SQL Server 2017 Developers Guide A Professional Guide To Designing And Developing Enterprise Database Applications

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Enterprise Application Development with C# 10 and .NET 6 - Ravindra Akella 2022-06-17
A comprehensive guide to every important component of C# and .NET 6 required to build robust enterprise web applications Key FeaturesExplore the advanced features of C# and .NET 6 to enhance your code and productivityFollow clear and easy instructions for building an end-to-end enterprise applicationLearn how to build scalable web applications and host them on the cloudBook Description Building production-ready enterprise applications can be a challenging task due to the overabundance of tools and their different versions that make app development complex. This book simplifies the process with an end-to-end road map for building enterprise applications from scratch using the latest features of .NET Core 6 and C# 10. Throughout the book, you'll work on creating an enterprise app, adding a key component to the app with each chapter, before finally getting it ready for testing and deployment. You'll learn concepts relating to advanced data structures, the Entity Framework Core, parallel programming, and dependency injection. As you progress, you'll cover various authentication and authorization schemes provided by .NET Core to make your apps and APIs secure. The book then shows you how the latest Microsoft Visual Studio and C# 10 help you simplify developer tasks and shares tips and tricks in Visual Studio to improve your productivity. You'll discover various testing techniques, such as unit testing and performance testing, as well as different methods to deploy enterprise apps. By the end of this book, you'll be able to create enterprise apps using the powerful features of .NET 6 and deploy them to the cloud while working with various cloud components using Azure. What you will learnDesign enterprise apps by making the most of the latest features of .NET 6Discover different layers of an app, such as the data layer, API layer, and web layerExplore end-to-end architecture by implementing an enterprise web app using .NET and C# 10 and deploying it on AzureFocus on the core concepts of web application development and implement them in .NET 6Integrate the new .NET 6 health and performance check APIs into your appExplore MAUI and build an application targeting multiple platforms - Android, iOS, and WindowsWho this book is for If you are a developer, architect, or senior programmer, this book will show you how to leverage the features of .NET 6 and the C# language, as well as help you grasp essential techniques to build your skills.

Pro T-SQL 2019 - Elizabeth Noble 2020-02-12
Design and write simple and efficient T-SQL code in SQL Server 2019 and beyond. Writing T-SQL that pulls back correct results can be challenging. This book provides the help you need in writing T-SQL that performs fast and is easy to maintain. You also will learn how to implement version control, testing, and deployment strategies. Hands-on examples show modern T-SQL practices and provide straightforward explanations. Attention is given to selecting the right data types and objects when designing T-SQL solutions. Author Elizabeth Noble teaches you how to improve your T-SQL performance through good design practices that benefit programmers and ultimately the users of the applications. You will know the common pitfalls of writing T-SQL and how to avoid those pitfalls going forward. What You Will LearnChoose correct data types and database objects when designing T-SQL Write T-SQL that searches data efficiently and uses hardware effectively Implement source control and testing methods to streamline the deployment process Design T-SQL that can be enhanced or modified with less effort Plan for long-term data management and storage Who This Book Is For Database developers who want to improve the efficiency of

their applications, and developers who want to solve complex query and data problems more easily by writing T-SQL that performs well, brings back correct results, and is easy for other developers to understand and maintain

SQL Server Advanced Troubleshooting and Performance Tuning - Dmitri Korotkevitch 2022-05-13
This practical book provides a comprehensive overview of troubleshooting and performance tuning best practices for Microsoft SQL Server. Database engineers, including database developers and administrators, will learn how to identify performance issues, troubleshoot the system in a holistic fashion, and properly prioritize tuning efforts to attain the best system performance possible. Author Dmitri Korotkevitch, Microsoft Data Platform MVP and Microsoft Certified Master (MCM), explains the interdependencies between SQL Server database components. You'll learn how to quickly diagnose your system and discover the root cause of any issue. Techniques in this book are compatible with all versions of SQL Server and cover both on-premises and cloud-based SQL Server installations. Discover how performance issues present themselves in SQL Server Learn about SQL Server diagnostic tools, methods, and technologies Perform health checks on SQL Server installations Learn the dependencies between SQL Server components Tune SQL Server to improve performance and reduce bottlenecks Detect poorly optimized queries and inefficiencies in query execution plans Find inefficient indexes and common database design issues Use these techniques with Microsoft Azure SQL databases, Azure SQL Managed Instances, and Amazon RDS for SQL Server

SQL Server 2017 Integration Services Cookbook - Christian Cote 2017-06-30
Harness the power of SQL Server 2017 Integration Services to build your data integration solutions with easeAbout This Book* Acquaint yourself with all the newly introduced features in SQL Server 2017 Integration Services* Program and extend your packages to enhance their functionality* This detailed, step-by-step guide covers everything you need to develop efficient data integration and data transformation solutions for your organizationWho This Book Is ForThis book is ideal for software engineers, DW/ETL architects, and ETL developers who need to create a new, or enhance an existing, ETL implementation with SQL Server 2017 Integration Services. This book would also be good for individuals who develop ETL solutions that use SSIS and are keen to learn the new features and capabilities in SSIS 2017.What You Will Learn* Understand the key components of an ETL solution using SQL Server 2016-2017 Integration Services* Design the architecture of a modern ETL solution* Have a good knowledge of the new capabilities and features added to Integration Services* Implement ETL solutions using Integration Services for both on-premises and Azure data* Improve the performance and scalability of an ETL solution* Enhance the ETL solution using a custom framework* Be able to work on the ETL solution with many other developers and have common design paradigms or techniques* Effectively use scripting to solve complex data issuesIn DetailSQL Server Integration Services is a tool that facilitates data extraction, consolidation, and loading options (ETL), SQL Server coding enhancements, data warehousing, and customizations. With the help of the recipes in this book, you'll gain complete hands-on experience of SSIS 2017 as well as the 2016 new features, design and development improvements including SCD, Tuning, and Customizations.At the start, you'll learn to install and set up SSIS as well other SQL Server resources to make optimal use of this Business Intelligence tools. We'll begin by

taking you through the new features in SSIS 2016/2017 and implementing the necessary features to get a modern scalable ETL solution that fits the modern data warehouse.Through the course of chapters, you will learn how to design and build SSIS data warehouses packages using SQL Server Data Tools. Additionally, you'll learn to develop SSIS packages designed to maintain a data warehouse using the Data Flow and other control flow tasks. You'll also be demonstrated many recipes on cleansing data and how to get the end result after applying different transformations. Some real-world scenarios that you might face are also covered and how to handle various issues that you might face when designing your packages.At the end of this book, you'll get to know all the key concepts to perform data integration and transformation. You'll have explored on-premises Big Data integration processes to create a classic data warehouse, and will know how to extend the toolbox with custom tasks and transforms.Style and approachThis cookbook follows a problem-solution approach and tackles all kinds of data integration scenarios by using the capabilities of SQL Server 2016 Integration Services. This book is well supplemented with screenshots, tips, and tricks. Each recipe focuses on a particular task and is written in a very easy-to-follow manner.

SQL Server 2019 Administration Inside Out - Randolph West 2020-03-11
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

Advanced Oracle PL/SQL Developer's Guide - Saurabh K. Gupta 2016-02-15
Master the advanced concepts of PL/SQL for professional-level certification and learn the new capabilities of Oracle Database 12c About This Book Learn advanced application development features of Oracle Database 12c and prepare for the 1Z0-146 examination Build robust and secure applications in Oracle PL/SQL using the best practices Packed with feature demonstrations and illustrations that will help you learn and understand the enhanced capabilities of Oracle Database 12c Who This Book Is For This book is for Oracle developers responsible for database management. Readers are expected to have basic knowledge of Oracle Database and the fundamentals of PL/SQL programming. Certification aspirants can use this book to prepare for 1Z0-146 examination in order to be an Oracle Certified Professional in Advanced PL/SQL. What You Will Learn Learn and understand the key SQL and PL/SQL features of Oracle Database 12c Understand the new Multitenant architecture and Database In-Memory option of Oracle Database 12c Know more about the advanced concepts of the Oracle PL/SQL language such as external procedures, securing data using Virtual Private Database (VPD), SecureFiles, and PL/SQL code tracing and profiling Implement Virtual Private Databases to prevent unauthorized data access Trace, analyze, profile, and debug PL/SQL code while developing database applications Integrate the new application development features of Oracle Database 12c with the current concepts Discover techniques to analyze and maintain PL/SQL code Get acquainted with the best practices of writing PL/SQL code and develop secure applications In Detail Oracle Database

is one of the most popular databases and allows users to make efficient use of their resources and to enhance service levels while reducing the IT costs incurred. Oracle Database is sometimes compared with Microsoft SQL Server, however, Oracle Database clearly supersedes SQL server in terms of high availability and addressing planned and unplanned downtime. Oracle PL/SQL provides a rich platform for application developers to code and build scalable database applications and introduces multiple new features and enhancements to improve development experience. Advanced Oracle PL/SQL Developer's Guide, Second Edition is a handy technical reference for seasoned professionals in the database development space. This book starts with a refresher of fundamental concepts of PL/SQL, such as anonymous block, subprograms, and exceptions, and prepares you for the upcoming advanced concepts. The next chapter introduces you to the new features of Oracle Database 12c, not limited to PL/SQL. In this chapter, you will understand some of the most talked about features such as Multitenant and Database In-Memory. Moving forward, each chapter introduces advanced concepts with the help of demonstrations, and provides you with the latest update from Oracle Database 12c context. This helps you to visualize the pre- and post-applications of a feature over the database releases. By the end of this book, you will have become an expert in PL/SQL programming and will be able to implement advanced concepts of PL/SQL for efficient management of Oracle Database. Style and approach The book follows the structure of the Oracle Certification examination but doesn't restrict itself to the exam objectives. Advanced concepts have been explained in an easy-to-understand style, supported with feature demonstrations and case illustrations.

The Guru's Guide to SQL Server Stored Procedures, XML, and HTML - Ken Henderson 2002
Explores the foundations of SQL and Transact-SQL programming to teach readers how to develop coding techniques and discover solutions to programming problems, then covers practices, design considerations, and advanced topics.

SQL Server 2017 Developer's Guide - William Durkin 2018-03-16
Build smarter and efficient database application systems for your organization with SQL Server 2017 Key Features Build database applications by using the development features of SQL Server 2017 Work with temporal tables to get information stored in a table at any time Use adaptive querying to enhance the performance of your queries Book Description Microsoft SQL Server 2017 is the next big step in the data platform history of Microsoft as it brings in the power of R and Python for machine learning and containerization-based deployment on Windows and Linux. Compared to its predecessor, SQL Server 2017 has evolved into Machine Learning with R services for statistical analysis and Python packages for analytical processing. This book prepares you for more advanced topics by starting with a quick introduction to SQL Server 2017's new features and a recapitulation of the possibilities you may have already explored with previous versions of SQL Server. The next part introduces you to enhancements in the Transact-SQL language and new database engine capabilities and then switches to a completely new technology inside SQL Server: JSON support. We also take a look at the Stretch database, security enhancements, and temporal tables. Furthermore, the book focuses on implementing advanced topics, including Query Store, columnstore indexes, and In-Memory OLTP. Towards the end of the book, you'll be introduced to R and how to use the R language with Transact-SQL for data exploration and analysis. You'll also learn to integrate Python code in SQL Server and graph database implementations along with deployment options on Linux and SQL Server in containers for development and testing. By the end of this book, you will have the required information to design efficient, high-performance database applications without any hassle. What you will learn Explore the new development features introduced in SQL Server 2017 Identify opportunities for In-Memory OLTP technology Use columnstore indexes to get storage and performance improvements Exchange JSON data between applications and SQL Server Use the new security features to encrypt or mask the data Control the access to the data on the row levels Discover the potential of R and Python integration Model complex relationships with the graph databases in SQL Server 2017 Who this book is for Database developers and solution architects looking to design efficient database applications using SQL Server 2017 will find this book very useful. In addition, this book will be valuable to advanced analysis practitioners and business intelligence developers. Database consultants dealing with performance tuning will get a lot of useful information from this book as well. Some basic understanding of database concepts and T-SQL is required to get the best out of this book.

SQL Server 2016 Developer's Guide - Dejan Sarka 2017-03-22
Get the most out of the rich development capabilities of SQL Server 2016
to build efficient database applications for your organization About This
Book Utilize the new enhancements in Transact-SQL and security
features in SQL Server 2016 to build efficient database applications
Work with temporal tables to get information about data stored in the
table at any point in time A detailed guide to SQL Server 2016,
introducing you to multiple new features and enhancements to improve
your overall development experience Who This Book Is For This book is
for database developers and solution architects who plan to use the new
SQL Server 2016 features for developing efficient database applications.
It is also ideal for experienced SQL Server developers who want to
switch to SQL Server 2016 for its rich development capabilities. Some
understanding of the basic database concepts and Transact-SQL
language is assumed. What You Will Learn Explore the new development
features introduced in SQL Server 2016 Identify opportunities for In-
Memory OLTP technology, significantly enhanced in SQL Server 2016
Use columnstore indexes to get significant storage and performance
improvements Extend database design solutions using temporal tables
Exchange JSON data between applications and SQL Server in a more
efficient way Migrate historical data transparently and securely to
Microsoft Azure by using Stretch Database Use the new security features
to encrypt or to have more granular control over access to rows in a
table Simplify performance troubleshooting with Query Store Discover
the potential of R's integration with SQL Server In Detail Microsoft SQL
Server 2016 is considered the biggest leap in the data platform history of
the Microsoft, in the ongoing era of Big Data and data science.
Compared to its predecessors, SQL Server 2016 offers developers a
unique opportunity to leverage the advanced features and build
applications that are robust, scalable, and easy to administer. This book
introduces you to new features of SQL Server 2016 which will open a
completely new set of possibilities for you as a developer. It prepares you
for the more advanced topics by starting with a quick introduction to
SQL Server 2016's new features and a recapitulation of the possibilities
you may have already explored with previous versions of SQL Server.
The next part introduces you to small delights in the Transact-SQL
language and then switches to a completely new technology inside SQL
Server - JSON support. We also take a look at the Stretch database,
security enhancements, and temporal tables. The last chapters
concentrate on implementing advanced topics, including Query Store,
columnstore indexes, and In-Memory OLTP. You will finally be
introduced to R and how to use the R language with Transact-SQL for
data exploration and analysis. By the end of this book, you will have the
required information to design efficient, high-performance database
applications without any hassle. Style and approach This book is a
detailed guide to mastering the development features offered by SQL
Server 2016, with a unique learn-as-you-do approach. All the concepts
are explained in a very easy-to-understand manner and are
supplemented with examples to ensure that you—the developer—are able
to take that next step in building more powerful, robust applications for
your organization with ease.
SQL Server 2017 Machine Learning Services with R - Julie Koesmarno
2018-02-27
Develop and run efficient R scripts and predictive models for SQL Server
2017 Key Features Learn how you can combine the power of R and SQL
Server 2017 to build efficient, cost-effective data science solutions
Leverage the capabilities of R Services to perform advanced analytics--
from data exploration to predictive modeling A quick primer with
practical examples to help you get up- and- running with SQL Server
2017 Machine Learning Services with R, as part of database solutions
with continuous integration / continuous delivery. Book Description R
Services was one of the most anticipated features in SQL Server 2016,
improved significantly and rebranded as SQL Server 2017 Machine
Learning Services. Prior to SQL Server 2016, many developers and data
scientists were already using R to connect to SQL Server in siloed
environments that left a lot to be desired, in order to do additional data
analysis, superseding SSAS Data Mining or additional CLR programming
functions. With R integrated within SQL Server 2017, these developers
and data scientists can now benefit from its integrated, effective,
efficient, and more streamlined analytics environment. This book gives
you foundational knowledge and insights to help you understand SQL
Server 2017 Machine Learning Services with R. First and foremost, the
book provides practical examples on how to implement, use, and
understand SQL Server and R integration in corporate environments,
and also provides explanations and underlying motivations. It covers

installing Machine Learning Services;maintaining, deploying, and
managing code;and monitoring your services. Delving more deeply into
predictive modeling and the RevoScaleR package, this book also provides
insights into operationalizing code and exploring and visualizing data. To
complete the journey, this book covers the new features in SQL Server
2017 and how they are compatible with R, amplifying their combined
power. What you will learn Get an overview of SQL Server 2017 Machine
Learning Services with R Manage SQL Server Machine Learning
Services from installation to configuration and maintenance Handle and
operationalize R code Explore RevoScaleR R algorithms and create
predictive models Deploy, manage, and monitor database solutions with
R Extend R with SQL Server 2017 features Explore the power of R for
database administrators Who this book is for This book is for data
analysts, data scientists, and database administrators with some or no
experience in R but who are eager to easily deliver practical data science
solutions in their day-to-day work (or future projects) using SQL Server.
*Professional Microsoft SQL Server 2016 Reporting Services and Mobile
Reports* - Paul Turley 2017-02-06
Optimize reporting and BI with Microsoft SQL Server 2016 Professional
Microsoft SQL Server 2016 Reporting Services and Mobile Reports
provides a comprehensive lesson in business intelligence (BI),
operational reporting and Reporting Services architecture using a clear,
concise tutorial approach. You'll learn effective report solution design
based upon many years of experience with successful report solutions.
Improve your own reports with advanced, best-practice design, usability,
query design, and filtering techniques. Expert guidance provides insight
into common report types and explains where each could be made more
efficient, while providing step-by step instruction on Microsoft SQL
Server 2016. All changes to the 2016 release are covered in detail,
including improvements to the Visual Studio Report Designer (SQL
Server Data Tools) and Report Builder, Mobile Dashboard Designer, the
new Report Portal Interface, HTML-5 Rendering, Power BI integration,
Custom Parameters Pane, and more. The Microsoft SQL Server 2016
release will include significant changes. New functionality, new
capabilities, re-tooled processes, and changing support require a
considerable update to existing knowledge. Whether you're starting from
scratch or simply upgrading, this book is an essential guide to report
design and business intelligence solutions. Understand BI fundamentals
and Reporting Services architecture Learn the ingredients to a
successful report design Get up to speed on Microsoft SQL Server 2016
Grasp the purpose behind common designs to optimize your reporting
Microsoft SQL Server Reporting Services makes reporting faster, easier,
and more powerful than ever in web, desktop and portal solutions.
Compatibility with an extensive variety of data sources makes it a go-to
solution for organizations across the globe. The 2016 release brings
some of the biggest changes in years, and the full depth and breadth of
these changes can create a serious snag in your workflow. For a clear
tutorial geared toward the working professional, Professional Microsoft
SQL Server 2016 Reporting Services and Mobile Reports is the ideal
guide for getting up to speed and producing successful reports.
*Professional Microsoft SQL Server 2016 Reporting Services and Mobile
Reports* - Paul Turley 2017-01-17
Optimize reporting and BI with Microsoft SQL Server 2016 Professional
Microsoft SQL Server 2016 Reporting Services and Mobile Reports
provides a comprehensive lesson in business intelligence (BI),
operational reporting and Reporting Services architecture using a clear,
concise tutorial approach. You'll learn effective report solution design
based upon many years of experience with successful report solutions.
Improve your own reports with advanced, best-practice design, usability,
query design, and filtering techniques. Expert guidance provides insight
into common report types and explains where each could be made more
efficient, while providing step-by step instruction on Microsoft SQL
Server 2016. All changes to the 2016 release are covered in detail,
including improvements to the Visual Studio Report Designer (SQL
Server Data Tools) and Report Builder, Mobile Dashboard Designer, the
new Report Portal Interface, HTML-5 Rendering, Power BI integration,
Custom Parameters Pane, and more. The Microsoft SQL Server 2016
release will include significant changes. New functionality, new
capabilities, re-tooled processes, and changing support require a
considerable update to existing knowledge. Whether you're starting from
scratch or simply upgrading, this book is an essential guide to report
design and business intelligence solutions. Understand BI fundamentals
and Reporting Services architecture Learn the ingredients to a
successful report design Get up to speed on Microsoft SQL Server 2016
Grasp the purpose behind common designs to optimize your reporting

Microsoft SQL Server Reporting Services makes reporting faster, easier, and more powerful than ever in web, desktop and portal solutions. Compatibility with an extensive variety of data sources makes it a go-to solution for organizations across the globe. The 2016 release brings some of the biggest changes in years, and the full depth and breadth of these changes can create a serious snag in your workflow. For a clear tutorial geared toward the working professional, Professional Microsoft SQL Server 2016 Reporting Services and Mobile Reports is the ideal guide for getting up to speed and producing successful reports.

Professional SQL Server 2005 Administration - Brian Knight
2007-03-06
SQL Server 2005 is the largest leap forward for SQL Server since its inception. With this update comes new features that will challenge even the most experienced SQL Server DBAs. Written by a team of some of the best SQL Server experts in the industry, this comprehensive tutorial shows you how to navigate the vastly changed landscape of the SQL Server administration. Drawing on their own first-hand experiences to offer you best practices, unique tips and tricks, and useful workarounds, the authors help you handle even the most difficult SQL Server 2005 administration issues, including blocking and locking. You'll learn how to fine-tune queries you've already written, automate redundant monitoring and maintenance tasks, and use hidden tools so that you can quickly get over the learning curve of how to configure and administer SQL Server 2005. What you will learn from this book How to use some of the more advanced concepts of installation Techniques for properly administering development features such as SQL CLR Ways to secure your SQL Server from common threats How to choose the right hardware configuration Best practices for backing up and recovering your database Step-by-step guidelines for clustering your SQL Server Who this book is for This book is for experienced developers and database administrators who plan to administer or are already administering an SQL Server 2005 system and its business intelligence features. Wrox Professional guides are planned and written by working technologists to meet the real-world needs of programmers, developers, and IT professionals. Focused and relevant, they address the issues technology professionals face every day. They provide examples, practical solutions, and expert education in new technologies, all designed to help programmers do a better job.

Exam Ref 70-761 Querying Data with Transact-SQL - Itzik Ben-Gan
2017-04-04
Prepare for Microsoft Exam 70-761–and help demonstrate your real-world mastery of SQL Server 2016 Transact-SQL data management, queries, and database programming. Designed for experienced IT professionals ready to advance their status, Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSA level. Focus on the expertise measured by these objectives: • Filter, sort, join, aggregate, and modify data • Use subqueries, table expressions, grouping sets, and pivoting • Query temporal and non-relational data, and output XML or JSON • Create views, user-defined functions, and stored procedures • Implement error handling, transactions, data types, and nulls This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have experience working with SQL Server as a database administrator, system engineer, or developer • Includes downloadable sample database and code for SQL Server 2016 SP1 (or later) and Azure SQL Database Querying Data with Transact-SQL About the Exam Exam 70-761 focuses on the skills and knowledge necessary to manage and query data and to program databases with Transact-SQL in SQL Server 2016. About Microsoft Certification Passing this exam earns you credit toward a Microsoft Certified Solutions Associate (MCSA) certification that demonstrates your mastery of essential skills for building and implementing on-premises and cloud-based databases across organizations. Exam 70-762 (Developing SQL Databases) is also required for MCSA: SQL 2016 Database Development certification. See full details at: microsoft.com/learning

SQL Server Database Programming with Visual Basic.NET - Ying Bai
2020-07-15
A guide to the practical issues and applications in database programming with updated Visual Basic.NET SQL Server Database Programming with Visual Basic.NET offers a guide to the fundamental knowledge and practical techniques for the design and creation of professional database programs that can be used for real-world commercial and industrial applications. The author—a noted expert on the topic—uses the most current version of Visual Basic.NET, Visual Basic.NET 2017 with Visual Studio.NET 2017. In addition, he introduces the updated SQL Server database and Microsoft SQL Server 2017 Express. All sample program

projects can be run in the most updated version, Visual Basic.NET 2019 with Visual Studio.NET 2019. Written in an accessible, down-to-earth style, the author explains how to build a sample database using the SQL Server management system and Microsoft SQL Server Management Studio 2018. The latest version of ASP.NET, ASP.NET 4.7, is also discussed to provide the most up-to-date Web database programming technologies. This important book: Offers illustrative practical examples and detailed descriptions to aid in comprehension of the material presented Includes both fundamental and advanced database programming techniques Integrates images into associated database tables using a DevExpress UI tools -WindowsUI Written for graduate and senior undergraduate students studying database implementations and programming courses, SQL Server Database Programming with Visual Basic.NET shows how to develop professional and practical database programs in Visual Basic.NET 2017/Visual Basic.NET 2019.

Data Science with SQL Server Quick Start Guide - Dejan Sarka
2018-08-31
Get unique insights from your data by combining the power of SQL Server, R and Python Key Features Use the features of SQL Server 2017 to implement the data science project life cycle Leverage the power of R and Python to design and develop efficient data models find unique insights from your data with powerful techniques for data preprocessing and analysis Book Description SQL Server only started to fully support data science with its two most recent editions. If you are a professional from both worlds, SQL Server and data science, and interested in using SQL Server and Machine Learning (ML) Services for your projects, then this is the ideal book for you. This book is the ideal introduction to data science with Microsoft SQL Server and In-Database ML Services. It covers all stages of a data science project, from businessand data understanding,through data overview, data preparation, modeling and using algorithms, model evaluation, and deployment. You will learn to use the engines and languages that come with SQL Server, including ML Services with R and Python languages and Transact-SQL. You will also learn how to choose which algorithm to use for which task, and learn the working of each algorithm. What you will learn Use the popular programming languages,T-SQL, R, and Python, for data science Understand your data with queries and introductory statistics Create and enhance the datasets for ML Visualize and analyze data using basic and advanced graphs Explore ML using unsupervised and supervised models Deploy models in SQL Server and perform predictions Who this book is for SQL Server professionals who want to start with data science, and data scientists who would like to start using SQL Server in their projects will find this book to be useful. Prior exposure to SQL Server will be helpful.

Learn T-SQL Querying - Pedro Lopes 2019-05-03
Troubleshoot query performance issues, identify anti-patterns in code, and write efficient T-SQL queries Key FeaturesDiscover T-SQL functionalities and services that help you interact with relational databasesUnderstand the roles, tasks and responsibilities of a T-SQL developer Explore solutions for carrying out database querying tasks, database administration, and troubleshootingBook Description Transact-SQL (T-SQL) is Microsoft's proprietary extension to the SQL language that is used with Microsoft SQL Server and Azure SQL Database. This book will be a useful guide to learning the art of writing efficient T-SQL code in modern SQL Server versions, as well as the Azure SQL Database. The book will get you started with query processing fundamentals to help you write powerful, performant T-SQL queries. You will then focus on query execution plans and learn how to leverage them for troubleshooting. In the later chapters, you will learn how to identify various T-SQL patterns and anti-patterns. This will help you analyze execution plans to gain insights into current performance, and determine whether or not a query is scalable. You will also learn to build diagnostic queries using dynamic management views (DMVs) and dynamic management functions (DMFs) to address various challenges in T-SQL execution. Next, you will study how to leverage the built-in tools of SQL Server to shorten the time taken to address query performance and scalability issues. In the concluding chapters, the book will guide you through implementing various features, such as Extended Events, Query Store, and Query Tuning Assistant using hands-on examples. By the end of this book, you will have the skills to determine query performance bottlenecks, avoid pitfalls, and discover the anti-patterns in use. Foreword by Conor Cunningham, Partner Architect – SQL Server and Azure SQL – Microsoft What you will learnUse Query Store to understand and easily change query performanceRecognize and eliminate bottlenecks that lead to slow performanceDeploy quick fixes

and long-term solutions to improve query performanceImplement best practices to minimize performance risk using T-SQLAchieve optimal performance by ensuring careful query and index designUse the latest performance optimization features in SQL Server 2017 and SQL Server 2019Protect query performance during upgrades to newer versions of SQL ServerWho this book is for This book is for database administrators, database developers, data analysts, data scientists, and T-SQL practitioners who want to get started with writing T-SQL code and troubleshooting query performance issues, through the help of practical examples. Previous knowledge of T-SQL querying is not required to get started on this book.

Data Modeling for Azure Data Services - Peter ter Braake 2021-07-30 Choose the right Azure data service and correct model design for successful implementation of your data model with the help of this hands-on guide Key Features Design a cost-effective, performant, and scalable database in Azure Choose and implement the most suitable design for a database Discover how your database can scale with growing data volumes, concurrent users, and query complexity Book Description Data is at the heart of all applications and forms the foundation of modern data-driven businesses. With the multitude of data-related use cases and the availability of different data services, choosing the right service and implementing the right design becomes paramount to successful implementation. Data Modeling for Azure Data Services starts with an introduction to databases, entity analysis, and normalizing data. The book then shows you how to design a NoSQL database for optimal performance and scalability and covers how to provision and implement Azure SQL DB, Azure Cosmos DB, and Azure Synapse SQL Pool. As you progress through the chapters, you'll learn about data analytics, Azure Data Lake, and Azure SQL Data Warehouse and explore dimensional modeling, data vault modeling, along with designing and implementing a Data Lake using Azure Storage. You'll also learn how to implement ETL with Azure Data Factory. By the end of this book, you'll have a solid understanding of which Azure data services are the best fit for your model and how to implement the best design for your solution. What you will learn Model relational database using normalization, dimensional, or Data Vault modeling Provision and implement Azure SQL DB and Azure Synapse SQL Pools Discover how to model a Data Lake and implement it using Azure Storage Model a NoSQL database and provision and implement an Azure Cosmos DB Use Azure Data Factory to implement ETL/ELT processes Create a star schema model using dimensional modeling Who this book is for This book is for business intelligence developers and consultants who work on (modern) cloud data warehousing and design and implement databases. Beginner-level knowledge of cloud data management is expected.

SQL Server Database Programming with Visual Basic.NET - Ying Bai 2020-06-01
A guide to the practical issues and applications in database programming with updated Visual Basic.NET SQL Server Database Programming with Visual Basic.NET offers a guide to the fundamental knowledge and practical techniques for the design and creation of professional database programs that can be used for real-world commercial and industrial applications. The author—a noted expert on the topic—uses the most current version of Visual Basic.NET, Visual Basic.NET 2017 with Visual Studio.NET 2017. In addition, he introduces the updated SQL Server database and Microsoft SQL Server 2017 Express. All sample program projects can be run in the most updated version, Visual Basic.NET 2019 with Visual Studio.NET 2019. Written in an accessible, down-to-earth style, the author explains how to build a sample database using the SQL Server management system and Microsoft SQL Server Management Studio 2018. The latest version of ASP.NET, ASP.NET 4.7, is also discussed to provide the most up-to-date Web database programming technologies. This important book: Offers illustrative practical examples and detailed descriptions to aid in comprehension of the material presented Includes both fundamental and advanced database programming techniques Integrates images into associated database tables using a DevExpress UI tools -WindowsUI Written for graduate and senior undergraduate students studying database implementations and programming courses, SQL Server Database Programming with Visual Basic.NET shows how to develop professional and practical database programs in Visual Basic.NET 2017/Visual Basic.NET 2019.

T-SQL Querying - Itzik Ben-Gan 2015-02-17
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

SQL Server 2017 Administration Inside Out - William Assaf 2018-02-26
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

Microsoft SQL Server 2012 Administration - Tom Carpenter 2013-06-03
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.

SQL Server 2017 Query Performance Tuning - Grant Fritchey 2018-09-03
Identify and fix causes of poor performance. You will learn Query Store, adaptive execution plans, and automated tuning on the Microsoft Azure

SQL Database platform. Anyone responsible for writing or creating T-SQL queries will find valuable the insight into bottlenecks, including how to recognize them and eliminate them. This book covers the latest in performance optimization features and techniques and is current with SQL Server 2017. If your queries are not running fast enough and you're tired of phone calls from frustrated users, then this book is the answer to your performance problems. SQL Server 2017 Query Performance Tuning is about more than quick tips and fixes. You'll learn to be proactive in establishing performance baselines using tools such as Performance Monitor and Extended Events. You'll recognize bottlenecks and defuse them before the phone rings. You'll learn some quick solutions too, but emphasis is on designing for performance and getting it right. The goal is to head off trouble before it occurs. What You'll Learn Use Query Store to understand and easily change query performance Recognize and eliminate bottlenecks leading to slow performance Deploy quick fixes when needed, following up with long-term solutions Implement best practices in T-SQL to minimize performance risk Design in the performance that you need through careful query and index design Utilize the latest performance optimization features in SQL Server 2017 Protect query performance during upgrades to the newer versions of SQL Server Who This Book Is For Developers and database administrators with responsibility for application performance in SQL Server environments. Anyone responsible for writing or creating T-SQL queries will find valuable the insight into bottlenecks, including how to recognize them and eliminate them.

Professional Azure SQL Managed Database Administration - Ahmad Osama 2021-03-08
Master data management by effectively utilizing the features of Azure SQL database. Key FeaturesLearn to automate common management tasks with PowerShell.Understand different methods to generate elastic pools and shards to scale Azure SQL databases.Learn to develop a scalable cloud solution through over 40 practical activities and exercises.Book Description Despite being the cloud version of SQL Server, Azure SQL Database and Azure SQL Managed Instance stands out in various aspects when it comes to management, maintenance, and administration. Updated with the latest Azure features, Professional Azure SQL Managed Database Administration continues to be a comprehensive guide for becoming proficient in data management. The book begins by introducing you to the Azure SQL managed databases (Azure SQL Database and Azure SQL Managed Instance), explaining their architecture, and how they differ from an on-premises SQL server. You will then learn how to perform common tasks, such as migrating, backing up, and restoring a SQL Server database to an Azure database. As you progress, you will study how you can save costs and manage and scale multiple SQL databases using elastic pools. You will also implement a disaster recovery solution using standard and active geo-replication. Finally, you will explore the monitoring and tuning of databases, the key features of databases, and the phenomenon of app modernization. By the end of this book, you will have mastered the key aspects of an Azure SQL database and Azure SQL managed instance, including migration, backup restorations, performance optimization, high availability, and disaster recovery. What you will learnUnderstanding Azure SQL database configuration and pricing optionsProvisioning a new SQL database or migrating an existing on-premises SQL Server database to an Azure SQL databaseBacking up and restoring an Azure SQL databaseSecuring and scaling an Azure SQL databaseMonitoring and tuning an Azure SQL databaseImplementing high availability and disaster recovery with an Azure SQL databaseManaging, maintaining, and securing managed instancesWho this book is for This book is designed to benefit database administrators, database developers, or application developers who are interested in developing new applications or migrating existing ones with Azure SQL database. Prior experience of working with an on-premise SQL Server or Azure SQL database along with a basic understanding of PowerShell scripts and C# code is necessary to grasp the concepts covered in this book.

The SQL Server DBA's Guide to Docker Containers - Edwin M Sarmiento 2020-05-29
Get introduced to the world of Docker containers from a SQL Server DBA's perspective. This book explains container technology and how it can improve the deployment of your SQL Server databases without infrastructure lock-in. You will be equipped with the right technical skills to guide stakeholders in your business as they adopt and adapt to new technologies to improve time-to-market and competitiveness. You will learn how to build a lab environment at home on which to build skills that transfer directly into your day job. This book teaches you how to

install and configure Docker on both Windows Server and Linux operating systems. You will learn the most common Docker commands that you need to know as a DBA to deploy and manage SQL Server on containers. Support for SQL Server on Linux is new, and this book has your back with guidance on creating Docker images specifically for deployment to a Linux platform. Included is coverage of key Linux commands needed to manage SQL Server on that operating system. By the end of the book you will have learned how to create your own custom SQL Server container images with configuration settings that are specific to your organization, that are capable of being deployed to both Windows Server and Linux. What You Will LearnCreate Docker containers for agile deployment of SQL ServerRun multiple SQL Server instances on a single Linux machineDeploy custom images specific to your organization's needsKnow the benefits and architecture of container technologyInstall and configure Docker on Windows Server and Linux Manage and persist SQL Server data in Docker containers Who This Book Is For Intermediate to senior SQL Server DBAs who are familiar with SQL Server on Windows and want to build their existing skills to deploy and manage SQL Server on Linux and through Docker containers. Readers should have a grasp of relational database concepts and be comfortable with the Transact-SQL language.

Data Professionals at Work - Malathi Mahadevan 2018-10-11
Enjoy reading interviews with more than two dozen data professionals to see a picture of what it's like to work in the industry managing and analyzing data, helping you to know what it takes to move from your current expertise into one of the fastest growing areas of technology today. Data is the hottest word of the century, and data professionals are in high demand. You may already be a data professional such as a database administrator or business intelligence analyst. Or you may be one of the many people who want to work as a data professional, and are curious how to get there. Either way, this collection helps you understand how data professionals work, what makes them successful, and what they do to keep up. You'll find interviews in this book with database administrators, database programmers, data architects, business intelligence professionals, and analytics professionals. Interviewees work across industry sectors ranging from healthcare and banking to finance and transportation and beyond. Each chapter illuminates a successful professional at the top of their game, who shares what helped them get to the top, and what skills and attitudes combine to make them successful in their respective fields. Interviewees in the book include: Mindy Curnutt, Julie Smith, Kenneth Fisher, Andy Leonard, Jes Borland, Kevin Feasel, Ginger Grant, Vicky Harp, Kendra Little, Jason Brimhall, Tim Costello, Andy Mallon, Steph Locke, Jonathan Stewart, Joseph Sack, John Q. Martin, John Morehouse, Kathi Kellenberger, Argenis Fernandez, Kirsten Benzel, Tracy Boggiano, Dave Walden, Matt Gordon, Jimmy May, Drew Furgiuele, Marlon Ribunal, and Joseph Fleming. All of them have been successful in their careers, and share their perspectives on working and succeeding in the field as data and database professionals. What You'll Learn Stand out as an outstanding professional in your area of data work by developing the right set of skills and attitudes that lead to success Avoid common mistakes and pitfalls, and recover from operational failures and bad technology decisions Understand current trends and best practices, and stay out in front as the field evolvesBreak into working with data through database administration, business intelligence, or any of the other career paths represented in this book Manage stress and develop a healthy work-life balance no matter which career path you decide upon Choose a suitable path for yourself from among the different career paths in working with data Who This Book Is For Database administrators and developers, database and business intelligence architects, consultants, and analytic professionals, as well as those intent on moving into one of those career paths. Aspiring data professionals and those in related technical fields who want to make a move toward managing or analyzing data on a full-time basis will find the book useful. Existing data professionals who want to be outstanding and successful at what they do will also appreciate the book's advice and guidance.

Pro SQL Server on Linux - Bob Ward 2018-10-27
Get SQL Server up and running on the Linux operating system and containers. No database professional managing or developing SQL Server on Linux will want to be without this deep and authoritative guide by one of the most respected experts on SQL Server in the industry. Get an inside look at how SQL Server for Linux works through the eyes of an engineer on the team that made it possible. Microsoft SQL Server is one of the leading database platforms in the industry, and SQL Server 2017 offers developers and administrators the ability to run a database

management system on Linux, offering proven support for enterprise-level features and without onerous licensing terms. Organizations invested in Microsoft and open source technologies are now able to run a unified database platform across all their operating system investments. Organizations are further able to take full advantage of containerization through popular platforms such as Docker and Kubernetes. Pro SQL Server on Linux walks you through installing and configuring SQL Server on the Linux platform. The author is one of the principal architects of SQL Server for Linux, and brings a corresponding depth of knowledge that no database professional or developer on Linux will want to be without. Throughout this book are internals of how SQL Server on Linux works including an in depth look at the innovative architecture. The book covers day-to-day management and troubleshooting, including diagnostics and monitoring, the use of containers to manage deployments, and the use of self-tuning and the in-memory capabilities. Also covered are performance capabilities, high availability, and disaster recovery along with security and encryption. The book covers the product-specific knowledge to bring SQL Server and its powerful features to life on the Linux platform, including coverage of containerization through Docker and Kubernetes. What You'll Learn Learn about the history and internal of the unique SQL Server on Linux architecture. Install and configure Microsoft's flagship database product on the Linux platform Manage your deployments using container technology through Docker and Kubernetes Know the basics of building databases, the T-SQL language, and developing applications against SQL Server on LinuxUse tools and features to diagnose, manage, and monitor SQL Server on LinuxScale your application by learning the performance capabilities of SQL ServerDeliver high availability and disaster recovery to ensure business continuity Secure your database from attack, and protect sensitive data through encryption Take advantage of powerful features such as Failover Clusters, Availability Groups, In-Memory Support, and SQL Server's Self-Tuning Engine Learn how to migrate your database from older releases of SQL Server and other database platforms such as Oracle and PostgreSQLBuild and maintain schemas, and perform management tasks from both GUI and command line Who This Book Is For Developers and IT professionals who are new to SQL Server and wish to configure it on the Linux operating system. This book is also useful to those familiar with SQL Server on Windows who want to learn the unique aspects of managing SQL Server on the Linux platform and Docker containers. Readers should have a grasp of relational database concepts and be comfortable with the SQL language.

Administering and Developing SQL Server 2017 for Linux - Agus Kurniawan 2017-12-17
This is a basic book to explain how to deploy and manage SQL Server 2017 on Linux. The following is a list of topic that covers in this book: * Preparing System Environment * Administering SQL Server 2017 on Linux * Developing Applications for SQL Server 2017 on Linux * SQL Server Integration Services (SSIS) * Backup and Restore * Azure SQL Server 2017 on Linux

Mastering SQL Server 2017 - Miloš Radivojević 2019-08-22
Leverage the power of SQL Server 2017 Integration Services to build data integration solutions with ease Key FeaturesWork with temporal tables to access information stored in a table at any timeGet familiar with the latest features in SQL Server 2017 Integration ServicesProgram and extend your packages to enhance their functionalityBook Description Microsoft SQL Server 2017 uses the power of R and Python for machine learning and containerization-based deployment on Windows and Linux. By learning how to use the features of SQL Server 2017 effectively, you can build scalable apps and easily perform data integration and transformation. You'll start by brushing up on the features of SQL Server 2017. This Learning Path will then demonstrate how you can use Query Store, columnstore indexes, and In-Memory OLTP in your apps. You'll also learn to integrate Python code in SQL Server and graph database implementations for development and testing. Next, you'll get up to speed with designing and building SQL Server Integration Services (SSIS) data warehouse packages using SQL server data tools. Toward the concluding chapters, you'll discover how to develop SSIS packages designed to maintain a data warehouse using the data flow and other control flow tasks. By the end of this Learning Path, you'll be equipped with the skills you need to design efficient, high-performance database applications with confidence. This Learning Path includes content from the following Packt books: SQL Server 2017 Developer's Guide by Miloš Radivojević, Dejan Sarka, et. al SQL Server 2017 Integration Services Cookbook by Christian Cote, Dejan Sarka, et. alWhat you will learnUse columnstore indexes to make storage and performance

improvementsExtend database design solutions using temporal tablesExchange JSON data between applications and SQL ServerMigrate historical data to Microsoft Azure by using Stretch DatabaseDesign the architecture of a modern Extract, Transform, and Load (ETL) solutionImplement ETL solutions using Integration Services for both on-premise and Azure dataWho this book is for This Learning Path is for database developers and solution architects looking to develop ETL solutions with SSIS, and explore the new features in SSIS 2017. Advanced analysis practitioners, business intelligence developers, and database consultants dealing with performance tuning will also find this book useful. Basic understanding of database concepts and T-SQL is required to get the best out of this Learning Path.

SQL Server 2017 Integration Services Cookbook - Christian Cote 2017-06-30
Harness the power of SQL Server 2017 Integration Services to build your data integration solutions with ease About This Book Acquaint yourself with all the newly introduced features in SQL Server 2017 Integration Services Program and extend your packages to enhance their functionality This detailed, step-by-step guide covers everything you need to develop efficient data integration and data transformation solutions for your organization Who This Book Is For This book is ideal for software engineers, DW/ETL architects, and ETL developers who need to create a new, or enhance an existing, ETL implementation with SQL Server 2017 Integration Services. This book would also be good for individuals who develop ETL solutions that use SSIS and are keen to learn the new features and capabilities in SSIS 2017. What You Will Learn Understand the key components of an ETL solution using SQL Server 2016-2017 Integration Services Design the architecture of a modern ETL solution Have a good knowledge of the new capabilities and features added to Integration Services Implement ETL solutions using Integration Services for both on-premises and Azure data Improve the performance and scalability of an ETL solution Enhance the ETL solution using a custom framework Be able to work on the ETL solution with many other developers and have common design paradigms or techniques Effectively use scripting to solve complex data issues In Detail SQL Server Integration Services is a tool that facilitates data extraction, consolidation, and loading options (ETL), SQL Server coding enhancements, data warehousing, and customizations. With the help of the recipes in this book, you'll gain complete hands-on experience of SSIS 2017 as well as the 2016 new features, design and development improvements including SCD, Tuning, and Customizations. At the start, you'll learn to install and set up SSIS as well other SQL Server resources to make optimal use of this Business Intelligence tools. We'll begin by taking you through the new features in SSIS 2016/2017 and implementing the necessary features to get a modern scalable ETL solution that fits the modern data warehouse. Through the course of chapters, you will learn how to design and build SSIS data warehouses packages using SQL Server Data Tools. Additionally, you'll learn to develop SSIS packages designed to maintain a data warehouse using the Data Flow and other control flow tasks. You'll also be demonstrated many recipes on cleansing data and how to get the end result after applying different transformations. Some real-world scenarios that you might face are also covered and how to handle various issues that you might face when designing your packages. At the end of this book, you'll get to know all the key concepts to perform data integration and transformation. You'll have explored on-premises Big Data integration processes to create a classic data warehouse, and will know how to extend the toolbox with custom tasks and transforms. Style and approach This cookbook follows a problem-solution approach and tackles all kinds of data integration scenarios by using the capabilities of SQL Server 2016 Integration Services. This book is well supplemented with screenshots, tips, and tricks. Each recipe focuses on a particular task and is written in a very easy-to-follow manner.

SQL Server 2017 Administrator's Guide - Marek Chmel 2017-12-12
Implement and administer successful database solution with SQL Server 2017 About This Book Master the required skills to successfully set up, administer, and maintain your SQL Server 2017 database solution Design and configure, manage, and secure a rock-solid SQL server Comprehensive guide in keeping your SQL server disaster proof and all-time availability Who This Book Is For This book targets database administrators with an interest in SQL Server 2017 administration. Readers are expected to have some experience with previous SQL Server versions. What You Will Learn Learn about the new features of SQL Server 2017 and how to implement them Build a stable and fast SQL Server environment Fix performance issues by optimizing queries and

making use of indexes Perform a health check of an existing troublesome database environment Design and use an optimal database management strategy Implement efficient backup and recovery techniques in-line with security policies Combine SQL Server 2017 and Azure and manage your solution by various automation techniques Perform data migration, cluster upgradation and server consolidation In Detail Take advantage of the real power of SQL Server 2017 with all its new features, in addition to covering core database administration tasks. This book will give you a competitive advantage by helping you quickly learn how to design, manage, and secure your database solution. You will learn how to set up your SQL Server and configure new (and existing) environments for optimal use. After covering the designing aspect, the book delves into performance-tuning aspects by teaching you how to effectively use indexes. The book will also teach you about certain choices that need to be made about backups and how to implement a rock-solid security policy and keep your environment healthy. Finally, you will learn about the techniques you should use when things go wrong, and other important topics - such as migration, upgrading, and consolidation - are covered in detail. Integration with Azure is also covered in depth. Whether you are an administrator or thinking about entering the field, this book will provide you with all the skills you need to successfully create, design, and deploy databases using SQL Server 2017. Style and approach A comprehensive guide for database professionals, covering a wide range of topics from installation, maintenance, and configuration to managing systems for operational efficiency and high availability; best practices for maintaining a highly reliable database solution are also supplied from industry experts.

SQL Server 2017 Administrator's Guide - Marek Chmel 2017-12-12 Implement and administer successful database solution with SQL Server 2017About This Book* Master the required skills to successfully set up, administer, and maintain your SQL Server 2017 database solution* Design and configure, manage, and secure a rock-solid SQL server* Comprehensive guide in keeping your SQL server disaster proof and all-time availabilityWho This Book Is ForThis book targets database administrators with an interest in SQL Server 2017 administration. Readers are expected to have some experience with previous SQL Server versions.What You Will Learn* Learn about the new features of SQL Server 2017 and how to implement them* Build a stable and fast SQL Server environment* Fix performance issues by optimizing queries and making use of indexes* Perform a health check of an existing troublesome database environment* Design and use an optimal database management strategy* Implement efficient backup and recovery techniques in-line with security policies* Combine SQL Server 2017 and Azure and manage your solution by various automation techniques Perform data migration, cluster upgradation and server consolidationIn DetailTake advantage of the real power of SQL Server 2017 with all its new features, in addition to covering core database administration tasks. This book will give you a competitive advantage by helping you quickly learn how to design, manage, and secure your database solution.You will learn how to set up your SQL Server and configure new (and existing) environments for optimal use. After covering the designing aspect, the book delves into performance-tuning aspects by teaching you how to effectively use indexes. The book will also teach you about certain choices that need to be made about backups and how to implement a rock-solid security policy and keep your environment healthy. Finally, you will learn about the techniques you should use when things go wrong, and other important topics - such as migration, upgrading, and consolidation - are covered in detail. Integration with Azure is also covered in depth.Whether you are an administrator or thinking about entering the field, this book will provide you with all the skills you need to successfully create, design, and deploy databases using SQL Server 2017.Style and approachA comprehensive guide for database professionals, covering a wide range of topics from installation, maintenance, and configuration to managing systems for operational efficiency and high availability; best practices for maintaining a highly reliable database solution are also supplied from industry experts.

Microsoft SQL Server 2017 on Linux - Benjamin Nevarez 2018-06-06 Essential Microsoft® SQL Server® 2017 installation, configuration, and management techniques for Linux Foreword by Kalen Delaney, Microsoft SQL Server MVP This comprehensive guide shows, step-by-step, how to set up, configure, and administer SQL Server 2017 on Linux for high performance and high availability. Written by a SQL Server expert and respected author, Microsoft SQL Server 2017 on Linux teaches valuable Linux skills to Windows-based SQL Server professionals. You will get clear coverage of both Linux and SQL Server and complete explanations

of the latest features, tools, and techniques. The book offers clear instruction on adaptive query processing, automatic tuning, disaster recovery, security, and much more. •Understand how SQL Server 2017 on Linux works•Install and configure SQL Server on Linux•Run SQL Server on Docker containers•Learn Linux Administration•Troubleshoot and tune query performance in SQL Server•Learn what is new in SQL Server 2017•Work with adaptive query processing and automatic tuning techniques•Implement high availability and disaster recovery for SQL Server on Linux•Learn the security features available in SQL Server

Transact-SQL Programming - Kevin Kline 1999 Provides detailed information about Transact-SQL programming and shows specific differences between the Microsoft and Sybase versions of the language.

Hands-On Data Science with SQL Server 2017 - Marek Chmel 2018-11-29 Find, explore, and extract big data to transform into actionable insights Key FeaturesPerform end-to-end data analysis—from exploration to visualizationReal-world examples, tasks, and interview queries to be a proficient data scientistUnderstand how SQL is used for big data processing using HiveQL and SparkSQLBook Description SQL Server is a relational database management system that enables you to cover end-to-end data science processes using various inbuilt services and features. Hands-On Data Science with SQL Server 2017 starts with an overview of data science with SQL to understand the core tasks in data science. You will learn intermediate-to-advanced level concepts to perform analytical tasks on data using SQL Server. The book has a unique approach, covering best practices, tasks, and challenges to test your abilities at the end of each chapter. You will explore the ins and outs of performing various key tasks such as data collection, cleaning, manipulation, aggregations, and filtering techniques. As you make your way through the chapters, you will turn raw data into actionable insights by wrangling and extracting data from databases using T-SQL. You will get to grips with preparing and presenting data in a meaningful way, using Power BI to reveal hidden patterns. In the concluding chapters, you will work with SQL Server integration services to transform data into a useful format and delve into advanced examples covering machine learning concepts such as predictive analytics using real-world examples. By the end of this book, you will be in a position to handle the growing amounts of data and perform everyday activities that a data science professional performs. What you will learnUnderstand what data science is and how SQL Server is used for big data processingAnalyze incoming data with SQL queries and visualizationsCreate, train, and evaluate predictive modelsMake predictions using trained models and establish regular retraining coursesIncorporate data source querying into SQL ServerEnhance built-in T-SQL capabilities using SQLCLRVisualize data with Reporting Services, Power View, and Power BITransform data with R, Python, and AzureWho this book is for Hands-On Data Science with SQL Server 2017 is intended for data scientists, data analysts, and big data professionals who want to master their skills learning SQL and its applications. This book will be helpful even for beginners who want to build their career as data science professionals using the power of SQL Server 2017. Basic familiarity with SQL language will aid with understanding the concepts covered in this book.

SQL Server 2017 Machine Learning Services with R - Tomaz Kastrun 2018-02-27 Develop and run efficient R scripts and predictive models for SQL Server 2017 Key Features Learn how you can combine the power of R and SQL Server 2017 to build efficient, cost-effective data science solutions Leverage the capabilities of R Services to perform advanced analytics—from data exploration to predictive modeling A quick primer with practical examples to help you get up- and- running with SQL Server 2017 Machine Learning Services with R, as part of database solutions with continuous integration / continuous delivery. Book Description R Services was one of the most anticipated features in SQL Server 2016, improved significantly and rebranded as SQL Server 2017 Machine Learning Services. Prior to SQL Server 2016, many developers and data scientists were already using R to connect to SQL Server in siloed environments that left a lot to be desired, in order to do additional data analysis, superseding SSAS Data Mining or additional CLR programming functions. With R integrated within SQL Server 2017, these developers and data scientists can now benefit from its integrated, effective, efficient, and more streamlined analytics environment. This book gives you foundational knowledge and insights to help you understand SQL Server 2017 Machine Learning Services with R. First and foremost, the book provides practical examples on how to

implement, use, and understand SQL Server and R integration in corporate environments, and also provides explanations and underlying motivations. It covers installing Machine Learning Services;maintaining, deploying, and managing code;and monitoring your services. Delving more deeply into predictive modeling and the RevoScaleR package, this book also provides insights into operationalizing code and exploring and visualizing data. To complete the journey, this book covers the new features in SQL Server 2017 and how they are compatible with R, amplifying their combined power. What you will learn Get an overview of SQL Server 2017 Machine Learning Services with R Manage SQL Server Machine Learning Services from installation to configuration and maintenance Handle and operationalize R code Explore RevoScaleR R algorithms and create predictive models Deploy, manage, and monitor database solutions with R Extend R with SQL Server 2017 features Explore the power of R for database administrators Who this book is for This book is for data analysts, data scientists, and database administrators with some or no experience in R but who are eager to easily deliver practical data science solutions in their day-to-day work (or future projects) using SQL Server.

Microsoft SQL Server 2019: A Beginner's Guide, Seventh Edition - Dusan Petkovic 2020-01-03
Publisher's Note: Products purchased from Third Party sellers are not guaranteed by the publisher for quality, authenticity, or access to any online entitlements included with the product. Get Up to Speed on Microsoft® SQL Server® 2019 Quickly and Easily Start working with Microsoft SQL Server 2019 in no time with help from this thoroughly revised, practical resource. Filled with real-world examples and hands-on exercises, Microsoft SQL Server 2019: A Beginner's Guide, Seventh Edition starts by explaining fundamental relational database system concepts. From there, you'll learn how to write Transact-SQL statements, execute simple and complex database queries, handle system administration and security, and use powerful analysis and reporting tools. New topics such as SQL and JSON support, graph databases, and support for machine learning with R and Python are also covered in this step-by-step tutorial. • Install, configure, and customize Microsoft SQL Server 2019 • Create and modify database objects with Transact-SQL statements • Write stored procedures and user-defined functions • Handle backup and recovery, and automate administrative tasks • Tune your database system for optimal availability and reliability • Secure your system using authentication, encryption, and authorization • Work with SQL Server Analysis Services, Reporting Services, and other BI tools • Gain knowledge of relational storage, presentation, and retrieval of data stored in the JSON format • Manage graphs using SQL Server Graph Databases • Learn about machine learning support for R and Python

SQL Queries for Mere Mortals - John L. Viescas 2018-01-31
The #1 Easy, Common-Sense Guide to SQL Queries—Updated with More Advanced Techniques and Solutions Foreword by Keith W. Hare, Vice Chair, USA SQL Standards Committee SQL Queries for Mere Mortals has earned worldwide praise as the clearest, simplest tutorial on writing effective queries with the latest SQL standards and database applications. Now, author John L. Viescas has updated this hands-on classic with even more advanced and valuable techniques. Step by step, Viescas guides you through creating reliable queries for virtually any current SQL-based database. He demystifies all aspects of SQL query writing, from simple data selection and filtering to joining multiple tables and modifying sets of data. Building on the basics, Viescas shows how to solve challenging real-world problems, including applying multiple complex conditions on one table, performing sophisticated logical evaluations, and using unlinked tables to think "outside the box." In two brand-new chapters, you learn how to perform complex calculations on groups for sophisticated reporting, and how to partition data into windows for more flexible aggregation. Practice all you want with downloadable sample databases for today's versions of Microsoft Office Access, Microsoft SQL Server, and the open source MySQL and PostgreSQL databases. Whether you're a DBA, developer, user, or

student, there's no better way to master SQL. Coverage includes: Getting started: understanding what relational databases are, and ensuring that your database structures are sound SQL basics: using SELECT statements, creating expressions, sorting information with ORDER BY, and filtering data using WHERE Summarizing and grouping data with GROUP BY and HAVING clauses Drawing data from multiple tables: using INNER JOIN, OUTER JOIN, and UNION operators, and working with subqueries Modifying data sets with UPDATE, INSERT, and DELETE statements Advanced queries: complex NOT and AND, conditions, if-then-else using CASE, unlinked tables, driver tables, and more NEW! Using advanced GROUP BY keywords to create subtotals, roll-ups, and more NEW! Applying window functions to answer more sophisticated questions, and gain deeper insight into your data Software-Independent Approach! If you work with database software such as Access, MS SQL Server, Oracle, DB2, MySQL, Ingres, or any other SQL-based program, this book could save you hours of time and aggravation—before you write a single query!

Pro T-SQL 2008 Programmer's Guide - Michael Coles 2008-10-03
Discussing new and existing features, SQL Server designer and administrator Michael Coles takes you on an expert guided tour of Transact–SQL functionality in SQL Server 2008 in his book, Pro T–SQL 2008 Programmer's Guide. Fully functioning examples and downloadable source code bring Coles' technically accurate and engaging treatment of Transact–SQL into your own hands. Step–by–step explanations ensure clarity, and an advocacy of best–practices will steer you down the road to success. Pro T–SQL 2008 Programmer's Guide is every developer's key to making full use of SQL Server 2008's powerful, built–in Transact–SQL language. Transact–SQL is the language developers and DBAs use to interact with SQL Server. It's used for everything from querying data, to writing stored procedures, to managing the database. New features in SQL Server 2008 include a spatial data type, SQLCLR integration, the MERGE statement, a dramatically improved and market–leading XML feature set, and support for encryption—all of which are covered in this book

Professional SQL Server High Availability and Disaster Recovery - Ahmad Osama 2019-01-31
Leverage powerful features of the SQL Server and watch your infrastructure transform into a high-performing, reliable network of systems. Key Features Explore more than 20 real-world use cases to understand SQL Server features Get to grips with the SQL Server Always On technology Learn how to choose HA and DR topologies for your system Book Description Professional SQL Server High Availability and Disaster Recovery explains the high availability and disaster recovery technologies available in SQL Server: Replication, AlwaysOn, and Log Shipping. You'll learn what they are, how to monitor them, and how to troubleshoot any related problems. You will be introduced to the availability groups of AlwaysOn and learn how to configure them to extend your database mirroring. Through this book, you will be able to explore the technical implementations of high availability and disaster recovery technologies that you can use when you create a highly available infrastructure, including hybrid topologies. Note that this course does not cover SQL Server Failover Cluster Installation with shared storage. By the end of the book, you'll be equipped with all that you need to know to develop robust and high performance infrastructure. What you will learn Configure and troubleshoot Replication, AlwaysOn, and Log Shipping Study the best practices to implement HA and DR solutions Design HA and DR topologies for the SQL Server and study how to choose a topology for your environment Use T-SQL to configure replication, AlwaysOn, and log shipping Migrate from On-Premise SQL Server to Azure SQL Database Manage and maintain AlwaysOn availability groups for extended database mirroring Who this book is for Professional SQL Server High Availability and Disaster Recovery is for you if you are a database administrator or database developer who wants to improve the performance of your production environment. Prior experience of working with SQL Server will help you get the most out of this book.