement hypothetical set and inverse distribution functions in standard SQL Use strategies for improving sequencing, paging, filtering, and pivoting Increase query speed using partitioning, ordering, and coverage indexing Apply new optimization iterators such as Window Spool Handle common issues such as running totals, intervals, medians, and gaps

If you need to deploy, manage, or secure Microsoft SQL Server 2012, this is the complete, fast-paced, task-based reference you’ve been searching for. Authored by a worldclass expert on running 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 first cloud-enabled database platform. Designed for maximum practical usability, it’s packed with expert tips and up-to-date real-world configuration guidance you simply won’t find anywhere else. As someone who helped influence the design of SQL Server 2012 and drawing on many months of beta testing, Ross Mistry provides immediately usable solutions for installation and upgrades, management and monitoring, performance and availability, security, consolidation, virtualization, troubleshooting, and more. Mistry identifies new features and corresponding best practices in every chapter, helping you take full advantage of new SQL Server innovations ranging from private cloud support to AlwaysOn Availability Groups. Understand how to: Efficiently install or upgrade the SQL Server 2012 database engine Administer and configure database engine settings, storage, I/O, and partitioning Transfer data on-premise or to the cloud Manage and optimize indexes Learn how to consolidate, virtualize and optimize SQL Server for Private Clouds Harden and audit SQL Server 2012 environments Administer security and authorization, including new Contained Databases Encrypt data and communications Design and deploy new AlwaysOn high-availability and disaster recovery features Implement maintenance best practices, including Policy-Based Management

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

SQL Server Internals: In-Memory Oltp

Securing SQL Server

Microsoft SQL Server 2012 Management and Administration

Inside Microsoft SQL Server 2000

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

Optimize Microsoft SQL Server 2014 queries and applications Microsoft SQL Server 2014 Query Tuning & Optimization is filled with ready-to-use techniques for creating high-performance queries and applications. The book describes the inner workings of the query processor so you can write better queries and provide the query processor with the quality information it needs to produce efficient execution plans. You ’ ll also get tips for troubleshooting underperforming queries. In-Memory OLTP (Hekaton), a key new feature of SQL Server 2014, is fully covered in this practical guide. Understand how the query optimizer works Troubleshoot queries using extended events, SQL trace, dynamic management views (DMVs), the data collector, and other tools Work with query operators for data access, joins, aggregations, parallelism, and updates Speed up queries and dramatically improve application performance by creating the right indexes Understand statistics and how to detect and fix cardinality estimation errors Maximize OLTP query performance using In-Memory OLTP (Hekaton) features, including memory-optimized tables and natively compiled stored procedures Monitor and promote plan caching and reuse to improve application performance Improve the performance of data warehouse queries using columnstore indexes Handle query processor limitations with hints and other methods

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

Build and manage data integration solutions with expert guidance from the Microsoft SQL Server Integration Services (SSIS) team. See best practices in action and dive deep into the SSIS engine, SSISDB catalog, and security features. Using the developer enhancements in SQL Server 2012 and the flexible SSIS toolset, you ’ ll handle complex data integration scenarios more efficiently—and acquire the skills you need to build comprehensive solutions. Discover how to: Use SSIS to extract, transform, and load data from multiple data sources Apply best practices to optimize package and project configuration and deployment Manage security settings in the SSISDB catalog and control package access Work with SSIS data quality features to profile, cleanse, and increase reliability Monitor, troubleshoot, and tune SSIS solutions with advanced features such as detailed views and data taps Load data incrementally to capture an easily consumable stream of insert, update, and delete activity

SQL Server 2017 Administration Inside Out

Pro SQL Server on Microsoft Azure

Inside Microsoft SQL Server 2008 T-SQL Querying

Training Kit (Exam 70-462)

Microsoft SQL Server 2012 Bible

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.

Harness the powerful new SQL Server 2012 Microsoft SQL Server 2012 is the most significant update to this product since 2005, and it may change how database administrators and developers perform many aspects of their jobs. If you’re a database administrator or developer, Microsoft SQL Server 2012 Bible teaches you everything you need to take full advantage of this major release. This detailed guide not only covers all the new features of SQL Server 2012, it also shows you step by step how to develop top-notch SQL Server databases and new data connections and keep your databases performing at peak. The book is crammed with specific examples, sample code, and a host of tips, workarounds, and best practices. In addition, downloadable code is available from the book’s companion web site, which you can use to jumpstart your own projects. Serves as an authoritative guide to Microsoft’s SQL Server 2012 for database administrators and developers Covers all the software’s new features and capabilities, including SQL Azure for cloud computing, enhancements to client connectivity, and new functionality that ensures high-availability of mission-critical applications Explains major new changes to the SQL Server Business Intelligence tools, such as Integration, Reporting, and Analysis Services Demonstrates tasks both graphically and in SQL code to enhance your learning Provides source code from the companion web site, which you can use as a basis for your own projects Explores tips, smart workarounds, and best practices to help you on the job Get thoroughly up to speed on SQL Server 2012 with Microsoft SQL Server 2012 Bible.

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.

* First book on the market to show how to effectively exploit the new .NET capabilities of the SQL Server 2005 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.

Beginning Microsoft SQL Server 2012 Programming

Concurrency Internals for SQL Server Practitioners