

The Microsoft Data Warehouse Toolkit With Sql Server 2008 R2 And The Microsoft Business Intelligence

This book aims to help students and practitioners who are new to data warehousing to start developing a new data warehouse project from scratch. It shows different phases of data warehousing projects through a simple case. So readers can experience the full data warehouse development life-cycle through a simple example step-by-step. The book is written for the novice user, so there is no requirement for previous experience of working with MS SQL Server and other tools. However, it expects readers to know basics of databases like the table, columns, etc. The book does not aim to teach data warehousing multi-dimensional design principle, nor play the role of a comprehensive reference book on Microsoft Business Intelligence Toolset. It only intends to help readers to get a hands-on experience on data warehouse development quickly. It aims to give readers basic understanding and experience, so they become more confident in using reference books and online materials. The book does not go through the installation of tools that are used in the sample project. The readers need to install the following tools in order to follow the steps, i.e., Microsoft SQL Server Database Engine, Microsoft SQL Server Integration Services (SSIS) 2017, Microsoft SQL Server Analysis Services (SSAS) 2017, Microsoft SQL Server Management Studio (SSMS), Microsoft Excel, and Microsoft Power BI.

Business intelligence projects do not need to cost multi-millions of dollars or take months or even years to complete! Using rapid application development (RAD) techniques along with Microsoft SQL Server 2012, this book guides database administrators, SQL programmers, and report specialists in creating practical, cost-effective business intelligence solutions for their companies and departments. Pro SQL Server 2012 BI Solutions provides practical examples of cost-effective business intelligence projects. Readers will be guided through several complete projects that build a foundation for real-world solutions. Even with limited experience using Microsoft's SQL Server, Integration Server, Analysis Server, and Reporting Server, you can leverage your existing knowledge of SQL programming and database design to provide users with the business intelligence reports they need. Provides recipes for multiple business intelligence scenarios Progresses from simple to advanced projects using several examples Shows Microsoft SQL Server technology used to complete real-world business intelligence projects

This is the eBook of the printed book and may not include any media, website access codes, or print supplements that may come packaged with the bound book. Introducing Microsoft Power BI enables you to evaluate when and how to use Power BI. Get inspired to improve business processes in your company by leveraging the available analytical and collaborative features of this environment. Be sure to watch for the publication of Alberto Ferrari and Marco Russo's upcoming retail book, Analyzing Data with Power BI and Power Pivot for Excel (ISBN 9781509302765). Go to the book's page at the Microsoft Press Store here for more details:<http://aka.ms/analyzingdata/details>. Learn more about Power BI at <https://powerbi.microsoft.com/>.

Learn Business Intelligence Markup Language (Biml) for automating much of the repetitive, manual labor involved in data integration. We teach you how to build frameworks and use advanced Biml features to get more out of SQL Server Integration Services (SSIS), Transact-SQL (T-SQL), and SQL Server Analysis Services (SSAS) than you ever thought possible. The first part of the book starts with the basics—getting your development environment configured, Biml syntax, and scripting essentials. Whether a beginner or a seasoned Biml expert, the next part of the book guides you through the process of using Biml to build a framework that captures both your design patterns and execution management. Design patterns are reusable code blocks that standardize the approach you use to perform certain types of data integration, logging, and other key data functions. Design patterns solve common problems encountered when developing data integration solutions. Because you do not have to build the code from scratch each time, design patterns improve your efficiency as a Biml developer. In addition to leveraging design patterns in your framework, you will learn how to build a robust metadata store and how to package your framework into Biml bundles for deployment within your enterprise. In the last part of the book, we teach you more advanced Biml features and capabilities, such as SSAS development, T-SQL recipes, documentation autogeneration, and Biml troubleshooting. The Biml Book: Provides practical and applicable examples Teaches you how to use Biml to reduce development time while improving quality Takes you through solutions to common data integration and BI challenges What You'll Learn Master the basics of Business Intelligence Markup Language (Biml) Study patterns for automating SSIS package generation Build a Biml Framework Import and transform database schemas Automate generation of scripts and projects Who This Book Is For BI developers wishing to quickly locate previously tested solutions, Microsoft BI specialists, those seeking more information about solution automation and code generation, and practitioners of Data Integration Lifecycle Management (DILM) in the DevOps enterprise With Examples in SQL Server Data Warehousing, Data Mining, and OLAP Methods and Supporting Technologies for Data Analysis Big Data Imperatives

*Applied Microsoft Business Intelligence
The Definitive Guide to Dimensional Modeling*

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

Cowritten by Ralph Kimball, the world's leading data warehousing authority, whose previous books have sold more than 150,000 copies Delivers real-world solutions for the most time- and labor-intensive portion of data warehousing—data staging, or the extract, transform, load (ETL) process Delineates best practices for extracting data from scattered sources, removing redundant and inaccurate data, transforming the remaining data into correctly formatted data structures, and then loading the end product into the data warehouse Offers proven time-saving ETL techniques, comprehensive guidance on building dimensional structures, and crucial advice on ensuring data quality Prepare for Microsoft Exam 70-767—and help demonstrate your real-world mastery of skills for managing data warehouses. This exam is intended for Extract, Transform, Load (ETL) data warehouse developers who create business intelligence (BI) solutions. Their responsibilities include data cleansing as well as ETL and data warehouse implementation. The reader should have experience installing and implementing a Master Data Services (MDS) model, using MDS tools, and creating a Master Data Manager database and web application. The reader should understand how to design and implement ETL control flow elements and work with a SQL Service Integration Services package. Focus on the expertise measured by these objectives: • Design, and implement, and maintain a data warehouse • Extract, transform, and load data • Build data quality solutions This Microsoft Exam Ref: • Organizes its coverage by exam objectives • Features strategic, what-if scenarios to challenge you • Assumes you have working knowledge of relational database technology and incremental database extraction, as well as experience with designing ETL control flows, using and debugging SSIS packages, accessing and importing or exporting data from multiple sources, and managing a SQL data warehouse. Implementing a SQL Data Warehouse About the Exam Exam 70-767 focuses on skills and knowledge required for working with relational database technology. About Microsoft Certification Passing this exam earns you credit toward a Microsoft Certified Professional (MCP) or Microsoft Certified Solutions Associate (MCSA) certification that demonstrates your mastery of data warehouse management Passing this exam as well as Exam 70-768 (Developing SQL Data Models) earns you credit toward a Microsoft Certified Solutions Associate (MCSA) SQL 2016 Business Intelligence (BI) Development certification. See full details at: microsoft.com/learning

How do you start? How should you build a plan for cloud migration for your entire portfolio? How will your organization be affected by these changes? This book, based on real-world cloud experiences by enterprise IT teams, seeks to provide the answers to these questions. Here, you'll see what makes the cloud so compelling to enterprises; with which applications you should start your cloud journey; how your organization will change, and how skill sets will evolve; how to measure progress; how to think about security, compliance, and business buy-in; and how to exploit the ever-growing feature set that the cloud offers to gain strategic and competitive advantage.

THE MICROSOFT DATA WAREHOUSE TOOLKIT: WITH SQL SERVER 2008 R2, 2ND ED

Business Intelligence and Data Warehouse Automation

The Microsoft Data Warehouse Toolkit: With Sql Serv

Data Warehouse Systems

The Unified Star Schema: An Agile and Resilient Approach to Data Warehouse and Analytics Design

Enterprise Big Data Warehouse, BI Implementations and Analytics

Here is the ideal field guide for data warehousing implementation. This book first teaches you how to build a data warehouse, including defining the architecture, understanding the methodology, gathering the requirements, designing the data models, and creating the databases. Coverage then explains how to populate the data warehouse and explores how to present data to users using reports and multidimensional databases and how to use the data in the data warehouse for business intelligence, customer relationship management, and other purposes. It also details testing and how to administer data warehouse operation.

Leverage the power of Microsoft Azure Data Factory v2 to build hybrid data solutions Key Features Combine the power of Azure Data Factory v2 and SQL Server Integration Services Design and enhance performance and scalability of a modern ETL hybrid solution Interact with the loaded data in data warehouse and data lake using Power BI Book Description ETL is one of the essential techniques in data processing. Given data is everywhere, ETL will always be the vital process to handle data from different sources. Hands-On Data Warehousing with Azure Data Factory starts with the basic concepts of data warehousing and ETL process. You will learn how Azure Data Factory and SSIS can be used to understand the key components of an ETL solution. You will go through different services offered by Azure that can be used by ADF and SSIS, such as Azure Data Lake Analytics, Machine Learning and Databrick's Spark with the help of practical examples. You will explore how to design and implement ETL hybrid solutions using different integration services with a step-by-step approach. Once you get to grips with all this, you will use Power BI to interact with

data coming from different sources in order to reveal valuable insights. By the end of this book, you will not only learn how to build your own ETL solutions but also address the key challenges that are faced while building them. What you will learn Understand the key components of an ETL solution using Azure Data Factory and Integration Services Design the architecture of a modern ETL hybrid solution Implement ETL solutions for both on-premises and Azure data Improve the performance and scalability of your ETL solution Gain thorough knowledge of new capabilities and features added to Azure Data Factory and Integration Services Who this book is for This book is for you if you are a software professional who develops and implements ETL solutions using Microsoft SQL Server or Azure cloud. It will be an added advantage if you are a software engineer, DW/ETL architect, or ETL developer, and know how to create a new ETL implementation or enhance an existing one with ADF or SSIS.

The "father of data warehousing" incorporates the latest technologies into his blueprint for integrated decision support systems Today's corporate IT and data warehouse managers are required to make a small army of technologies work together to ensure fast and accurate information for business managers. Bill Inmon created the Corporate Information Factory to solve the needs of these managers. Since the First Edition, the design of the factory has grown and changed dramatically. This Second Edition, revised and expanded by 40% with five new chapters, incorporates these changes. This step-by-step guide will enable readers to connect their legacy systems with the data warehouse and deal with a host of new and changing technologies, including Web access mechanisms, e-commerce systems, ERP (Enterprise Resource Planning) systems. The book also looks closely at exploration and data mining servers for analyzing customer behavior and departmental data marts for finance, sales, and marketing.

Dive into the business intelligence features in SharePoint 2013—and use the right combination of tools to deliver compelling solutions. Take control of business intelligence (BI) with the tools offered by SharePoint 2013 and Microsoft SQL Server 2012. Led by a group of BI and SharePoint experts, you'll get step-by-step instructions for understanding how to use these technologies best in specific BI scenarios—whether you're a SharePoint administrator, SQL Server developer, or business analyst. Discover how to: Manage the entire BI lifecycle, from determining key performance indicators to building dashboards Use web-based Microsoft Excel services and publish workbooks on a SharePoint Server Mash up data from multiple sources and create Data Analysis Expressions (DAX) using PowerPivot Create data-driven diagrams that provide interactive processes and context with Microsoft Visio Services Use dashboards, scorecards, reports, and key performance indicators to monitor and analyze your business Use SharePoint to view BI reports side by side, no matter which tools were used to produce them

The Complete Guide to Dimensional Modeling

The Microsoft® Data Warehouse Toolkit

A Primer for the Data Scientist

With SQL Server 2008 R2 and the Microsoft Business Intelligence Toolset

Analyzing Data with Power BI and Power Pivot for Excel

ETL techniques to load and transform data from various sources, both on-premises and on cloud

The data warehousing bible updated for the new millennium Updated and expanded to reflect the many technological advances occurring since the previous edition, this latest edition of the data warehousing "bible" provides a comprehensive introduction to building data marts, operational data stores, the Corporate Information Factory, exploration warehouses, and Web-enabled warehouses. Written by the father of the data warehouse concept, the book also reviews the unique requirements for supporting e-business and explores various ways in which the traditional data warehouse can be integrated with new technologies to provide enhanced customer service, sales, and support—both online and offline—including near-line data storage techniques.

A thorough update to the industry standard for designing, developing, and deploying data warehouse and business intelligence systems The world of data warehousing has changed remarkably since the first edition of The Data Warehouse Lifecycle Toolkit was published in 1998. In that time, the data warehouse industry has reached full maturity and acceptance, hardware and software have made staggering advances, and the techniques promoted in the premiere edition of this book have been adopted by nearly all data warehouse vendors and practitioners. In addition, the term "business intelligence" emerged to reflect the mission of the data warehouse: wrangling the data out of source systems, cleaning it, and delivering it to add value to the business. Ralph Kimball and his colleagues have refined the original set of Lifecycle methods and techniques based on their consulting and training experience. The authors understand first-hand that a data warehousing/business intelligence (DW/BI) system needs to change as fast as its surrounding organization evolves. To that end, they walk you through the detailed steps of designing, developing, and deploying a DW/BI system. You'll learn to create adaptable systems that deliver data and analyses to business users so they can make better business decisions.

The overwhelming pace of evolution in technology has made it possible to develop intelligent systems which help users in their daily life activities. - cordingly, methods of recording, managing and analysing data have evolved from the very simple ?le systems into complex ambient supportive intelligent systems. This book arises as a compilation of methods, techniques and tools c- nected with data related issues: from modelling to analysis. A broad range of approaches such as database self-* techniques for ubiquitous environments, multimedia data, or data driven models will be reviewed. Di?erent areas of applications, in which data models conceptualize nowadays reality, starting from e-learning to electric transformers will be considered. The book is a collection of representative contributions to cover the sp- trum related to data bases, which support decision making and data mining methods as well as conceptualization. Datawarehouse technology and m- eling are presented in the ?rst chapter together with the deep review of datawarehouse techniques for supporting e-learning processes with special emphasis on data cubes, all the tools are considered in the context of imp- mentationofsoftwareapplication. Thesecondchaptercontinueswiththes- ilar technology and deals with the community data warehouse architecture.

The Microsoft Data Warehouse Toolkit With SQL Server 2008 R2 and the Microsoft Business Intelligence Toolset John Wiley & Sons

Dimensional Modeling: In a Business Intelligence Environment

Building the Data Warehouse

Building with Speed and Agility on Microsoft's Cloud Platform

The Modern Data Warehouse in Azure

The Microsoft Data Warehouse Toolkit

A Comprehensive Guide for IT Professionals

Build a modern data warehouse on Microsoft's Azure Platform that is flexible, adaptable, and fast—fast to snap together, reconfigure, and fast at delivering results to drive good decision making in your business. Gone are the days when data warehousing projects were lumbering dinosaur-style projects that took forever, drained budgets, and produced business intelligence (BI) just in time to tell you what to do 10 years ago. This book will show you how to assemble a data warehouse solution like a jigsaw puzzle by connecting specific Azure technologies that address your own needs and bring value to your business. You will see how to implement a range of architectural patterns using batches, events, and streams for both data lake technology and SQL databases. You will discover how to manage metadata and automation to accelerate the development of your warehouse while establishing resilience at every level. And you will know how to feed downstream analytic solutions such as Power BI and Azure Analysis Services to empower data-driven decision making that drives your business forward toward a pattern of success. This book teaches you how to employ the Azure platform in a strategy to dramatically improve implementation speed and flexibility of data warehousing systems. You will know how to make correct decisions in design, architecture, and infrastructure such as choosing which type of SQL engine (from at least three options) best meets the needs of your organization. You also will learn about ETL/ELT structure and the vast number of accelerators and patterns that can be used to aid implementation and ensure resilience. Data warehouse developers and architects will find this book a tremendous resource for moving their skills into the future through cloud-based implementations. What You Will Learn Choose the appropriate Azure SQL engine for implementing a given data warehouse Develop smart, reusable ETL/ELT processes that are resilient and easily maintained Automate mundane development tasks through tools such as PowerShell Ensure consistency of data by creating and enforcing data contracts Explore streaming and event-driven architectures for data ingestion Create advanced staging layers using Azure Data Lake Gen 2 to feed your data warehouse Who This Book Is For Data warehouse or ETL/ELT developers who wish to implement a data warehouse project in the Azure cloud, and developers currently working in on-premise environments who want to move to the cloud, and for developers with Azure experience looking to tighten up their implementation and consolidate their knowledge

DW 2.0: The Architecture for the Next Generation of Data Warehousing is the first book on the new generation of data warehouse architecture, DW 2.0, by the father of the data warehouse. The book describes the future of data warehousing that is technologically possible today, at both an architectural level and technology level. The perspective of the book is from the top down: looking at the overall architecture and then delving into the issues underlying the components. This allows people who are building or using a data warehouse to see what lies ahead and determine what new technology to buy, how to plan extensions to the data warehouse, what can be salvaged from the current system, and how to justify the expense at the most practical level. This book gives experienced data warehouse professionals everything they need in order to implement the new generation DW 2.0. It is designed for professionals in the IT organization, including data architects, DBAs, systems design and development professionals, as well as data warehouse and knowledge management professionals. * First book on the new generation of data warehouse architecture, DW 2.0. * Written by the "father of the data warehouse", Bill Inmon, a columnist and newsletter editor of The Bill Inmon Channel on the Business Intelligence Network. * Long overdue comprehensive coverage of the implementation of technology and tools that enable the new generation of the DW: metadata, temporal data, ETL, unstructured data, and data quality control.

Best practices and invaluable advice from world-renowned data warehouse experts In this book, leading data warehouse experts from the Kimball Group share best practices for using the upcoming "Business Intelligence release" of SQL Server, referred to as SQL Server 2008 R2. In this new edition, the authors explain how SQL Server 2008 R2 provides a collection of powerful new tools that extend the power of its BI toolset to Excel and SharePoint users and they show how to use SQL Server to build a successful data warehouse that supports the business intelligence requirements that are common to most organizations. Covering the complete suite of data warehousing and BI tools that are part of SQL Server 2008 R2, as well as Microsoft Office, the authors walk you through a full project lifecycle, including design, development, deployment and maintenance. Features more than 50 percent new and revised material that covers the rich new feature set of the SQL Server 2008 R2 release, as well as the Office 2010 release Includes brand new content that focuses on PowerPivot for Excel and SharePoint, Master Data Services, and discusses updated capabilities of SQL Server Analysis, Integration, and Reporting Services Shares detailed case examples that clearly illustrate how to best apply the techniques described in the book The accompanying Web site contains all code samples as well as the sample database used throughout the case studies The Microsoft Data Warehouse Toolkit, Second Edition provides you with the knowledge of how and when to use BI tools such as Analysis Services and Integration Services to accomplish your most essential data warehousing tasks. Cowritten by Ralph Kimball, the world's leading data warehousing authority Delivers real-world solutions for the most time- and labor-intensive portion of data warehousing—data staging, or the extract, transform, load (ETL) process Delineates best practices for extracting data from scattered sources, removing redundant and inaccurate data, transforming the remaining data into correctly formatted data structures, and then loading the end product into the data warehouse Offers proven time-saving ETL techniques, comprehensive guidance on building dimensional structures, and crucial advice on ensuring data quality This book is also available as part of the Kimball's Data Warehouse Toolkit Classics Box Set (ISBN: 9780470479575) with the following 3 books: The Data Warehouse Toolkit, 2nd Edition (9780471200246) The Data Warehouse Lifecycle Toolkit, 2nd Edition (9780470149775) The Data Warehouse ETL Toolkit (9780764567575)

Data Architecture: A Primer for the Data Scientist

Practical Techniques for Extracting, Cleaning, Conforming, and Delivering Data

The Data Warehouse Toolkit, 2nd Edition; The Data Warehouse Lifecycle, 2nd Edition; The Data Warehouse ETL Toolkit

Hands-On Data Warehousing with Azure Data Factory

Mastering Data Warehouse Design

Enterprise Cloud epUB _1

Focus your efforts on the best opportunities --

A cutting-edge response to Ralph Kimball's challenge to the data warehouse community that answers some tough questions about the effectiveness of the relational approach to data warehousing Written by one of the best-known exponents of the Bill Inmon approach to data warehousing Addresses head-on the tough issues raised by Kimball and explains how to choose the best modeling technique for solving common data warehouse design problems Weighs the pros and cons of relational vs. dimensional modeling techniques Focuses on tough modeling problems, including creating and maintaining keys and modeling calendars, hierarchies, transactions, and data quality

The Data Vault was invented by Dan Linstedt at the U.S. Department of Defense, and the standard has been successfully applied to data warehousing projects at organizations of different sizes, from small to large-size corporations. Due to its simplified design, which is adapted from nature, the Data Vault 2.0 standard helps prevent typical data warehousing failures. "Building a Scalable Data Warehouse" covers everything one needs to know to create a scalable data warehouse end to end, including a presentation of the Data Vault modeling technique, which provides the foundations to create a technical data warehouse layer.

The book discusses how to build the data warehouse incrementally using the agile Data Vault 2.0 methodology. In addition, readers will learn how to create the input layer (the stage layer) and the presentation layer (data mart) of the Data Vault 2.0 architecture including implementation best practices. Drawing upon years of practical experience and using numerous examples and an easy to understand framework, Dan Linstedt and Michael Olschimke discuss: How to load each layer using SQL Server Integration Services (SSIS), including automation of the Data Vault loading processes. Important data warehouse technologies and practices. Data Quality Services (DQS) and Master Data Services (MDS) in the context of the Data Vault architecture. Provides a complete introduction to data warehousing, applications, and the business context so readers can get-up and running fast Explains theoretical concepts and provides hands-on instruction on how to build and implement a data warehouse Demystifies data vault modeling with beginning, intermediate, and advanced techniques Discusses the advantages of the data vault approach over other techniques, also including the latest updates to Data Vault 2.0 and multiple improvements to Data Vault 1.0 Written in an easy-to-follow, example-driven format, there are plenty of stepbystep instructions to help get you started! The book has a friendly approach, with the opportunity to learn by experimenting. If you are a BI and Data Warehouse developer new to Microsoft Business Intelligence, and looking to get a good understanding of the different components of Microsoft SQL Server for Business Intelligence, this book is for you. It ' s assumed that you will have some experience in databases systems and T-SQL. This book is will give you a good upshot view of each component and scenarios featuring the use of that component in Data Warehousing and Business Intelligence systems.

DW 2.0: The Architecture for the Next Generation of Data Warehousing

Corporate Information Factory

Solutions for Star Schema Performance

Building a Scalable Data Warehouse with Data Vault 2.0

Mastering Data Warehouse Aggregates

The Data Warehouse Toolkit

Renowned DAX experts Alberto Ferrari and Marco Russo teach you how to design data models for maximum efficiency and effectiveness. How can you use Excel and Power BI to gain real insights into your information? As you examine your data, how do you write a formula that provides the numbers you need? The answers to both of these questions lie with the data model. This book introduces the basic techniques for shaping data models in Excel and Power BI. It's meant for readers who are new to data modeling as well as for experienced data modelers looking for tips from the experts. If you want to use Power BI or Excel to analyze data, the many real-world examples in this book will help you look at your reports in a different way—like experienced data modelers do. As you'll soon see, with the right data model, the correct answer is always a simple one! By reading this book, you will: □ Gain an understanding of the basics of data modeling, including tables, relationships, and keys □ Familiarize yourself with star schemas, snowflakes, and common modeling techniques □ Learn the importance of granularity □ Discover how to use multiple fact tables, like sales and purchases, in a complex data model □ Manage calendar-related calculations by using date tables □ Track historical attributes, like previous addresses of customers or manager assignments □ Use snapshots to compute quantity on hand □ Work with multiple currencies in the most efficient way □ Analyze events that have durations, including overlapping durations □ Learn what data model you need to answer your specific business questions About This Book □ For Excel and Power BI users who want to exploit the full power of their favorite tools □ For BI professionals seeking new ideas for modeling data

Big Data Imperatives, focuses on resolving the key questions on everyone's mind: Which data matters? Do you have enough data volume to justify the usage? How you want to process this amount of data? How long do you really need to keep it active for your analysis, marketing, and BI applications? Big data is emerging from the realm of one-off projects to mainstream business adoption; however, the real value of big data is not in the overwhelming size of it, but more in its effective use. This book addresses the following big data characteristics: Very large, distributed aggregations of loosely structured data – often incomplete and inaccessible Petabytes/Exabytes of data Millions/billions of people providing/contributing to the context behind the data Flat schema's with few complex interrelationships Involves time-stamped events Made up of incomplete data Includes connections between data elements that must be probabilistically inferred Big Data Imperatives explains 'what big data can do'. It can batch process millions and billions of records both unstructured and structured much faster and cheaper. Big data analytics provide a platform to merge all analysis which enables data analysis to be more accurate, well-rounded, reliable and focused on a specific business capability. Big Data Imperatives describes the complementary nature of traditional data warehouses and big-data analytics platforms and how they feed each other. This book aims to bring the big data and analytics realms together with a greater focus on architectures that leverage the scale and power of big data and the ability to integrate and apply analytics principles to data which earlier was not accessible. This book can also be used as a handbook for practitioners; helping them on methodology, technical architecture, analytics techniques and best practices. At the same time, this book intends to hold the interest of those new to big data and analytics by giving them a deep insight into the realm of big data.

Updated new edition of Ralph Kimball's groundbreaking book on dimensional modeling for data warehousing and business intelligence! The first edition of Ralph Kimball's The Data Warehouse Toolkit introduced the industry to dimensional modeling, and now his books are considered the most authoritative guides in this space. This new third edition is a complete library of updated dimensional modeling techniques, the most comprehensive collection ever. It covers new and enhanced star schema dimensional modeling patterns, adds two new chapters on ETL techniques, includes new and expanded business matrices for 12 case studies, and more. Authored by Ralph Kimball and Margy Ross, known worldwide as educators, consultants, and influential thought leaders in data warehousing and business intelligence Begins with fundamental design recommendations and progresses through increasingly complex scenarios Presents unique modeling techniques for business applications such as inventory management, procurement, invoicing, accounting, customer relationship management, big data analytics, and more Draws real-world case studies from a variety of industries, including retail sales, financial services, telecommunications, education, health care, insurance, e-commerce, and more Design dimensional databases that are easy to understand and provide fast query response with The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, 3rd Edition.

Master the most agile and resilient design for building analytics applications: the Unified Star Schema (USS) approach. The USS has many benefits over traditional dimensional modeling. Witness the power of the USS as a single star schema that serves as a foundation for all present and future business requirements of your organization. Data warehouse legend Bill Inmon and business intelligence innovator, Francesco Puppini, explain step-by-step why the Unified Star Schema is the

recommended approach for business intelligence designs today, and show through many examples how to build and use this new solution. This book contains two parts. Part I, Architecture, explains the benefits of data marts and data warehouses, covering how organizations progressed to their current state of analytics, and to the challenges that result from current business intelligence architectures. Chapter 1 covers the drivers behind and the characteristics of the data warehouse and data mart. Chapter 2 introduces dimensional modeling concepts, including fact tables, dimensions, star joins, and snowflakes. Chapter 3 recalls the evolution of the data mart. Chapter 4 explains Extract, Transform, and Load (ETL), and the value ETL brings to reporting. Chapter 5 explores the Integrated Data Mart Approach, and Chapter 6 explains how to monitor this environment. Chapter 7 describes the different types of metadata within the data warehouse environment. Chapter 8 progresses through the evolution to our current modern data warehouse environment. Part II, the Unified Star Schema, covers the Unified Star Schema (USS) approach and how it solves the challenges introduced in Part I. There are eight chapters within Part II: · Chapter 9, Introduction to the Unified Star Schema: Learn about its architecture and use cases, as well as how the USS approach differs from the traditional approach. · Chapter 10, Loss of Data: Learn about the loss of data and the USS Bridge. Understand that the USS approach does not create any join, and for this reason, it has no loss of data. · Chapter 11, The Fan Trap: Get introduced to the Oriented Data Model convention, and learn the dangers of a fan trap through an example. Differentiate join and association, and realize that an “in-memory association” is the preferred solution to the fan trap. · Chapter 12, The Chasm Trap: Become familiar with the Cartesian product, and then follow along with an example based on LinkedIn, which illustrates that a chasm trap produces unwanted duplicates. See that the USS Bridge is based on a union, which does not create any duplicates. · Chapter 13, Multi-Fact Queries: Distinguish between multiple facts “with direct connection” versus multiple facts “with no direct connection”. Explore how BI tools are capable of building aggregated virtual rows. · Chapter 14, Loops: Learn more about loops and five traditional techniques to solve them. Follow along with an implementation, which will illustrate the solution based on the USS approach. · Chapter 15, Non-Conformed Granularities: Learn about non-conformed granularities, and learn that the Unified Star Schema introduces a solution called “re-normalization”. · Chapter 16, Northwind Case Study. Witness how easy it is to detect the pitfalls of Northwind using the ODM convention. Follow along with an implementation of the USS approach on the Northwind database with various BI tools.

T-SQL Fundamentals

Relational and Dimensional Techniques

Business Intelligence in Microsoft SharePoint 2013

The Data Warehouse ETL Toolkit

With SQL Server 2005 and the Microsoft Business Intelligence Toolset

Expert techniques for effective data analytics and business intelligence

Market_Desc: Database and Data Warehouse Developers and Managers Special Features: · Wiley is the leading publisher of books on data warehousing· Wiley books written by members of the Kimball Group have sold more than 300,000 copies, generating revenue in excess of \$7 million· Ralph Kimball and his co-authors are recognized as the most influential thought leaders in the data warehousing industry; there is no direct competition.· The methods they've pioneered have been adopted by almost all leading data warehouse vendors.· The authors will actively promote this book in training and consulting worldwide. **About The Book:** In this book, leading data warehouse experts from the Kimball Group share best practices for using the upcoming Business Intelligence release of SQL Server, referred to as SQL Server 2008 R2. In this new edition, the authors explain how SQL Server 2008 R2 provides a collection of powerful new tools that extend the power of its BI toolset to Excel and SharePoint users and they show how to use SQL Server to build a successful data warehouse that supports the business intelligence requirements that are common to most organizations. Covering the complete suite of data warehousing and BI tools that are part of SQL Server 2008 R2, as well as Microsoft Office, the authors walk you through a full project lifecycle, including design, development, deployment and maintenance.

Design, create and manage robust Power BI solutions to gain meaningful business insights Key Features Master all the dashboarding and reporting features of Microsoft Power BI Combine data from multiple sources, create stunning visualizations and publish your reports across multiple platforms A comprehensive guide with real-world use cases and examples demonstrating how you can get the best out of Microsoft Power BI **Book Description** This book is intended for business intelligence professionals responsible for the design and development of Power BI content as well as managers, architects and administrators who oversee Power BI projects and deployments. The chapters flow from the planning of a Power BI project through the development and distribution of content to the administration of Power BI for an organization. BI developers will learn how to create sustainable and impactful Power BI datasets, reports, and dashboards. This includes connecting to data sources, shaping and enhancing source data, and developing an analytical data model. Additionally, top report and dashboard design practices are described using features such as Bookmarks and the Power KPI visual. BI managers will learn how Power BI's tools work together such as with the On-premises data gateway and how content can be staged and securely distributed via Apps. Additionally, both the Power BI Report Server and Power BI Premium are reviewed. By the end of this book, you will be confident in creating effective charts, tables, reports or dashboards for any kind of data using the tools and techniques in Microsoft PowerBI. **What you will learn** Build efficient data retrieval and transformation processes with the Power Query M Language Design scalable, user-friendly DirectQuery and Import Data Models Develop visually rich, immersive, and interactive reports and dashboards Maintain version control and stage deployments across development, test, and production environments Manage and monitor the Power BI Service and the On-premises data gateway Develop a fully on-premise solution with the Power BI Report Server Scale up a Power BI solution via Power BI Premium capacity and migration to Azure Analysis Services or SQL Server Analysis Services **Who this book is for** Business Intelligence professionals and existing Power BI users looking to master Power BI for all their data visualization and dashboarding needs will find this book to be useful. While understanding of the basic BI concepts is required, some exposure to Microsoft Power BI will be helpful.

With this textbook, Vaisman and Zimányi deliver excellent coverage of data warehousing and business intelligence technologies ranging from the most basic principles to recent findings and applications. To this end, their work is structured into three parts. Part I describes “Fundamental Concepts” including conceptual and logical data warehouse design, as well as querying using MDX, DAX and SQL/OLAP. This part also covers data analytics using Power BI and Analysis Services. Part II details “Implementation and Deployment,” including physical design, ETL and data warehouse design methodologies. Part III covers “Advanced Topics” and it is almost completely new in this second edition. This part includes chapters with an in-depth

coverage of temporal, spatial, and mobility data warehousing. Graph data warehouses are also covered in detail using Neo4j. The last chapter extensively studies big data management and the usage of Hadoop, Spark, distributed, in-memory, columnar, NoSQL and NewSQL database systems, and data lakes in the context of analytical data processing. As a key characteristic of the book, most of the topics are presented and illustrated using application tools. Specifically, a case study based on the well-known Northwind database illustrates how the concepts presented in the book can be implemented using Microsoft Analysis Services and Power BI. All chapters have been revised and updated to the latest versions of the software tools used. KPIs and Dashboards are now also developed using DAX and Power BI, and the chapter on ETL has been expanded with the implementation of ETL processes in PostgreSQL. Review questions and exercises complement each chapter to support comprehensive student learning. Supplemental material to assist instructors using this book as a course text is available online and includes electronic versions of the figures, solutions to all exercises, and a set of slides accompanying each chapter. Overall, students, practitioners and researchers alike will find this book the most comprehensive reference work on data warehouses, with key topics described in a clear and educational style. "I can only invite you to dive into the contents of the book, feeling certain that once you have completed its reading (or maybe, targeted parts of it), you will join me in expressing our gratitude to Alejandro and Esteban, for providing such a comprehensive textbook for the field of data warehousing in the first place, and for keeping it up to date with the recent developments, in this current second edition." From the foreword by Panos Vassiliadis, University of Ioannina, Greece.

In this IBM Redbooks publication we describe and demonstrate dimensional data modeling techniques and technology, specifically focused on business intelligence and data warehousing. It is to help the reader understand how to design, maintain, and use a dimensional model for data warehousing that can provide the data access and performance required for business intelligence. Business intelligence is comprised of a data warehousing infrastructure, and a query, analysis, and reporting environment. Here we focus on the data warehousing infrastructure. But only a specific element of it, the data model - which we consider the base building block of the data warehouse. Or, more precisely, the topic of data modeling and its impact on the business and business applications. The objective is not to provide a treatise on dimensional modeling techniques, but to focus at a more practical level. There is technical content for designing and maintaining such an environment, but also business content. For example, we use case studies to demonstrate how dimensional modeling can impact the business intelligence requirements for your business initiatives. In addition, we provide a detailed discussion on the query aspects of BI and data modeling. For example, we discuss query optimization and how you can determine performance of the data model prior to implementation. You need a solid base for your data warehousing infrastructure . . . a solid data model.

Collaborative Dimensional Modeling, from Whiteboard to Star Schema

The Biml Book

Briggs

Exam Ref 70-767 Implementing a SQL Data Warehouse

Mastering Microsoft Power BI

Agile Data Warehouse Design

Over the past 5 years, the concept of big data has matured, data science has grown exponentially, and data architecture has become a standard part of organizational decision-making. Throughout all this change, the basic principles that shape the architecture of data have remained the same. There remains a need for people to take a look at the "bigger picture" and to understand where their data fit into the grand scheme of things. Data Architecture: A Primer for the Data Scientist, Second Edition addresses the larger architectural picture of how big data fits within the existing information infrastructure or data warehousing systems. This is an essential topic not only for data scientists, analysts, and managers but also for researchers and engineers who increasingly need to deal with large and complex sets of data. Until data are gathered and can be placed into an existing framework or architecture, they cannot be used to their full potential. Drawing upon years of practical experience and using numerous examples and case studies from across various industries, the authors seek to explain this larger picture into which big data fits, giving data scientists the necessary context for how pieces of the puzzle should fit together. New case studies include expanded coverage of textual management and analytics New chapters on visualization and big data Discussion of new visualizations of the end-state architecture

Geared to IT professionals eager to get into the all-important field of data warehousing, this book explores all topics needed by those who design and implement data warehouses. Readers will learn about planning requirements, architecture, infrastructure, data preparation, information delivery, implementation, and maintenance. They'll also find a wealth of industry examples garnered from the author's 25 years of experience in designing and implementing databases and data warehouse applications for major corporations. Market: IT Professionals, Consultants.

Leverage the integration of SQL Server and Office for more effective BI Applied Microsoft Business Intelligence shows you how to leverage the complete set of Microsoft tools—including Microsoft Office and SQL Server—to better analyze business data. This book provides best practices for building complete BI solutions using the full Microsoft toolset. You will learn how to effectively use SQL Server Analysis and Reporting Services, along with Excel, SharePoint, and other tools to provide effective and cohesive solutions for the enterprise. Coverage includes BI architecture, data queries, semantic models, multidimensional modeling, data analysis and visualization, performance monitoring, data mining, and more, to help you learn to perform practical business analysis and reporting. Written by an author team that includes a key member of the BI product team at Microsoft, this useful reference provides expert instruction for more effective use of the Microsoft BI toolset. Use Microsoft BI suite cohesively for more effective enterprise solutions Search, analyze, and visualize data more efficiently and completely Develop flexible and scalable tabular and multidimensional models Monitor performance, build a BI portal, and deploy and manage the BI Solution

This is the first book to provide in-depth coverage of star schema aggregates used in dimensional modeling—from selection and design, to loading and usage, to specific tasks and deliverables for implementation projects Covers the principles of aggregate schema design and the pros and cons of various types of commercial solutions for navigating and building aggregates Discusses how to include aggregates in data warehouse development projects that focus on incremental development, iterative builds, and early data loads

The Data Warehouse Lab

Data Warehousing Fundamentals

Design and Implementation

A Step-By-step Guide Using SSIS and SSAS 2017

Building a Data Warehouse

Pro SQL Server 2012 BI Solutions

Agile Data Warehouse Design is a step-by-step guide for capturing data warehousing/business intelligence (DW/BI) requirements and turning them into high performance dimensional models in the most direct way: by modelstorming (data modeling] brainstorming) with BI stakeholders. This book describes BEAM, an agile approach to dimensional modeling, for improving communication between data warehouse designers, BI stakeholders and the whole DW/BI development team. BEAM provides tools and techniques that will encourage DW/BI designers and developers to move away from their keyboards and entity relationship based tools and model interactively with their colleagues. The result is everyone thinks dimensionally from the outset! Developers understand how to efficiently implement dimensional modeling solutions. Business stakeholders feel ownership of the data warehouse they have created, and can already imagine how they will use it to answer their business questions. Within this book, you will learn: Agile dimensional modeling using Business Event Analysis & Modeling (BEAM) Modelstorming: data modeling that is quicker, more inclusive, more productive, and frankly more fun! Telling dimensional data stories using the 7Ws (who, what, when, where, how many, why and how) Modeling by example not abstraction; using data story themes, not crow's feet, to describe detail Storyboarding the data warehouse to discover conformed dimensions and plan iterative development Visual modeling: sketching timelines, charts and grids to model complex process measurement - simply Agile design documentation: enhancing star schemas with BEAM dimensional shorthand notation Solving difficult DW/BI performance and usability problems with proven dimensional design patterns LawrenceCorr is a data warehouse designer and educator. As Principal of DecisionOne Consulting, he helps clients to review and simplify their data warehouse designs, and advises vendors on visual data modeling techniques. He regularly teaches agile dimensional modeling courses worldwide and has taught dimensional DW/BI skills to thousands of students. Jim Stagnitto is a data warehouse and master data management architect specializing in the healthcare, financial services, and information service industries. He is the founder of the data warehousing and data mining consulting firm Llumino.

Microsoft SQL Server 2014 Business Intelligence Development Beginner's Guide

Kimball's Data Warehouse Toolkit Classics

Introducing Microsoft Power BI

The Data Warehouse Lifecycle Toolkit