

## *Sql Server 2016 High Availability Unleashed Includes Content Update Program*

A hands-on resource for SQL Server 2008 troubleshooting methods and tools SQL Server administrators need to ensure that SQL Server remains running 24/7. Authored by leading SQL Server experts and MVPs, this book provides in-depth coverage of best practices based on a deep understanding of the internals of both SQL Server and the Windows operating system. You'll get a thorough look at the SQL Server database architecture and internals as well as Windows OS internals so that you can approach troubleshooting with a solid grasp of the total processing environment. Armed with this comprehensive understanding, readers will then learn how to use a suite of tools for troubleshooting performance problems whether they originate on the database server or operating system side. Topics Covered: SQL Server Architecture Understanding Memory SQL Server Waits and Extended Events Working with Storage CPU and Query Processing Locking and Latches Knowing Tempdb Defining Your Approach To Troubleshooting Viewing Server Performance with PerfMon and the PAL Tool Tracing SQL Server with SQL Trace and Profiler Consolidating Data Collection with SQLDiag and the PerfStats Script Introducing RML Utilities for Stress Testing and Trace File Analysis Bringing It All Together with SQL Nexus Using Management Studio Reports and the Performance Dashboard Using SQL Server Management Data Warehouse Shortcuts to Efficient Data Collection and Quick Analysis Note: CD-ROM/DVD and other supplementary materials are not included as part of eBook file.

Take a deep dive into one of the most significant SQL Server features—support for In-Memory Online Transaction Processing. The latest developments are covered, including support of off-row storage, columnstore indexes and operational analytics, changes in programmability and native compilation, and more. This book describes the architecture and internals of the In-Memory OLTP Engine and explains how to develop, deploy, and maintain systems using it. With it you can dramatically increase transaction throughput to handle thousands of transactions per second supporting millions of customers. Learn the architecture and the internals of In-Memory OLTP in order to recognize when technology can make a difference. Recognize opportunities for In-Memory OLTP in new development and understand how to benefit from it in existing systems. Don't be without Dmitri Korotkevitch and the deep expertise he imparts in Expert SQL Server In-Memory OLTP, 2nd Edition as you move forward in using SQL Server's In-Memory OLTP technology. Dmitri Korotkevitch is the five-star author of Pro SQL Server Internals, and brings the same combination of clear thinking and deep expertise to help you in this second edition. The book: Explains In-Memory OLTP internals, architecture and programmability, including data storage, indexing, multi-version concurrency control, transaction logging and recovery, and native compilation Covers SQL Server 2016 technology enhancements, including columnstore indexes and off-row storage Guides in using In-Memory OLTP in new development and existing systems What You'll Learn Grasp how SQL Server stores and works with data in memory-optimized tables Properly design and index memory-optimized tables Plan successful deployments, including the required memory size and I/O configuration Accelerate T-SQL processing through the creation of natively compiled modules Monitor and report on the benefits and performance of your In-Memory OLTP solutions Benefit from the technology in existing systems and in the systems with the mixed workload Who This Book Is For Application developers and database administrators who create and manage online transaction processing (OLTP) systems; in particular, those wanting to take advantage of SQL Server's new offering of in-memory OLTP to dramatically improve performance and throughput of their systems

Conquer Windows Server 2016—from the inside out! Dive into Windows Server 2016—and really put your Windows Server expertise to work. Focusing on Windows Server 2016's most powerful and innovative features, this supremely organized reference packs hundreds of timesaving solutions, tips, and workarounds—all you need to plan, implement, or manage Windows Server in enterprise, data center, cloud, and hybrid environments. Fully reflecting Windows Server new capabilities for the cloud-first era, Orin covers everything from Nano Server to Windows Server and Hyper-V Containers. You'll discover how experts tackle today's essential tasks—and challenge yourself to new levels of mastery.

- Optimize the full Windows Server 2016 lifecycle, from planning and configuration through rollout and administration
- Ensure fast, reliable upgrades and migrations
- Seamlessly deliver core DNS, DHCP, file, print, storage, and Internet services
- Use IPAM to centrally manage all enterprise DNS and DHCP infrastructure
- Gain dramatic storage utilization improvements with built-in deduplication and storage replica
- Build flexible cloud and hybrid environments with Windows Containers and Shielded VMs
- Seamlessly integrate Azure IaaS services with Windows Server 2016
- Slash resource usage and improve availability with tiny Nano Server installations
- Improve configuration management with Desired State Configuration and Chef
- Deliver Active Directory identity, certificate, federation, and rights management services
- Protect servers, clients, assets, and users with advanced Windows Server 2016 security features including Just Enough Administration

For Experienced Windows Server Users and IT Professionals • Your role: Experienced intermediate-to-advanced level Windows Server user or IT professional • Prerequisites: Basic understanding of Windows Server procedures, techniques, and navigation

Hands-on troubleshooting methods on the most recent release of SQL Server The 2012 release of SQL Server is the most significant one since 2005 and introduces an abundance of new features. This critical book provides in-depth coverage of best practices for troubleshooting performance problems based on a solid understanding of both SQL Server and Windows internals and shows experienced DBAs how to ensure reliable performance. The team of authors shows you how to master the use of specific troubleshooting tools and how to interpret their output so you can quickly identify and resolve any performance issue on any server running SQL Server. Covers the core technical topics required to understand how SQL Server and Windows should be working Shares best practices so that you know how to proactively monitor and avoid problems Shows how to use tools to quickly gather, analyze, and effectively respond to the source of a system-wide performance issue Professional SQL Server 2012 Internals and Troubleshooting helps you to quickly become familiar with the changes of this new release so that you can best handle database performance and troubleshooting.

Supporting 24x7 Applications with Continuous Uptime

**The Go Faster Book**  
**Professional SQL Server 2012 Internals and Troubleshooting**  
**Deploying SharePoint 2016**  
**Microsoft SQL Server 2008 Management and Administration**  
**SQL Server 2016 Reporting Services Cookbook**

Learn how to install, configure, and maintain the latest release of Microsoft's popular SharePoint Server, SharePoint 2016. This latest version brings with it many changes for IT professionals. With this book you will learn how to create an efficient and stable SharePoint environment for your organization. What You'll Learn Install SharePoint Server 2016, both using the user interface provided by Microsoft, and by using PowerShell Understand your authentication options and associated security considerations Deploy add-ins, either from the store, or from your own custom app catalog Configure Search Service Application using either the provided UI or PowerShell Configure business intelligence components such as Excel Services, SQL Server Reporting Services, and PowerPivot Migrate to SharePoint Server 2016 from either SharePoint Server 2010 or 2013 Understand approaches to high availability, disaster recovery, patching, and ways to monitor and maintain your SharePoint 2016 deployment once it's up and running Who This Book Is For Anyone tasked with installing, configuring, and maintaining SharePoint Server 2016 in their organization. This book assumes some working knowledge of a previous release of SharePoint Server, such as SharePoint 2010 or SharePoint 2013

Get a fast start to using AlwaysOn, the SQL Server solution to high-availability and disaster recovery. This third edition is newly-updated to cover the 2019 editions of both SQL Server and Windows Server and includes strong coverage of implementing AlwaysOn Availability Groups on both Windows and Linux operating systems. The book provides a solid and accurate understanding of how to implement systems requiring consistent and continuous uptime, as well as how to troubleshoot those systems in order to keep them running and reliable. This edition is updated to account for all new major functionality and also includes coverage of implementing atypical configurations, such as clusterless and domain-independent Availability Groups, distributed Availability Groups, and implementing Availability Groups on Azure. The book begins with an introduction to high-availability and disaster recovery concepts such as Recovery Point Objectives (RPOs), Recovery Time Objectives (RTOs), availability levels, and the cost of downtime. You'll then move into detailed coverage of implementing and configuring the AlwaysOn feature set in order to meet the business objectives set by your organization. Content includes coverage on implementing clusters, building AlwaysOn failover clustered instances, and configuring AlwaysOn Availability Groups. SQL Server 2019 AlwaysOn is chock full of real-world advice on how to build and configure the most appropriate topology to meet the high-availability and disaster recovery requirements you are faced with, as well as how to use AlwaysOn Availability Groups to scale-out read-only workloads. This is a practical and hands-on book to get you started quickly in using one of the most talked-about SQL Server feature sets. What You Will Learn Understand high availability and disaster recovery in SQL Server 2019 Build and configure a Windows Cluster in Windows Server 2019 Create and configure an AlwaysOn failover clustered instance Implement AlwaysOn Availability Groups and appropriately configure them Implement AlwaysOn Availability Groups on Linux servers Configure Availability Groups on Azure IaaS Administer AlwaysOn technologies post implementation Understand typical configurations, such as clusterless and distributed Availability Groups Who This Book Is For For Microsoft SQL Server database administrators who interested in growing their knowledge and skills in SQL Server's high-availability and disaster recovery feature set. Get up to speed on the game-changing developments in SQL Server 2019. No longer just a database engine, SQL Server 2019 is cutting edge with support for machine learning (ML), big data analytics, Linux, containers, Kubernetes, Java, and data virtualization to Azure. This is not a book on traditional database administration for SQL Server. It focuses on all that is new for one of the most successful modernized data platforms in the industry. It is a book for data professionals who already know the fundamentals of SQL Server and want to up their game by building their skills in some of the hottest new areas in technology. SQL Server 2019 Revealed begins with a look at the project's team goal to integrate the world of big data with SQL Server into a major product release. The book then dives into the details of key new capabilities in SQL Server 2019 using a "learn by example" approach for Intelligent Performance, security, mission-critical availability, and features for the modern developer. Also covered are enhancements to SQL Server 2019 for Linux and gain a comprehensive look at SQL Server using containers and Kubernetes clusters. The book concludes by showing you how to virtualize your data access with Polybase to Oracle, MongoDB, Hadoop, and Azure, allowing you to reduce the need for expensive extract, transform, and load (ETL) applications. You will then learn how to take your knowledge of containers, Kubernetes, and Polybase to build a comprehensive solution called Big Data Clusters, which is a marquee feature of 2019. You will also learn how to gain access to Spark, SQL Server, and HDFS to build intelligence over your own data lake and deploy end-to-end machine learning applications. What You Will Learn Implement Big Data Clusters with SQL Server, Spark, and HDFS Create a Data Hub with connections to Oracle, Azure, Hadoop, and other sources Combine SQL and Spark to build a machine learning platform for AI applications Boost your performance with no application changes using Intelligent Performance Increase security of your SQL Server through Secure Enclaves and Data Classification Maximize database uptime through online indexing and Accelerated Database Recovery Build new modern applications with Graph, ML Services, and T-SQL Extensibility with Java Improve your ability to deploy SQL Server on Linux Gain in-depth knowledge to run SQL Server with containers and Kubernetes Know all the new database engine features for performance, usability, and diagnostics Use the latest tools and methods to migrate your database to SQL Server 2019 Apply your knowledge of SQL Server 2019 to Azure Who This Book Is For IT professionals and developers who understand the fundamentals of SQL Server and wish to focus on learning about the new, modern capabilities of SQL Server 2019. The book is for those who want to learn about SQL Server 2019 and the new Big Data Clusters and AI feature set, support for machine learning and Java, how to run SQL Server with containers and Kubernetes, and increased capabilities around Intelligent Performance, advanced security, and high availability.

Companies and institutions depend more than ever on the availability of their Information Technology, and most mission critical business processes are IT-based. Business Continuity is the ability to do business under any circumstances and is an essential requirement faced by modern companies. Both concepts - High Availability and Disaster Recovery - are realized by redundant systems. This book presents requirements, concepts, and realizations of redundant systems on all abstraction levels, and all given examples refer to UNIX and Linux Systems.

Maximize storage efficiency, performance, and security using System Center LTSC and SAC releases

Introducing Microsoft SQL Server 2019

SQL the One

Performance Tuning and Optimization

Implement tried-and-true high availability and disaster recovery solutions with SQL Server

Microsoft Azure Essentials Migrating SQL Server Databases to Azure

Get a fast start to using AlwaysOn, the SQL Server solution to high-availability and disaster recovery. This second edition is newly-updated to cover the 2016 editions of both SQL Server and Windows Server. Also in this edition is all-new content on troubleshooting and metadata. The book provides a solid and accurate understanding of how to implement systems requiring consistent and continuous uptime, as well as how to troubleshoot those systems in order to keep them running an reliable. Begin with an introduction to high-availability and disaster recovery concepts such as Recovery Point Objectives (RPOs), Recovery Time Objectives (RTO), availability levels, and the cost of downtime. Then move into detailed coverage of implementing and configuring the AlwaysOn feature set in order to meet the business objectives set by your organization. SQL Server AlwaysOn Revealed offers real-world advice on how to build and configure the most appropriate topology to meet the high-availability and disaster recovery requirements you are faced with. Content includes strong coverage on implementing clusters, on building AlwaysOn failover clustered instances, and on configuring AlwaysOn Availability Groups. This is a practical and hand-on book to get you started quickly in using one of the most talked-about SQL Server feature sets. Teaches you to build HA and DR solutions using the AlwaysOn feature set Provides real-world advice on configuration and performance considerations Demonstrates administrative techniques for the AlwaysOn feature set What You Will Learn Understand high availability and disaster recovery in SQL Server 2016 Build and configure a Windows Cluster Create and configure an AlwaysOn failover clustered instance Implement AlwaysOn Availability Groups and appropriately configure them Administer AlwaysOn technologies post implementation Troubleshoot and resolve problems with misbehaving systems Who This Book Is For Database administrators interested in growing their knowledge and skills in Microsoft SQL Server's high-availability and disaster recovery feature set.

Part of the "Microsoft Azure Essentials" series, this ebook helps SQL Server database users understand Microsoft's offering for SQL Server in Azure. Learn how SQL Server in Azure is similar to SQL Server in an on-premises environment, and how they are different. The author, a content lead for Azure.com, walks you through the steps of getting started with SQL Server in an Azure virtual machine and with Azure SQL Database. Follow the numerous screenshots to create a trial subscription, create SQL Server in an Azure virtual machine, create an Azure SQL Database, migrate an on-premises database to each Azure environment, create users, back up and restore data, and archive data.

This book will give you all the information you need to become an expert database administrator and master the administrative aspects of SQL Server 2019. From setting up and configuring your SQL Server instance to fine-tuning your database, this extensive guide will teach you the nitty-gritty of SQL Server 2019 administration.

Use this comprehensive guide for the SQL Server DBA, covering all that practicing database administrators need to know to get their daily work done. Updated for SQL Server 2019, this edition includes coverage of new features such as Memory-optimized TempDB Metadata, and Always Encrypted with Secure Enclaves. Other new content includes coverage of Query Store, resumable index operations, installation on Linux, and containerized SQL. Pro SQL Server 2019 Administration takes DBAs on a journey that begins with planning their SQL Server deployment and runs through installing and configuring the instance, administering and optimizing database objects, and ensuring that data is secure and highly available. Finally, readers will learn how to perform advanced maintenance and tuning techniques. This book teaches you to make the most of new SQL Server 2019 functionality, including Data Discovery and Classification. The book promotes best-practice installation, shows how to configure for scalability and high workloads, and demonstrates the gamut of database-level maintenance tasks such as index maintenance, database consistency checks, and table optimizations. What You Will Learn Install and configure SQL Server on Windows through the GUI and with PowerShell Install and configure SQL Server on Linux and in Containers Optimize tables through in-memory OLTP, table partitioning, and the creation of indexes Secure and encrypt data to protect against embarrassing data breaches Ensure 24x7x365 access through high-availability and disaster recovery features Back up your data to ensure against loss, and recover data when needed Perform routine maintenance tasks such as database consistency checks Troubleshoot and solve performance problems in SQL queries and in the database engine Who This Book Is For SQL Server DBAs who manage on-premise installations of SQL Server. This book is also useful for DBAs who wish to learn advanced features such as Query Store, Extended Events, Distributed Replay, and Policy-Based Management, or those who need to install SQL Server in a variety of environments.

Microsoft System Center Data Protection Manager Cookbook

*Professional SQL Server High Availability and Disaster Recovery*

*Mastering Windows Server 2016*

*Best Practices for Installing, Configuring, and Maintaining SharePoint Server 2016*

*Microsoft SQL Server Interview Guide*

*A Guide for the Modern DBA*

**Over 60 recipes to achieve a robust and advanced backup and recovery solution leveraging SCDPM Key Features Adapt to the modern data center design challenges and improve storage efficiency Effective recipes to help you create your own robust architectural designs Solve data protection and recovery problems in your organization Book Description System Center Data Protection Manager (SCDPM) is a robust enterprise backup and recovery system that contributes to your BCDR strategy by facilitating the backup and recovery of enterprise data. With an increase in data recovery and protection problems faced in organizations, it has become important to keep data safe and recoverable. This book contains recipes that will help you upgrade to SCDPM and it covers the advanced features and functionality of SCDPM. This book starts by helping you install SCDPM and then moves on to post-installation and management tasks. You will come across a lot of useful recipes that will help you recover your VMware and Hyper-V VMs. It will also walk you through tips for monitoring SCDPM in different scenarios. Next, the book will also offer insights into protecting windows workloads followed by best practices on SCDPM. You will also learn to back up your Azure Stack Infrastructure using Azure Backup. You will also learn about recovering data from backup and implementing disaster recovery. Finally, the book will show you how to configure the protection groups to enable online protection and troubleshoot Microsoft Azure Backup Agent. What you will learn Install and prepare SQL Server for the SCDPM database Reduce backup storage with SCDPM and data deduplication Learn about the prerequisites for supported Hyper-V Server protection Integrate SCDPM with other System Center products to build optimal services Protect and restore the SCDPM database Protect your data center by integrating SCDPM with Azure Backup Manually create online recovery points and recover production data from Azure Protect and learn about the requirements to recover Azure Stack with SCDPM Who this book is for If you are an SCDPM administrator, this book will help you verify your knowledge and provide you with everything you need to know about the new release of System Center Data Protection Manager.**

**Prepare for Microsoft Exam 70-764—and help demonstrate your real-world mastery of skills for database administration. This exam is intended for database administrators charged with installation, maintenance, and configuration tasks. Their responsibilities also include setting up database systems, making sure those systems operate efficiently, and regularly storing, backing up, and securing data from unauthorized access. Focus on the expertise measured by these objectives:**

- Configure data access and auditing
- Manage backup and restore of databases
- Manage and monitor SQL Server instances
- Manage high availability and disaster recovery

**This Microsoft Exam Ref:**

- Organizes its coverage by exam objectives
- Features strategic, what-if scenarios to challenge you
- Assumes you have working knowledge of database installation, configuration, and maintenance tasks.

**You should also have experience with setting up database systems, ensuring those systems operate efficiently, regularly storing and backing up data, and securing data from unauthorized access. About the Exam Exam 70-764 focuses on skills and knowledge required for database administration. About Microsoft Certification Passing both Exam 70-764 and Exam 70-765 (Provisioning SQL Databases) earns you credit toward an MCSA: SQL 2016 Database Administration certification. See full details at: [microsoft.com/learning](https://microsoft.com/learning)**

**With Microsoft SQL Server 2016, a variety of new features and enhancements to the data platform deliver breakthrough performance, advanced security, and richer, integrated reporting and analytics capabilities. In this ebook, we introduce new security features: Always Encrypted, Row-Level Security, and dynamic data masking; discuss enhancements that enable you to better manage performance and storage: TempDB configuration, query store, and Stretch Database; review several improvements to Reporting Services; and also describe AlwaysOn Availability Groups, tabular enhancements, and R integration. Explore the impressive storage and analytic tools available with the in-cloud and on-premises versions of Microsoft SQL Server 2019. Key Features Gain insights into what's new in SQL Server 2019 Understand use cases and customer scenarios that can be implemented with SQL Server 2019 Discover new cross-platform tools that simplify management and analysis Book Description Microsoft SQL Server comes equipped with industry-leading features and the best online transaction processing capabilities. If you are looking to work with data processing and management, getting up to speed with Microsoft Server 2019 is key. Introducing SQL Server 2019 takes you through the latest**

**features in SQL Server 2019 and their importance. You will learn to unlock faster querying speeds and understand how to leverage the new and improved security features to build robust data management solutions. Further chapters will assist you with integrating, managing, and analyzing all data, including relational, NoSQL, and unstructured big data using SQL Server 2019. Dedicated sections in the book will also demonstrate how you can use SQL Server 2019 to leverage data processing platforms, such as Apache Hadoop and Spark, and containerization technologies like Docker and Kubernetes to control your data and efficiently monitor it. By the end of this book, you'll be well versed with all the features of Microsoft SQL Server 2019 and understand how to use them confidently to build robust data management solutions. What you will learn Build a custom container image with a Dockerfile Deploy and run the SQL Server 2019 container image Understand how to use SQL server on Linux Migrate existing paginated reports to Power BI Report Server Learn to query Hadoop Distributed File System (HDFS) data using Azure Data Studio Understand the benefits of In-Memory OLTP Who this book is for This book is for database administrators, architects, big data engineers, or anyone who has experience with SQL Server and wants to explore and implement the new features in SQL Server 2019. Basic working knowledge of SQL Server and relational database management system (RDBMS) is required.**

**SQL Server 2019 AlwaysOn**

**A professional guide to designing and developing enterprise database applications**

**Pro SQL Server Always On Availability Groups**

**SQL Server 2019 Administrator's Guide**

**SQL Server 2017 Administration Inside Out**

**SQL Server AlwaysOn Revealed**

Best practices, guidance, and tips for virtualizing Microsoft® business critical applications on the VMware vSphere® platform By virtualizing Microsoft's enterprise applications on vSphere, you can drive down costs while migrating toward flexible, low-cost private cloud architectures. This unique guidebook bridges the gap between the Microsoft and VMware worlds, bringing together the deep knowledge, cutting-edge best practices, and practical techniques you need to succeed. Leading experts Matt Liebowitz and Alex Fontana present end-to-end coverage of virtualizing Windows Server 2012 AD domain controllers and failover clusters, Exchange Server 2013, SQL Server 2012, and SharePoint Server 2013. They offer indispensable advice on sizing, architecture, performance, availability, monitoring, and metrics. Throughout, the authors share valuable tips, tricks, and insights from their own experiences. For each Microsoft application, they provide "proof of concept" sample configurations and clearly explain how new features impact virtualization. You'll also find authoritative, up-to-date guidance on licensing and other issues related to ensuring full support from both Microsoft and VMware. Coverage includes

- Evaluating the benefits, risks, and challenges of virtualizing Microsoft business critical applications
- Identifying strategies for success associated with people, processes, and technology
- Reviewing VMware vSphere features most important to virtualizing business-critical applications
- Taking advantage of new virtualization-aware features built in to Windows Server 2012 domain controllers
- Designing and configuring vSphere High Availability (vSphere HA) clusters to run Windows enterprise applications
- Reflecting Exchange Server 2013's new architecture to maximize its performance in virtualized environments
- Leveraging new SQL Server 2012 features to simplify the delivery of high availability on virtual servers
- Reducing SQL Server 2012 licensing costs through virtualization
- Planning, designing, and deploying virtualized SharePoint Server 2013 environments

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

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.

This is the eBook version of the print title. Note that the eBook does not provide access to the practice test software that accompanies the print book. Learn, prepare, and practice for CompTIA IT Fundamentals FC0-U61 exam success with this CompTIA Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master CompTIA IT Fundamentals FC0-U61 exam topics Assess your knowledge with practice questions Review key concepts with exam preparation tasks Practice with realistic exam questions Get practical guidance for next steps and more advanced certifications CompTIA IT Fundamentals Cert Guide is a best-of-breed exam study guide. Leading IT certification expert Mark Edward Soper shares preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this CompTIA study guide helps you master the concepts and techniques that will allow you to succeed on the exam the first time. The CompTIA study guide helps you master all the topics on the IT Fundamentals exam, including: IT concepts and terminology, including data types, input, processing, output, storage, the value of data and information, and basic troubleshooting methods Infrastructure, including I/O hardware, peripheral setup/installation, internal computer components, Internet service types, storage types, computing devices, and networking Applications and software, including software management, operating system components, software types and uses, application architecture and delivery models, web browser configuration, application concepts, and best practices Software development concepts, including types of programming languages, programming organization techniques and logic, and basic programming concepts Database concepts, purposes, structures, and interfaces Security issues, including confidentiality, integrity, and availability; device security; behavioral security; authentication and authorization; password best practices; encryption; and business continuity concepts

High Availability and Disaster Recovery

High Performance SQL Server

Microsoft SQL Server High Availability

Windows PowerShell 3.0 Step by Step

SQL Server 2019 Administration Inside Out

Pro SQL Server on Linux

***This book is your field guide to planning, deploying, managing, and troubleshooting Always On Availability Groups. The Always On Availability Groups feature is an enterprise-level solution for high availability and disaster recovery. Always On provides a rich set of options that reduce overhead and resource usage and enable database administrators to implement and manage high availability and disaster recovery solutions far more easily than by implementing the log-shipping and database-mirroring solutions of the past. Pro SQL Server Always On Availability Groups shows how to reduce downtime, maximize application availability, and provide data protection. The goal is always to have your SQL Server databases up and running whenever you need them, rain or shine, disaster or otherwise. With a focus on real-world experiences and war stories, authors Uttam Parui and Vivek Sanil offer you: Tips, tricks, and best practices for architecting and deploying availability groups. The confidence required to manage and monitor availability groups. Techniques to troubleshoot common issues that you may face during and after deploying availability groups in a mission-critical production environment. What You Will Learn Grasp important concepts underlying high-availability and disaster recovery. Plan and deploy Always On Availability Groups in your corporate environment. Manage Availability Groups to ensure constant readiness and high throughput. Monitor Availability Group performance and troubleshoot problems fast. Build on the cloud and make Windows Azure part of your availability solution. Employ proven techniques and best practices as tested and shared by the authors. Audience Pro SQL Server Always On Availability Groups is aimed at SQL Server architects, database administrators, and IT professionals who are tasked with architecting and deploying a high-availability and disaster recovery solution involving Microsoft SQL Server. This book is also for SQL Server support staff who will be managing and supporting existing availability group deployments.***

***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.*

*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.*

*Maximize your administration skills effectively and efficiently Key Features Implement cost-effective virtualization solutions for your organization with actionable recipes Explore the concepts of VMM with real-world use cases Use the latest features with VMM 2016 such as Cluster OS Rolling Upgrade, Guarded Fabric and Storage Spaces Direct Book Description Virtual Machine Manager (VMM) 2016 is part of the System Center suite to configure and manage datacenters and offers a unified management experience on-premises and Azure cloud. This book will be your best companion for day-to-day virtualization needs within your organization, as it takes you through a series of recipes to simplify and plan a highly scalable and available virtual infrastructure. You will learn the deployment tips, techniques, and solutions designed to show users how to improve VMM 2016 in a real-world scenario. The chapters are divided in a way that will allow you to implement the VMM 2016 and additional solutions required to effectively manage and monitor your fabrics and clouds. We will cover the most important new features in VMM 2016 across networking, storage, and compute, including brand new Guarded Fabric, Shielded VMs and Storage Spaces Direct. The recipes in the book provide step-by-step instructions giving you the simplest way to dive into VMM fabric concepts, private cloud, and integration with external solutions such as VMware, Operations Manager, and the Windows Azure Pack. By the end of this book, you will be armed with the knowledge you require to start designing and implementing virtual infrastructures in VMM 2016. What you will learn Plan and design a VMM architecture for real-world deployment Configure fabric resources, including compute, networking, and storage Create and manage Storage Spaces Direct clusters in VMM Configure Guarded Fabric with Shielded VMs Create and deploy virtual machine templates and multi-tier services Manage Hyper-V and VMware environments from VMM Enhance monitoring and management capabilities Upgrade to VMM 2016 from previous versions Who this book is for If you are a solutions architect, technical consultant, administrator, or any other virtualization enthusiast who needs to use Microsoft System Center Virtual Machine Manager in a real-world environment, then this is the book for you.*

*Exam Ref 70-764 Administering a SQL Database Infrastructure*

*SQL Server 2016 Developer's Guide*

*Reliability, scalability, and security both on premises and in the cloud*

*Including Big Data Clusters and Machine Learning*

*One stop solution for DBAs to monitor, manage, and maintain enterprise databases*

*SQL Server 2019 Revealed*

*Explains how to assess, select, and build high availability solutions from the ground up. Learn valuable skills, including how to drill down into the heart of high availability requirements, and how to assess and classify these requirements, and how to select, configure, and specify a matching high availability solution that optimally meets your needs.*

*Book + Content Update Program SQL Server 2016 High Availability Unleashed provides start-to-*

finish coverage of SQL Server's powerful high availability (HA) solutions for your traditional on-premise databases, cloud-based databases (Azure or AWS), hybrid databases (on-premise coupled with the cloud), and your emerging Big Data solutions. This complete guide introduces an easy-to-follow, formal HA methodology that has been refined over the past several years and helps you identify the right HA solution for your needs. There is also additional coverage of both disaster recovery and business continuity architectures and considerations. You are provided with step-by-step guides, examples, and sample code to help you set up, manage, and administer these highly available solutions. All examples are based on existing production deployments at major Fortune 500 companies around the globe. This book is for all intermediate-to-advanced SQL Server and Big Data professionals, but is also organized so that the first few chapters are great foundation reading for CIOs, CTOs, and even some tech-savvy CFOs. Learn a formal, high availability methodology for understanding and selecting the right HA solution for your needs

Deep dive into Microsoft Cluster Services Use selective data replication topologies Explore thorough details on AlwaysOn and availability groups Learn about HA options with log shipping and database mirroring/ snapshots Get details on Microsoft Azure for Big Data and Azure SQL Explore business continuity and disaster recovery Learn about on-premise, cloud, and hybrid deployments Provide all types of database needs, including online transaction processing, data warehouse and business intelligence, and Big Data Explore the future of HA and disaster recovery

In addition, this book is part of InformIT's exciting Content Update Program, which provides content updates for major technology improvements! As significant updates are made to SQL Server, sections of this book will be updated or new sections will be added to match the updates to the technologies. As updates become available, they will be delivered to you via a free Web Edition of this book, which can be accessed with any Internet connection. To learn more, visit [informit.com/cup](http://informit.com/cup). How to access the Web Edition: Follow the instructions inside to learn how to register your book to access the FREE Web Edition.

Create interactive cross-platform reports and dashboards using SQL Server 2016 Reporting Services About This Book Get up to speed with the newly-introduced enhancements and the more advanced query and reporting features Easily access your important data by creating visually appealing dashboards in the Power BI practical recipe Create cross-browser and cross-platform reports using SQL Server 2016 Reporting Services Who This Book Is For This book is for software professionals who develop and implement reporting solutions using Microsoft SQL Server. It is especially relevant for professionals who are software engineers, software architects, DW/BI engineers, and DW/BI architects who perform simple to complex report authoring implementations. This book is also suitable for those who develop software solutions that integrate reporting solutions and are keen to learn about Microsoft SQL Server 2016's features and capabilities.

What You Will Learn Key capabilities, architecture, and components of Reporting Services New features that have been added to Reporting Services Design the architecture for reporting solutions Design the architecture for BI solutions Implement reporting solutions using Reporting Services Improve the performance, availability, and scalability of the reporting solution Enhance reporting solutions with custom programming and improved security In Detail Microsoft SQL Server 2016 Reporting Services comes with many new features. It offers different types of reporting such as Production, Ad-hoc, Dashboard, Mash-up, and Analytical. SQL Server 2016 also has a surfeit of new features including Mobile Reporting, and Power BI integration. This book contains recipes that explore the new and advanced features added to SQL Server 2016. The first few chapters cover recipes on configuring components and how to explore these new features. You'll learn to build your own reporting solution with data tools and report builder, along with learning techniques to create visually appealing reports. This book also has recipes for enhanced mobile reporting solutions, accessing these solutions effectively, and delivering interactive business intelligence solutions. Towards the end of the book, you'll get to grips with running reporting services in SharePoint integrated mode and be able to administer, monitor, and secure your reporting solution. This book covers about the new offerings of Microsoft SQL Server 2016 Reporting Services in comprehensive detail and uses examples of real-world problem-solving business scenarios. Style and approach This comprehensive cookbook follows a problem-solution approach to help you overcome any obstacle when creating interactive, visually-appealing reports using SQL Server 2016 Reporting Services. Each recipe focuses on a specific task and is written in a clear, solution-focused style.

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

**Exam Ref 70-339 Managing Microsoft SharePoint Server 2016**

**SQL Server 2016 High Availability**

**Design, configure, and manage an efficient virtual infrastructure with VMM in System Center 2016, 3rd Edition**

**Expert SQL Server In-Memory OLTP**

**Unleashed**

This book is an easy-to-follow, comprehensive guide that is full of hands-on examples, which you can follow to successfully design, build, and deploy mission-critical database applications with SQL Server 2014. If you are a database developer, architect, or administrator who wants to learn how to design, implement, and deliver a successful database solution with SQL Server 2014, then this book is for you. Existing users of Microsoft SQL Server will also benefit from this book as they will learn what's new in the latest version.

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.

Prepare for Microsoft Exam 70-339—and help demonstrate your real-world mastery of planning, configuring, and managing Microsoft SharePoint 2016 core technologies in datacenters, in the cloud, and in hybrid environments. Designed for experienced IT pros ready to advance their status, this Exam Ref focuses on the critical-thinking and decision-making acumen needed for success at the MCSE level. Focus on the skills measured on the exam: • Design SharePoint infrastructure • Plan authentication and security • Plan workload optimization • Plan productivity solutions • Manage search capabilities • Plan and configure cloud services • Monitor and optimize a SharePoint environment This Microsoft Exam Ref: • Organizes its coverage by the “Skills measured” posted on the exam webpage • Features strategic, what-if scenarios to challenge you • Provides exam preparation tips • Points to in-depth material by topic for exam candidates needing additional review • Assumes experience planning and maintaining SharePoint and related core technologies, including Windows Server 2012 R2 or later, Internet Information Services (IIS), Microsoft SQL Server 2014 or later, Active Directory, and networking infrastructure services

The IT pro's must-have guide to Windows Server 2016 Mastering Windows Server 2016 is a complete resource for IT professionals needing to get quickly up to date on the latest release. Designed to provide comprehensive information in the context of real-world usage, this book offers expert guidance through the new tools and features to help you get Windows Server 2016 up and running quickly. Straightforward discussion covers all aspects, including virtualization products, identity and access, automation, networking, security, storage and more, with clear explanations and immediately-applicable instruction. Find the answers you need, and explore new solutions as Microsoft increases their focus on security, software-defined infrastructure, and the cloud; new capabilities including containers and Nano Server, Shielded VMs, Failover Clustering, PowerShell, and more give you plenty of tools to become more efficient, more effective, and more productive. Windows Server 2016 is the ideal server for Windows 10 clients, and is loaded with new features that IT professionals need to know. This book provides a comprehensive resource grounded in real-world application to help you get up to speed quickly. Master the latest features of Windows Server 2016 Apply new tools in real-world scenarios Explore new capabilities in security, networking, and the cloud Gain expert guidance on all aspect of Windows Server 2016 migration and management System administrators tasked with upgrading, migrating, or managing Windows Server 2016 need a one-stop resource to help them get the job done. Mastering Windows Server 2016 has the answers you need, the practicality you seek, and the latest information to get you up to speed quickly.

System Center 2016 Virtual Machine Manager Cookbook,

SQL Server 2014 Development Essentials

SQL Server 2017 Developer's Guide

Concepts, Design, Implementation

CompTIA IT Fundamentals+ FC0-U61 Cert Guide

A definitive guide for DBAs to implement, monitor, and maintain enterprise database solutions, 2nd Edition

**If you need to deploy, manage, or secure Microsoft SQL Server 2008, this is the complete, fast-paced, task-based reference you've been searching for. Authored by a world-class expert on SQL Server in the enterprise, this book goes far beyond the basics, taking on the complex tasks that DBAs need to make the most of Microsoft's flagship database platform. SQL Server MVP, Ross Mistry presents proven techniques for SQL Server 2008 installation, upgrades, backup/restore, data transfer, indexing, high availability, security, and much more. He draws on extensive testing in high-profile production environments to offer step-by-step solutions and powerful tips you won't find anywhere else. Every chapter begins with a section identifying SQL Server 2008's most significant new improvements, and concludes with a convenient summary of best practices. Each chapter also outlines the benefits of leveraging Windows Server 2008. Understand how to: Master DBA tips, tricks, and best practices proven in actual enterprise environments Install, upgrade or transition to SQL Server 2008. Harden and Secure an implementation. Encrypt SQL Server from an end-to-end perspective. Implement high availability—and leverage SQL Server 2008's major improvements to failover clustering and database mirroring Save time with SQL Server 2008's new policy-based management tools Performance tune and troubleshoot a SQL Server 2008 environment. Optimize application performance and manage workloads with the powerful new Resource Governor Implement Performance Studio, maintenance plans, Transparent Data Encryption and much more... Bonus Content: The book is based on Windows Server 2008 Step by step instructions of how to implement a failover cluster on Windows Server 2008 SQL Server PowerShell Administration Tasks Consolidate and virtualize SQL Server with Hyper-V Step by step instructions on how to install Hyper-V Proactively Monitor SQL Server with Operations Manager Install Windows Server 2008 certificates to encrypt SQL Server data Contributing Writers include: Hilary Cotter - SQL Server MVP John Welch - SQL Server MVP Marco Shaw - PowerShell MVP Maciej**

### **Pilecki - SQL Server MVP Shirmattie Seenarine - Technical Writer**

**Gain an in depth view of optimizing the performance of BizTalk Server. This book provides best practices and techniques for improving development of high mission critical solutions. You'll see how the BizTalk Server engine works and how to proactively detect and remedy potential bottlenecks before they occur. The book starts with an overview of the BizTalk Server internal mechanisms that will help you understand the optimizations detailed throughout the book. You'll then see how the mechanisms can be applied to a BizTalk Server environment to improve low and high latency throughput scenarios. A section on testing BizTalk server solutions will guide you through the most frequently adopted techniques used to develop solutions such as performance and unit testing as part of the development cycle. With BizTalk Server 2016 you'll see how to apply side-by-side versioning to your solutions to reduce the chances of downtime, You'll also review instrumentation techniques using Event Traces for windows and business activity monitoring (BAM). While the book is focused on the latest version of BizTalk Server, most of the topics discussed will also work with BizTalk Server 2013R2. What You'll Learn Review BizTalk Server internals and how the message engine works Understand BizTalk Server architecture Gather and analyze BizTalk Server performance data Develop BizTalk Server performance solutions Use advanced troubleshooting tools to help diagnose your platform Who This Book Is For Those who have strong BizTalk and .NET Framework knowledge and want to get their BizTalk Server knowledge to the next level**

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

**Your hands-on, step-by-step guide to automating Windows administration with Windows PowerShell 3.0 Teach yourself the fundamentals of Windows PowerShell 3.0 command line interface and scripting language—one step at a time. Written by a leading scripting expert, this practical tutorial delivers learn-by-doing exercises, timesaving tips, and hands-on sample scripts for performing administrative tasks on both local and remote Windows systems. Discover how to: Use built-in cmdlets to execute commands Write scripts to handle recurring tasks Use providers to access information beyond the shell environment Configure network components with Windows Management Instrumentation Manage users, groups, and computers with Active Directory services Execute scripts to administer and troubleshoot Microsoft Exchange Server 2010**

### **Professional SQL Server 2008 Internals and Troubleshooting**

### **Introducing Microsoft SQL Server 2016**

### **SQL Server 2016 High Availability Unleashed (includes Content Update Program)**

### **Including Container-Based Deployment with Docker and Kubernetes**

### **Mission-Critical Applications, Deeper Insights, Hyperscale Cloud**

### **Pro SQL Server 2019 Administration**

**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 Linux Use tools and features to diagnose, manage, and monitor SQL Server on Linux Scale your application by learning the performance capabilities of SQL Server Deliver 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 PostgreSQL Build 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.

**Book + Content Update Program** SQL Server 2016 High Availability Unleashed provides start-to-finish coverage of SQL Server's powerful high availability (HA) solutions for your traditional on-premise databases, cloud-based databases (Azure or AWS), hybrid databases (on-premise coupled with the cloud), and your emerging Big Data solutions. This complete guide introduces an easy-to-follow, formal HA methodology that has been refined over the past several years and helps you identify the right HA solution for your needs. There is also additional coverage of both disaster recovery and business continuity architectures and considerations. You are provided with step-by-step guides, examples, and sample code to help you set up, manage, and administer these highly available solutions. All examples are based on existing production deployments at major Fortune 500 companies around the globe. This book is for all intermediate-to-advanced SQL Server and Big Data professionals, but is also organized so that the first few chapters are great foundation reading for CIOs, CTOs, and even some tech-savvy CFOs. Learn a formal, high availability methodology for understanding and selecting the right HA solution for your needs Deep dive into Microsoft Cluster Services Use selective data replication topologies Explore thorough details on AlwaysOn and availability groups Learn about HA options with log shipping and database mirroring/ snapshots Get details on Microsoft Azure for Big Data and Azure SQL Explore business continuity and disaster recovery Learn about on-premise, cloud, and hybrid deployments Provide all types of database needs, including online transaction processing, data warehouse and business intelligence, and Big Data Explore the future of HA and disaster recovery In addition, this book is part of InformIT's exciting Content Update Program, which provides content updates for major technology improvements! As significant updates are made to SQL Server, sections of this book will be updated or new sections will be added to match the updates to the technologies. As updates become available, they will be delivered to you via a free Web Edition of this book, which can be accessed with any Internet connection. To learn more, visit [informit.com/cup](http://informit.com/cup). How to access the Web Edition: Follow the instructions inside to learn how to register your book to access the FREE Web Edition.

**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

**BizTalk Server 2016**

**SQL Server 2017 Administrator's Guide**

**Windows Server 2016 Inside Out (includes Current Book Service)**