

Read Book 70 473 Designing And Implementing Cloud Data Platform Solutions Study Guide Pdf For Free

Data Engineering with Google Cloud Platform Jul 07 2020 Build and deploy your own data pipelines on GCP, make key architectural decisions, and gain the confidence to boost your career as a data engineer Key Features Understand data engineering concepts, the role of a data engineer, and the benefits of using GCP for building your solution Learn how to use the various GCP products to ingest, consume, and transform data and orchestrate pipelines Discover tips to prepare for and pass the Professional Data Engineer exam Book Description With this book, you'll understand how the highly scalable Google Cloud Platform (GCP) enables data engineers to create end-to-end data pipelines right from storing and processing data and workflow orchestration to presenting data through visualization dashboards. Starting with a quick overview of the fundamental concepts of data engineering, you'll learn the various responsibilities of a data engineer and how GCP plays a vital role in fulfilling those responsibilities. As you progress through the chapters, you'll be able to leverage GCP products to build a sample data warehouse using Cloud Storage and BigQuery and a data lake using Dataproc. The book gradually takes you through operations such as data ingestion, data cleansing, transformation, and integrating data with other sources. You'll learn how to design IAM for data governance, deploy ML pipelines with the Vertex AI, leverage pre-built GCP models as a service, and visualize data with Google Data Studio to build compelling reports. Finally, you'll find tips on how to boost your career as a data engineer, take the Professional Data Engineer certification exam, and get ready to become an expert in data engineering with GCP. By the end of this data engineering book, you'll have developed the skills to perform core data engineering tasks and build efficient ETL data pipelines with GCP. What you will learn Load data into BigQuery and materialize its output for downstream consumption Build data pipeline orchestration using Cloud Composer Develop Airflow jobs to orchestrate and automate a data warehouse Build a Hadoop data lake, create ephemeral clusters, and run jobs on the Dataproc cluster Leverage Pub/Sub for messaging and ingestion for event-driven systems Use Dataflow to perform ETL on streaming data Unlock the power of your data with Data Studio Calculate the GCP cost estimation for your end-to-end data solutions Who this book is for This book is for data engineers, data analysts, and anyone looking to design and manage data processing pipelines using GCP. You'll find this book useful if you are preparing to take Google's Professional Data Engineer exam. Beginner-level understanding of data science, the Python programming language, and Linux commands is necessary. A basic understanding of data processing and cloud computing, in general, will help you make the most out of this book.

Data Science on the Google Cloud Platform Aug 20 2021 Learn how easy it is to apply sophisticated statistical and machine learning methods to real-world problems when you build on top of the Google Cloud Platform (GCP). This hands-on guide shows developers entering the data science field how to implement an end-to-end data pipeline, using statistical and machine learning methods and tools on GCP. Through the course of the book, you'll work through a sample business decision by employing a variety of data science approaches. Follow along by implementing these statistical and machine learning solutions in your own project on GCP, and discover how this platform provides a transformative and more collaborative way of doing data science. You'll learn how to: Automate and schedule data ingest, using an App Engine application Create and populate a dashboard in Google Data Studio Build a real-time analysis pipeline to carry out streaming analytics Conduct interactive data exploration with Google BigQuery Create a Bayesian model on a Cloud Dataproc cluster Build a logistic regression machine-learning model with Spark Compute time-aggregate features with a Cloud Dataflow pipeline Create a high-performing prediction model with TensorFlow Use your deployed model as a microservice you can access from both batch and real-time pipelines

Data Analytics with Google Cloud Platform Apr 27 2022 Step-by-step guide to different data movement and processing techniques, using Google Cloud Platform Services Key Featuresa- Learn the basic concept of Cloud Computing along with different Cloud service provides with their supported Models (IaaS/PaaS/SaaS)a- Learn the basics of Compute Engine, App Engine, Container Engine, Project and Billing setup in the Google Cloud Platforma- Learn how and when to use Cloud DataFlow, Cloud DataProc and Cloud DataPrep a- Build real-time data pipeline to support real-time analytics using Pub/Sub messaging servicea- Setting up a fully managed GCP Big Data Cluster using Cloud DataProc for running Apache Spark and Apache Hadoop clusters in a simpler, more cost-efficient mannera- Learn how to use Cloud Data Studio for visualizing the data on top of Big Querya- Implement and understand real-world business scenarios for Machine Learning, Data Pipeline EngineeringDescriptionModern businesses are awash with data, making data driven decision-making tasks increasingly complex. As a result, relevant technical expertise and analytical skills are required to do such tasks. This book aims to equip you with enough knowledge of Cloud Computing in conjunction with Google Cloud Data platform to succeed in the role of a Cloud data expert.Current market is trending towards the latest cloud technologies, which is the need of the hour. Google being the pioneer, is dominating this space with the right set of cloud services being offered as part of GCP (Google Cloud Platform). At this juncture, this book will be very vital and will be cover all the services that are being offered by GCP, putting emphasis on Data services.What will you learnBy the end of the book, you will have come across different data services and platforms offered by Google Cloud, and how those services/features can be enabled to serve business needs. You will also see a few case studies to put your knowledge to practice and solve business problems such as building a real-time streaming pipeline engine, Scalable Datawarehouse on Cloud, fully managed Hadoop cluster on Cloud and enabling TensorFlow/Machine Learning API's to support real-life business problems. Remember to practice additional examples to master these techniques. Who this book is forThis book is for professionals as well as graduates who want to build a career in Google Cloud data analytics technologies. One stop shop for those who wish to get an initial to advance understanding of the GCP data platform. The target audience will be data engineers/professionals who are new, as well as those who are acquainted with the tools and techniques related to cloud and data space. a- Individuals who have basic data understanding (i.e. Data and cloud) and have done some work in the field of data analytics, can refer/use this book to master their knowledge/understanding.a- The highlight of this book is that it will start with the basic cloud computing fundamentals and will move on to cover the advance concepts on GCP cloud data analytics and hence can be referred across multiple different levels of audiences. Table of Contents1. GCP Overview and Architecture2. Data Storage in GCP 3. Data Processing in GCP with Pub/Sub and Dataflow 4. Data Processing in GCP with DataPrep and Dataflow5. Big Query and Data Studio6. Machine Learning with GCP7. Sample Use cases and ExamplesAbout the Author Murari Ramuka is a seasoned Data Analytics professional with 12+ years of experience in enabling data analytics platforms using traditional DW/BI and Cloud Technologies (Azure, Google Cloud Platform) to uncover hidden insights and maximize revenue, profitability and ensure efficient operations management. He has worked with several multinational IT giants like Capgemini, Cognizant, Syntel and Icertis.His LinkedIn Profile: <https://www.linkedin.com/in/murari-ramuka-98a440a/>

Cloud Computing May 17 2021 This book lays a good foundation to the core concepts and principles of cloud computing, walking the reader through the fundamental ideas with expert ease. The book advances on the topics in a step-by-step manner and reinforces theory with a full-fledged pedagogy designed to enhance students' understanding and offer them a practical insight into the subject

Cloud Data Design, Orchestration, and Management Using Microsoft Azure Dec 04 2022 Use Microsoft Azure to optimally design your data solutions and save time and money. Scenarios are presented covering analysis, design, integration, monitoring, and derivatives. This book is about data and provides you with a wide range of possibilities to implement a data solution on Azure, from hybrid cloud to PaaS services. Migration from existing solutions is presented in detail. Alternatives and their scope are discussed. Five of six chapters explore PaaS, while one focuses on SQL Server features for cloud and relates to hybrid cloud and IaaS functionalities. What You'll Learn Know the Azure services useful to implement a data solution Match the products/services used to your specific needs Fit relational databases efficiently into data design Understand how to work with any type of data using Azure hybrid and public cloud features Use non-relational alternatives to solve even complex requirements Orchestrate data movement using Azure services Approach analysis and manipulation according to the data life

cycle Who This Book Is For Software developers and professionals with a good data design background and basic development skills who want to learn how to implement a solution using Azure data services

Designing Cloud Data Platforms May 09 2023 Centralized data warehouses, the long-time defacto standard for housing data for analytics, are rapidly giving way to multi-faceted cloud data platforms. Companies that embrace modern cloud data platforms benefit from an integrated view of their business using all of their data and can take advantage of advanced analytic practices to drive predictions and as yet unimagined data services. *Designing Cloud Data Platforms* is an hands-on guide to envisioning and designing a modern scalable data platform that takes full advantage of the flexibility of the cloud. As you read, you'll learn the core components of a cloud data platform design, along with the role of key technologies like Spark and Kafka Streams. You'll also explore setting up processes to manage cloud-based data, keep it secure, and using advanced analytic and BI tools to analyse it. about the technology Access to affordable, dependable, serverless cloud services has revolutionized the way organizations can approach data management, and companies both big and small are raring to migrate to the cloud. But without a properly designed data platform, data in the cloud can remain just as siloed and inaccessible as it is today for most organizations. *Designing Cloud Data Platforms* lays out the principles of a well-designed platform that uses the scalable resources of the public cloud to manage all of an organization's data, and present it as useful business insights. about the book In *Designing Cloud Data Platforms*, you'll learn how to integrate data from multiple sources into a single, cloud-based, modern data platform. Drawing on their real-world experiences designing cloud data platforms for dozens of organizations, cloud data experts Danil Zburivsky and Lynda Partner take you through a six-layer approach to creating cloud data platforms that maximizes flexibility and manageability and reduces costs. Starting with foundational principles, you'll learn how to get data into your platform from different databases, files, and APIs, the essential practices for organizing and processing that raw data, and how to best take advantage of the services offered by major cloud vendors. As you progress past the basics you'll take a deep dive into advanced topics to get the most out of your data platform, including real-time data management, machine learning analytics, schema management, and more. what's inside The tools of different public cloud for implementing data platforms Best practices for managing structured and unstructured data sets Machine learning tools that can be used on top of the cloud Cost optimization techniques about the reader For data professionals familiar with the basics of cloud computing and distributed data processing systems like Hadoop and Spark. about the authors Danil Zburivsky has over 10 years experience designing and supporting large-scale data infrastructure for enterprises across the globe. Lynda Partner is the VP of Analytics-as-a-Service at Pythian, and has been on the business side of data for over 20 years.

Cloud Computing and Beyond: A Managerial Perspective, 2/e Jun 17 2021 Cloud computing is rage these days. "It's become the phrase du jour," says Gartner, senior analyst, Ben Pring. This book attempts to unravel the mystery behind this buzzword. The primary objective is to provide the introduction to the current practices of Cloud Computing, also known as the Internet as a platform. This book takes a cross-disciplinary approach covering topics in business, computer science, and information systems. Mainly focusing on cloud computing models, techniques, and architectures, this book provides knowledge and hands-on experience in designing and implementing cloud-based software systems. Topics included are advanced web technologies (AJAX and Mashup), distributed computing models and technologies (Hadoop and MapReduce), Infrastructure-as-a-Service (IaaS), Software as a Service (SaaS), Platform-as-a-Service (PaaS), virtualization, parallelization, security/privacy, and other issues in cloud computing. This book also explores the current challenges facing cloud computing. This book has deep theoretical foundations of Cloud Computing and associated topics and case studies. Cloud Computing is one of the upcoming and sought after subjects in most IT companies. This subject will be useful to all professionals and B. Tech, MCA, M. Tech and MBA students. This edition has two new chapters which are most topical for current cloud implementation, namely: • Green Cloud Computing • Cloud Data Security Management

Cloud Computing Jan 25 2022 *Cloud Computing: Implementation, Management, and Security* provides an understanding of what cloud computing really means, explores how disruptive it may become in the future, and examines its advantages and disadvantages. It gives business executives the knowledge necessary to make informed, educated decisions regarding cloud initiatives. The authors first discuss the evolution of computing from a historical perspective, focusing primarily on advances that led to the development of cloud computing. They then survey some of the critical components that are necessary to make

the cloud computing paradigm feasible. They also present various standards based on the use and implementation issues surrounding cloud computing and describe the infrastructure management that is maintained by cloud computing service providers. After addressing significant legal and philosophical issues, the book concludes with a hard look at successful cloud computing vendors. Helping to overcome the lack of understanding currently preventing even faster adoption of cloud computing, this book arms readers with guidance essential to make smart, strategic decisions on cloud initiatives.

Cloud Computing Solutions Feb 23 2022 CLOUD COMPUTING SOLUTIONS The main purpose of this book is to include all the cloud-related technologies in a single platform, so that researchers, academicians, postgraduate students, and those in the industry can easily understand the cloud-based ecosystems. This book discusses the evolution of cloud computing through grid computing and cluster computing. It will help researchers and practitioners to understand grid and distributed computing cloud infrastructure, virtual machines, virtualization, live migration, scheduling techniques, auditing concept, security and privacy, business models, and case studies through the state-of-the-art cloud computing countermeasures. This book covers the spectrum of cloud computing-related technologies and the wide-ranging contents will differentiate this book from others. The topics treated in the book include: The evolution of cloud computing from grid computing, cluster computing, and distributed systems; Covers cloud computing and virtualization environments; Discusses live migration, database, auditing, and applications as part of the materials related to cloud computing; Provides concepts of cloud storage, cloud strategy planning, and management, cloud security, and privacy issues; Explains complex concepts clearly and covers information for advanced users and beginners. Audience The primary audience for the book includes IT, computer science specialists, researchers, graduate students, designers, experts, and engineers who are occupied with research.

Briggs Oct 10 2020 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.

Cloud Data Centers A Complete Guide - 2020 Edition Sep 08 2020 How much data can be collected in the given timeframe? What is your BATNA (best alternative to a negotiated agreement)? What risks do you need to manage? How do you manage unclear cloud data centers requirements? Are required metrics defined, what are they? Defining, designing, creating, and implementing a process to solve a challenge or meet an objective is the most valuable role... In EVERY group, company, organization and department. Unless you are talking a one-time, single-use project, there should be a process. Whether that process is managed and implemented by humans, AI, or a combination of the two, it needs to be designed by someone with a complex enough perspective to ask the right questions. Someone capable of asking the right questions and step back and say, 'What are we really trying to accomplish here? And is there a different way to look at it?' This Self-Assessment empowers people to do just that - whether their title is entrepreneur, manager, consultant, (Vice-)President, CxO etc... - they are the people who rule the future. They are the person who asks the right questions to make Cloud Data Centers investments work better. This Cloud Data Centers All-Inclusive Self-Assessment enables You to be that person. All the tools you need to an in-depth Cloud Data Centers Self-Assessment. Featuring 930 new and updated case-based questions, organized into seven core areas of process design, this Self-Assessment will help you identify areas in which Cloud Data Centers improvements can be made. In using the questions you will be better able to: - diagnose Cloud Data Centers projects, initiatives, organizations, businesses and processes using accepted diagnostic standards and practices - implement evidence-based best practice strategies aligned with overall goals - integrate recent advances in Cloud Data Centers and process design strategies into practice according to best practice guidelines Using a Self-Assessment tool known as the Cloud Data Centers Scorecard, you will develop a clear picture of which Cloud Data Centers areas need attention. Your purchase includes access details to the Cloud Data Centers self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows your organization exactly what to do next. You will receive the following contents with New and Updated specific criteria: - The latest quick edition of the book in PDF - The latest complete edition of the book in PDF, which criteria correspond to the criteria in... - The Self-Assessment Excel Dashboard - Example pre-filled

Self-Assessment Excel Dashboard to get familiar with results generation - In-depth and specific Cloud Data Centers Checklists - Project management checklists and templates to assist with implementation INCLUDES LIFETIME SELF ASSESSMENT UPDATES Every self assessment comes with Lifetime Updates and Lifetime Free Updated Books. Lifetime Updates is an industry-first feature which allows you to receive verified self assessment updates, ensuring you always have the most accurate information at your fingertips.

Implementing Cloud Robotics for Practical Applications Aug 08 2020 This book explores cloud robotics by casting a light on key issues and proposing a novel approach towards implementation and practical aspects to allow for the widespread adoption of cloud-based functionality. The advent of cloud robotics can to unleash a new generation of smart robotic devices by allowing robots to explore cloud computing capabilities to share data and to offload heavy processing applications. Cloud robotics is investigated as an enabler to a series of applications and devices, questioning how the insertion of network and cloud technologies into such systems might affect the interaction between a robot and the human operating it, and what are the limiting requirements for cloud-based solutions. Aiming at researchers and practitioners, this book also presents a methodology based on open-source software and commercial off-the-shelf devices to provide a common standard for reproducing and benchmarking different cloud robotics systems.

Mobile Cloud Computing Jul 19 2021 *Mobile Cloud Computing: Models, Implementation, and Security* provides a comprehensive introduction to mobile cloud computing, including key concepts, models, and relevant applications. The book focuses on novel and advanced algorithms, as well as mobile app development. The book begins with an overview of mobile cloud computing concepts, models, and service deployments, as well as specific cloud service models. It continues with the basic mechanisms and principles of mobile computing, as well as virtualization techniques. The book also introduces mobile cloud computing architecture, design, key techniques, and challenges. The second part of the book covers optimizations of data processing and storage in mobile clouds, including performance and green clouds. The crucial optimization algorithm in mobile cloud computing is also explored, along with big data and service computing. Security issues in mobile cloud computing are covered in-depth, including a brief introduction to security and privacy issues and threats, as well as privacy protection techniques in mobile systems. The last part of the book features the integration of service-oriented architecture with mobile cloud computing. It discusses web service specifications related to implementations of mobile cloud computing. The book not only presents critical concepts in mobile cloud systems, but also drives readers to deeper research, through open discussion questions. Practical case studies are also included. Suitable for graduate students and professionals, this book provides a detailed and timely overview of mobile cloud computing for a broad range of readers.

DATA SCIENCE ON THE GOOGLE CLOUD PLATFORM Apr 15 2021

CSA Guide to Cloud Computing Nov 22 2021 *CSA Guide to Cloud Computing* brings you the most current and comprehensive understanding of cloud security issues and deployment techniques from industry thought leaders at the Cloud Security Alliance (CSA). For many years the CSA has been at the forefront of research and analysis into the most pressing security and privacy related issues associated with cloud computing. *CSA Guide to Cloud Computing* provides you with a one-stop source for industry-leading content, as well as a roadmap into the future considerations that the cloud presents. The authors of *CSA Guide to Cloud Computing* provide a wealth of industry expertise you won't find anywhere else. Author Raj Samani is the Chief Technical Officer for McAfee EMEA; author Jim Reavis is the Executive Director of CSA; and author Brian Honan is recognized as an industry leader in the ISO27001 standard. They will walk you through everything you need to understand to implement a secure cloud computing structure for your enterprise or organization. Your one-stop source for comprehensive understanding of cloud security from the foremost thought leaders in the industry Insight into the most current research on cloud privacy and security, compiling information from CSA's global membership Analysis of future security and privacy issues that will impact any enterprise that uses cloud computing

Cloud Computing for Machine Learning and Cognitive Applications Apr 03 2020 The first textbook to teach students how to build data analytic solutions on large data sets using cloud-based technologies. This is the first textbook to teach students how to build data analytic solutions on large data sets (specifically in Internet of Things applications) using cloud-based technologies for data storage, transmission and mashup, and AI techniques to analyze this data. This

textbook is designed to train college students to master modern cloud computing systems in operating principles, architecture design, machine learning algorithms, programming models and software tools for big data mining, analytics, and cognitive applications. The book will be suitable for use in one-semester computer science or electrical engineering courses on cloud computing, machine learning, cloud programming, cognitive computing, or big data science. The book will also be very useful as a reference for professionals who want to work in cloud computing and data science. Cloud and Cognitive Computing begins with two introductory chapters on fundamentals of cloud computing, data science, and adaptive computing that lay the foundation for the rest of the book. Subsequent chapters cover topics including cloud architecture, mashup services, virtual machines, Docker containers, mobile clouds, IoT and AI, inter-cloud mashups, and cloud performance and benchmarks, with a focus on Google's Brain Project, DeepMind, and X-Lab programs, IBKai HwangM SyNapse, Bluemix programs, cognitive initiatives, and neurocomputers. The book then covers machine learning algorithms and cloud programming software tools and application development, applying the tools in machine learning, social media, deep learning, and cognitive applications. All cloud systems are illustrated with big data and cognitive application examples.

Handbook of Cloud Computing Jan 31 2020 Great POSSIBILITIES and high future prospects to become ten times folds in the near FUTUREKey features
Comprehensively gives clear picture of current state-of-the-art aspect of cloud computing by elaborating terminologies, models and other related terms. Enlightens all major players in Cloud Computing industry providing services in terms of SaaS, PaaS and IaaS. Highlights Cloud Computing Simulators, Security Aspect and Resource Allocation. In-depth presentation with well-illustrated diagrams and simple to understand technical concepts of cloud. Description The book "e;Handbook of Cloud Computing"e; provides the latest and in-depth information of this relatively new and another platform for scientific computing which has great possibilities and high future prospects to become ten folds in near future. The book covers in comprehensive manner all aspects and terminologies associated with cloud computing like SaaS, PaaS and IaaS and also elaborates almost every cloud computing service model. The book highlights several other aspects of cloud computing like Security, Resource allocation, Simulation Platforms and futuristic trend i.e. Mobile cloud computing. The book will benefit all the readers with all in-depth technical information which is required to understand current and futuristic concepts of cloud computing. No prior knowledge of cloud computing or any of its related technology is required in reading this book. What will you learn Cloud Computing, Virtualisation Software as a Service, Platform as a Service, Infrastructure as a Service Data in Cloud and its Security Cloud Computing - Simulation, Mobile Cloud Computing Specific Cloud Service Models Resource Allocation in Cloud Computing Who this book is for Students of Polytechnic Diploma Classes- Computer Science/ Information Technology Graduate Students- Computer Science/ CSE / IT/ Computer Applications Master Class Students-Msc (CS/IT)/ MCA/ M.Phil, M.Tech, M.S. Researcher's-Ph.D Research Scholars doing work in Virtualization, Cloud Computing and Cloud Security Industry Professionals- Preparing for Certifications, Implementing Cloud Computing and even working on Cloud Security Table of contents1. Introduction to Cloud Computing2. Virtualisation3. Software as a Service4. Platform as a Service5. Infrastructure as a Service6. Data in Cloud7. Cloud Security 8. Cloud Computing - Simulation9. Specific Cloud Service Models10. Resource Allocation in Cloud Computing11. Mobile Cloud Computing About the authorDr. Anand Nayyar received Ph.D (Computer Science) in Wireless Sensor Networks and Swarm Intelligence. Presently he is working in Graduate School, Duy Tan University, Da Nang, Vietnam. He has total of fourteen Years of Teaching, Research and Consultancy experience with more than 250 Research Papers in various International Conferences and highly reputed journals. He is certified Professional with more than 75 certificates and member of 50 Professional Organizations. He is acting as "e;ACM DISTINGUISHED SPEAKER"e;

The Cloud Data Lake Jan 13 2021 More organizations than ever understand the importance of data lake architectures for deriving value from their data. Building a robust, scalable, and performant data lake remains a complex proposition, however, with a buffet of tools and options that need to work together to provide a seamless end-to-end pipeline from data to insights. This book provides a concise yet comprehensive overview on the setup, management, and governance of a cloud data lake. Author Rukmani Gopalan, a product management leader and data enthusiast, guides data architects and engineers through the major aspects of working with a cloud data lake, from design considerations and best practices to data format optimizations, performance optimization, cost

management, and governance. Learn the benefits of a cloud-based big data strategy for your organization Get guidance and best practices for designing performant and scalable data lakes Examine architecture and design choices, and data governance principles and strategies Build a data strategy that scales as your organizational and business needs increase Implement a scalable data lake in the cloud Use cloud-based advanced analytics to gain more value from your data

The Cloud Data Lake Mar 03 2020 More organizations than ever understand the importance of data lake architectures for deriving value from their data. Building a robust, scalable, and performant data lake remains a complex proposition, however, with a buffet of tools and options that need to work together to provide a seamless end-to-end pipeline from data to insights. This book provides a concise yet comprehensive overview on the setup, management, and governance of a cloud data lake. Author Rukmani Gopalan, product management leader at Microsoft, guides data architects and engineers through the major aspects of working with a cloud data lake, from design considerations and best practices to data format optimizations, performance optimization, cost management, and governance. Learn the benefits of a cloud-based big data strategy for your organization Get guidance and best practices for designing performant and scalable data lakes Examine architecture and design choices, and data governance principles and strategies Build a data strategy that scales as your organizational and business needs increase Implement a scalable data lake in the cloud Use cloud-based advanced analytics to gain more value from your data

Jumpstart Snowflake Oct 22 2021 Explore the modern market of data analytics platforms and the benefits of using Snowflake computing, the data warehouse built for the cloud. With the rise of cloud technologies, organizations prefer to deploy their analytics using cloud providers such as Amazon Web Services (AWS), Microsoft Azure, or Google Cloud Platform. Cloud vendors are offering modern data platforms for building cloud analytics solutions to collect data and consolidate into single storage solutions that provide insights for business users. The core of any analytics framework is the data warehouse, and previously customers did not have many choices of platform to use. Snowflake was built specifically for the cloud and it is a true game changer for the analytics market. This book will help onboard you to Snowflake, present best practices to deploy, and use the Snowflake data warehouse. In addition, it covers modern analytics architecture and use cases. It provides use cases of integration with leading analytics software such as Matillion ETL, Tableau, and Databricks. Finally, it covers migration scenarios for on-premise legacy data warehouses. What You Will Learn Know the key functionalities of Snowflake Set up security and access with cluster Bulk load data into Snowflake using the COPY command Migrate from a legacy data warehouse to Snowflake integrate the Snowflake data platform with modern business intelligence (BI) and data integration tools Who This Book Is For Those working with data warehouse and business intelligence (BI) technologies, and existing and potential Snowflake users

Snowflake Cookbook Mar 07 2023 Develop modern solutions with Snowflake's unique architecture and integration capabilities; process bulk and real-time data into a data lake; and leverage time travel, cloning, and data-sharing features to optimize data operations Key FeaturesBuild and scale modern data solutions using the all-in-one Snowflake platformPerform advanced cloud analytics for implementing big data and data science solutionsMake quicker and better-informed business decisions by uncovering key insights from your dataBook Description Snowflake is a unique cloud-based data warehousing platform built from scratch to perform data management on the cloud. This book introduces you to Snowflake's unique architecture, which places it at the forefront of cloud data warehouses. You'll explore the compute model available with Snowflake, and find out how Snowflake allows extensive scaling through the virtual warehouses. You will then learn how to configure a virtual warehouse for optimizing cost and performance. Moving on, you'll get to grips with the data ecosystem and discover how Snowflake integrates with other technologies for staging and loading data. As you progress through the chapters, you will leverage Snowflake's capabilities to process a series of SQL statements using tasks to build data pipelines and find out how you can create modern data solutions and pipelines designed to provide high performance and scalability. You will also get to grips with creating role hierarchies, adding custom roles, and setting default roles for users before covering advanced topics such as data sharing, cloning, and performance optimization. By the end of this Snowflake book, you will be well-versed in Snowflake's architecture for building modern analytical solutions and understand best practices for solving commonly faced problems using

practical recipes. What you will learn

- Get to grips with data warehousing techniques aligned with Snowflake's cloud architecture
- Broaden your skills as a data warehouse designer to cover the Snowflake ecosystem
- Transfer skills from on-premise data warehousing to the Snowflake cloud analytics platform
- Optimize performance and costs associated with a Snowflake solution
- Stage data on object stores and load it into Snowflake
- Secure data and share it efficiently for access
- Manage transactions and extend Snowflake using stored procedures
- Extend cloud data applications using Spark Connector

Who this book is for This book is for data warehouse developers, data analysts, database administrators, and anyone involved in designing, implementing, and optimizing a Snowflake data warehouse. Knowledge of data warehousing and database and cloud concepts will be useful. Basic familiarity with Snowflake is beneficial, but not necessary.

Cloud Data Management Interface A Complete Guide - 2020 Edition Jan 01 2020 How can you better manage risk? What adjustments to the strategies are needed? Is the Cloud Data Management Interface organization completing tasks effectively and efficiently? How do you measure efficient delivery of Cloud Data Management Interface services? Do you have the right capabilities and capacities? Defining, designing, creating, and implementing a process to solve a challenge or meet an objective is the most valuable role... In EVERY group, company, organization and department. Unless you are talking a one-time, single-use project, there should be a process. Whether that process is managed and implemented by humans, AI, or a combination of the two, it needs to be designed by someone with a complex enough perspective to ask the right questions. Someone capable of asking the right questions and step back and say, 'What are we really trying to accomplish here? And is there a different way to look at it?' This Self-Assessment empowers people to do just that - whether their title is entrepreneur, manager, consultant, (Vice-)President, CxO etc... - they are the people who rule the future. They are the person who asks the right questions to make Cloud Data Management Interface investments work better. This Cloud Data Management Interface All-Inclusive Self-Assessment enables You to be that person. All the tools you need to an in-depth Cloud Data Management Interface Self-Assessment. Featuring 949 new and updated case-based questions, organized into seven core areas of process design, this Self-Assessment will help you identify areas in which Cloud Data Management Interface improvements can be made. In using the questions you will be better able to: - diagnose Cloud Data Management Interface projects, initiatives, organizations, businesses and processes using accepted diagnostic standards and practices - implement evidence-based best practice strategies aligned with overall goals - integrate recent advances in Cloud Data Management Interface and process design strategies into practice according to best practice guidelines Using a Self-Assessment tool known as the Cloud Data Management Interface Scorecard, you will develop a clear picture of which Cloud Data Management Interface areas need attention. Your purchase includes access details to the Cloud Data Management Interface self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows your organization exactly what to do next. You will receive the following contents with New and Updated specific criteria: - The latest quick edition of the book in PDF - The latest complete edition of the book in PDF, which criteria correspond to the criteria in... - The Self-Assessment Excel Dashboard - Example pre-filled Self-Assessment Excel Dashboard to get familiar with results generation - In-depth and specific Cloud Data Management Interface Checklists - Project management checklists and templates to assist with implementation INCLUDES LIFETIME SELF ASSESSMENT UPDATES Every self assessment comes with Lifetime Updates and Lifetime Free Updated Books. Lifetime Updates is an industry-first feature which allows you to receive verified self assessment updates, ensuring you always have the most accurate information at your fingertips.

Cloud Computing for Geospatial Big Data Analytics Mar 27 2022 This book introduces the latest research findings in cloud, edge, fog, and mist computing and their applications in various fields using geospatial data. It solves a number of problems of cloud computing and big data, such as scheduling, security issues using different techniques, which researchers from industry and academia have been attempting to solve in virtual environments. Some of these problems are of an intractable nature and so efficient technologies like fog, edge and mist computing play an important role in addressing these issues. By exploring emerging advances in cloud computing and big data analytics and their engineering applications, the book enables researchers to understand the mechanisms needed to implement cloud, edge, fog, and mist computing in their own endeavours, and motivates them to examine their own research findings and developments.

Essentials of Cloud Computing Dec 24 2021 This reader-friendly textbook presents a comprehensive overview of the essential aspects of cloud computing, from the origin of the field to the latest developments. Rather than merely discussing the cloud paradigm in isolation, the text also examines how cloud

computing can work collaboratively with other computing models to meet the needs of evolving computing trends. This multi-dimensional approach encompasses the challenges of fulfilling the storage requirements of big data, the use of the cloud as a remote server for Internet of Things and sensor networks, and an investigation of how cloud computing is interlinked with edge, fog and mist computing, among other illuminating perspectives. Topics and features: includes learning objectives, motivating questions, and self-test exercises in every chapter; presents an introduction to the underlying concepts, fundamental features, and key technological foundations of cloud computing; examines how enterprise networking and cloud networking can work together to achieve business goals; reviews the different types of cloud storage available to address the evolution of data and the need for digitization; discusses the challenges and approaches to implementing cloud security, and the hot topic of cloud management; highlights the value of cloud brokerage capabilities, and explains the importance of cloud orchestration in multi-cloud environments; describes the details of cloud migration, the crucial role of monitoring in optimizing the cloud, and the basics of disaster recovery using cloud infrastructure. This technically rigorous yet simple-to-follow textbook is an ideal resource for graduate courses on cloud computing. Professional software developers and cloud architects will also find the work to be an invaluable reference.

Cloud Computing Business in Saudi Arabia Feb 11 2021 Doctoral Thesis / Dissertation from the year 2014 in the subject Computer Science - Commercial Information Technology, grade: 4.5, Egerton University, language: English, abstract: Cloud computing has 3 primary service models including SaaS, IaaS and PaaS, which are classified depending on the level for which a service user interacts with the service provider's systems in accessing memory, processing power and storage. Deployment models of cloud computing include hybrid, community, public and private clouds depending on the approach to hosting and the number of clients sharing a resource. Due to the prohibitive nature of private cloud computing and requirement for specialized systems in community clouds, the most suitable approach to cloud computing for small and medium enterprises is public cloud computing. In this regard, this study was aimed at determining the extent to which implementation of public cloud computing by enterprise companies is feasible. Due to the cultural and the absence of law in Saudi Arabia ensuring the protection of data in the cloud, challenges in implementing cloud computing in the country are related to adherence to the data governance structure. For instance, privacy and security are important for enterprise companies since the local culture values the safeguarding of family and individual information. In addition, information transferred through the cloud system must adhere to the conservative philosophy and data privacy, which limits the level of compatibility in cloud computing between Saudi Arabia and the western world. Since most service providers are based in the west, companies have to identify a service provider that tailors its products to suit the market in Saudi Arabia. Therefore, implementation of public cloud computing in Saudi Arabia is feasible as long as companies select a service provider with a positive reputation, limit posting of sensitive information to the cloud server, and implement cloud computing gradually to avert the possibility of complete failure. This study determined that SaaS cloud computing is feasible for enterprise companies in Saudi Arabia, but further study is required to examine the feasibility of IaaS and PaaS. In addition, a larger study should be done to collect quantitative data to determine the implications of cloud computing in a representative sample.

Implementing and Developing Cloud Computing Applications Feb 06 2023 From small start-ups to major corporations, companies of all sizes have embraced cloud computing for the scalability, reliability, and cost benefits it can provide. It has even been said that cloud computing may have a greater effect on our lives than the PC and dot-com revolutions combined. Filled with comparative charts and decision trees, Impleme

Polyolefin Fibres May 05 2020 Polyolefins are one of the most widely used commercial polymers. This book reviews the most important polyolefins, including polyethylene and polypropylene. These versatile fibres are durable, chemically resistant, lightweight, economical and functional. Polyolefin fibres: industrial and medical applications provides a comprehensive review of the structure and properties of this group of fibres, together with methods to improve the functionality of polyolefins and their range of applications. The first set of chapters discusses the different types of polyolefins, their structural and chemical properties as well as their production methods. The second group of chapters examines how to improve the functionality of polyolefin fibres. A final group of chapters addresses how polyolefins can be incorporated into specific applications such as industrial, medical and automotive products. Written by a distinguished team of international contributors, Polyolefin fibres: industrial and medical applications is a quintessential reference for textile technologists, fibre

scientists, yarn and fabric manufacturers and also those in academia. Reviews the most important polyolefins including polyethylene and polypropylene, their structural and chemical properties as well as production methods Examines methods to improve the functionality of polyolefin fibres including production methods and quality control

Data Analytics with Google Cloud Platform Jan 05 2023 Step-by-step guide to different data movement and processing techniques, using Google Cloud Platform Services DESCRIPTION Modern businesses are awash with data, making data-driven decision-making tasks increasingly complex. As a result, relevant technical expertise and analytical skills are required to do such tasks. This book aims to equip you with enough knowledge of Cloud Computing in conjunction with Google Cloud Data platform to succeed in the role of a Cloud data expert. The current market is trending towards the latest cloud technologies, which is the need of the hour. Google being the pioneer, is dominating this space with the right set of cloud services being offered as part of GCP (Google Cloud Platform). At this juncture, this book will be very vital and will cover all the services that are being offered by GCP, putting emphasis on Data services. This book starts with sophisticated knowledge on Cloud Computing. It also explains different types of data services/technology and machine learning algorithm/Pre-Trained API through real-business problems, which are built on the Google Cloud Platform (GCP). With some of the latest business examples and hands-on guide, this book will enable the developers entering the data analytics fields to implement an end-to-end data pipeline, using GCP Data services. Through the course of the book, you will come across multiple industry-wise use cases, like Building Datawarehouse using Big Query, a sample real-time data analytics solution on machine learning and Artificial Intelligence that helped with the business decision, by employing a variety of data science approaches on Google Cloud environment. Whether your business is at the early stage of cloud implementation in its journey or well on its way to digital transformation, Google Cloud's solutions and technologies will always help chart a path to success. This book can be used to develop the GCP concepts in an easy way. It contains many examples showcasing the implementation of a GCP service. It enables the learning of the basic and advance concepts of Google Cloud Data Platform. This book is divided into 7 chapters and provides a detailed description of the core concepts of each of the Data services offered by Google Cloud. KEY FEATURES Learn the basic concept of Cloud Computing along with different Cloud service provides with their supported Models (IaaS/PaaS/SaaS) Learn the basics of Compute Engine, App Engine, Container Engine, Project and Billing setup in the Google Cloud Platform Learn how and when to use Cloud DataFlow, Cloud DataProc and Cloud DataPrep Build real-time data pipeline to support real-time analytics using Pub/Sub messaging service Setting up a fully managed GCP Big Data Cluster using Cloud DataProc for running Apache Spark and Apache Hadoop clusters in a simpler, more cost-efficient manner Learn how to use Cloud Data Studio for visualizing the data on top of Big Query Implement and understand real-world business scenarios for Machine Learning, Data Pipeline Engineering WHAT WILL YOU LEARN By the end of the book, you will have come across different data services and platforms offered by Google Cloud, and how those services/features can be enabled to serve business needs. You will also see a few case studies to put your knowledge to practice and solve business problems such as building a real-time streaming pipeline engine, Scalable Data Warehouse on Cloud, fully managed Hadoop cluster on Cloud and enabling TensorFlow/Machine Learning API's to support real-life business problems. Remember to practice additional examples to master these techniques. WHO IS THIS BOOK FOR This book is for professionals as well as graduates who want to build a career in Google Cloud data analytics technologies. While no prior knowledge of Cloud Computing or related technologies is assumed, it will be helpful to have some data background and experience. One stop shop for those who wish to get an initial to advance understanding of the GCP data platform. The target audience will be data engineers/professionals who are new, as well as those who are acquainted with the tools and techniques related to cloud and data space. ? Individuals who have basic data understanding (i.e. Data and cloud) and have done some work in the field of data analytics, can refer/use this book to master their knowledge/understanding. ? The highlight of this book is that it will start with the basic cloud computing fundamentals and will move on to cover the advance concepts on GCP cloud data analytics and hence can be referred across multiple different levels of audiences. Table of Contents 1. GCP Overview and Architecture 2. Data Storage in GCP 3. Data Processing in GCP with Pub/Sub and Dataflow 4. Data Processing in GCP with DataPrep and Dataflow 5. Big Query and Data Studio 6. Machine Learning with GCP 7. Sample Use cases and Examples

Data Warehousing For Dummies Jun 05 2020 Data warehousing is one of the hottest business topics, and there's more to understanding data warehousing technologies than you might think. Find out the basics of data warehousing and how it facilitates data mining and business intelligence with *Data Warehousing For Dummies, 2nd Edition*. Data is probably your company's most important asset, so your data warehouse should serve your needs. The fully updated Second Edition of *Data Warehousing For Dummies* helps you understand, develop, implement, and use data warehouses, and offers a sneak peek into their future. You'll learn to: Analyze top-down and bottom-up data warehouse designs Understand the structure and technologies of data warehouses, operational data stores, and data marts Choose your project team and apply best development practices to your data warehousing projects Implement a data warehouse, step by step, and involve end-users in the process Review and upgrade existing data storage to make it serve your needs Comprehend OLAP, column-wise databases, hardware assisted databases, and middleware Use data mining intelligently and find what you need Make informed choices about consultants and data warehousing products *Data Warehousing For Dummies, 2nd Edition* also shows you how to involve users in the testing process and gain valuable feedback, what it takes to successfully manage a data warehouse project, and how to tell if your project is on track. You'll find it's the most useful source of data on the topic!

Implementing Cloud Design Patterns for AWS Sep 20 2021 Create highly efficient design patterns for scalability, redundancy, and high availability in the AWS Cloud Key Features Build highly robust systems using the cloud infrastructure Make web applications resilient against scheduled and accidental downtime Explore and apply Amazon-provided services in unique ways to solve common design problems Book Description Whether you're just getting your feet wet in cloud infrastructure or already creating complex systems, this book will guide you through using the patterns to fit your system needs. Starting with patterns that cover basic processes such as source control and infrastructure-as-code, the book goes on to introduce cloud security practices. You'll then cover patterns of availability and scalability and get acquainted with the ephemeral nature of cloud environments. You'll also explore advanced DevOps patterns in operations and maintenance, before focusing on virtualization patterns such as containerization and serverless computing. In the final leg of your journey, this book will delve into data persistence and visualization patterns. You'll get to grips with architectures for processing static and dynamic data, as well as practices for managing streaming data. By the end of this book, you will be able to design applications that are tolerant of underlying hardware failures, resilient against an unexpected influx of data, and easy to manage and replicate. What you will learn Implement scaling policies on schedules, influxes in traffic, and deep health checks Make complete use of highly available and redundant storage Design content delivery networks to improve user experience Optimize databases through caching and sharding Apply patterns to solve common problems Implement repeatable processes for deploying systems Who this book is for If you're an architect, solution provider, or DevOps community member looking to implement repeatable patterns for deploying and maintaining services in the Amazon cloud infrastructure, this book is for you. You'll need prior experience of using AWS understand key concepts covered in the book, as it focuses on the patterns rather than the basics of using AWS.

Collection Management in the Cloud Nov 03 2022 This guide will examine the benefits of using these powerful cloud-based and low-cost or free applications for documentation, data and project management, communication, data storage, and data visualization for technical services staff operations in acquisitions and electronic collection management.

Integration and Implementation of the Internet of Things Through Cloud Computing Nov 10 2020 The internet of things (IoT) has drawn great attention from both academia and industry, since it offers a challenging notion of creating a world where all things around us are connected to the internet and communicate with each other with minimal human intervention. Another component for helping IoT to succeed is cloud computing. The combination of cloud computing and IoT will enable new monitoring services and powerful processing of sensory data streams. These applications, alongside implementation details and challenges, should also be explored for successful mainstream adoption. IoT is also fueled by the advancement of digital technologies, and the next generation era will be cloud-based IoT systems. *Integration and Implementation of the Internet of Things Through Cloud Computing* studies, analyzes, and presents cloud-based IoT-related technologies, protocols, and standards along with recent research and development in cloud-based IoT. It also presents recent emerging trends and technological advances of cloud-based IoT, innovative applications, and the challenges and implications for society. The chapters included

take a strong look at the societal and social aspects of this technology along with its implementations and technological analyses. This book is intended for IT specialists, technologists, practitioners, researchers, academicians, and students who are interested in the next era of IoT through cloud computing.

Cloud Technologies Dec 12 2020 CLOUD TECHNOLOGIES Contains a variety of cloud computing technologies and explores how the cloud can enhance business operations Cloud Technologies offers an accessible guide to cloud-based systems and clearly explains how these technologies have changed the way organizations approach and implement their computing infrastructure. The author includes an overview of cloud computing and addresses business-related considerations such as service level agreements, elasticity, security, audits, and practical implementation issues. In addition, the book covers important topics such as automation, infrastructure as code, DevOps, orchestration, and edge computing. Cloud computing fundamentally changes the way organizations think about and implement IT infrastructure. Any manager without a firm grasp of basic cloud concepts is at a huge disadvantage in the modern world. Written for all levels of managers working in IT and other areas, the book explores cost savings and enhanced capabilities, as well as identifies different models for implementing cloud technologies and tackling cloud business concerns. This important book: Demonstrates a variety of cloud computing technologies and ways the cloud can enhance business operations Addresses data security concerns in cloud computing relevant to corporate data owners Shows ways the cloud can save money for a business Offers a companion website hosting PowerPoint slides Written for managers in the fields of business, IT and cloud computing, Cloud Technologies describes cloud computing concepts and related strategies and operations in accessible language.

Handbook of Research on Security Considerations in Cloud Computing Oct 02 2022 Cloud computing has quickly become the next big step in security development for companies and institutions all over the world. With the technology changing so rapidly, it is important that businesses carefully consider the available advancements and opportunities before implementing cloud computing in their organizations. The Handbook of Research on Security Considerations in Cloud Computing brings together discussion on current approaches to cloud-based technologies and assesses the possibilities for future advancements in this field. Highlighting the need for consumers to understand the unique nature of cloud-delivered security and to evaluate the different aspects of this service to verify if it will meet their needs, this book is an essential reference source for researchers, scholars, postgraduate students, and developers of cloud security systems.

Data Science on the Google Cloud Platform Sep 01 2022 Learn how easy it is to apply sophisticated statistical and machine learning methods to real-world problems when you build using Google Cloud Platform (GCP). This hands-on guide shows data engineers and data scientists how to implement an end-to-end data pipeline, using statistical and machine learning methods and tools on GCP. Through the course of this updated second edition, you'll work through a sample business decision by employing a variety of data science approaches. Follow along by implementing these statistical and machine learning solutions in your own project on GCP, and discover how this platform provides a transformative and more collaborative way of doing data science. You'll learn how to: Employ best practices in building highly scalable data and ML pipelines on Google Cloud Automate and schedule data ingest using Cloud Run Create and populate a dashboard in Data Studio Build a real-time analytics pipeline using Pub/Sub, Dataflow, and BigQuery Conduct interactive data exploration with BigQuery Create a Bayesian model with Spark on Cloud Dataproc Forecast time series and do anomaly detection with BigQuery ML Aggregate within time windows with Dataflow Train explainable machine learning models with Vertex AI Operationalize ML with Vertex AI Pipelines

Cloud Analytics with Google Cloud Platform May 29 2022 Combine the power of analytics and cloud computing for faster and efficient insights Key Features Master the concept of analytics on the cloud: and how organizations are using it Learn the design considerations and while applying a cloud analytics solution Design an end-to-end analytics pipeline on the cloud Book Description With the ongoing data explosion, more and more organizations all over the world are slowly migrating their infrastructure to the cloud. These cloud platforms also provide their distinct analytics services to help you get faster insights from your data. This book will give you an introduction to the concept of analytics on the cloud, and the different cloud services popularly used for processing and analyzing data. If you're planning to adopt the cloud analytics model for your business, this book will help you understand the design and business considerations to be kept in mind, and choose the best tools and alternatives for analytics, based on your requirements. The chapters in this book will take you

through the 70+ services available in Google Cloud Platform and their implementation for practical purposes. From ingestion to processing your data, this book contains best practices on building an end-to-end analytics pipeline on the cloud by leveraging popular concepts such as machine learning and deep learning. By the end of this book, you will have a better understanding of cloud analytics as a concept as well as a practical know-how of its implementation. What you will learn: Explore the basics of cloud analytics and the major cloud solutions; Learn how organizations are using cloud analytics to improve the ROI; Explore the design considerations while adopting cloud services; Work with the ingestion and storage tools of GCP such as Cloud Pub/Sub; Process your data with tools such as Cloud Dataproc, BigQuery, etc; Over 70 GCP tools to build an analytics engine for cloud analytics; Implement machine learning and other AI techniques on GCP. Who this book is for: This book is targeted at CIOs, CTOs, and even analytics professionals looking for various alternatives to implement their analytics pipeline on the cloud. Data professionals looking to get started with cloud-based analytics will also find this book useful. Some basic exposure to cloud platforms such as GCP will be helpful, but not mandatory.

Cloud Computing For Dummies Apr 08 2023 The easy way to understand and implement cloud computing technology written by a team of experts. Cloud computing can be difficult to understand at first, but the cost-saving possibilities are great and many companies are getting on board. If you've been put in charge of implementing cloud computing, this straightforward, plain-English guide clears up the confusion and helps you get your plan in place. You'll learn how cloud computing enables you to run a more green IT infrastructure, and access technology-enabled services from the Internet ("in the cloud") without having to understand, manage, or invest in the technology infrastructure that supports them. You'll also find out what you need to consider when implementing a plan, how to handle security issues, and more. Cloud computing is a way for businesses to take advantage of storage and virtual services through the Internet, saving money on infrastructure and support. This book provides a clear definition of cloud computing from the utility computing standpoint and also addresses security concerns. Offers practical guidance on delivering and managing cloud computing services effectively and efficiently. Presents a proactive and pragmatic approach to implementing cloud computing in any organization. Helps IT managers and staff understand the benefits and challenges of cloud computing, how to select a service, and what's involved in getting it up and running. Highly experienced author team consults and gives presentations on emerging technologies. **Cloud Computing For Dummies** gets straight to the point, providing the practical information you need to know.

Deploying and Managing a Cloud Infrastructure Jul 31 2022 Learn in-demand cloud computing skills from industry experts. **Deploying and Managing a Cloud Infrastructure** is an excellent resource for IT professionals seeking to tap into the demand for cloud administrators. This book helps prepare candidates for the CompTIA Cloud+ Certification (CV0-001) cloud computing certification exam. Designed for IT professionals with 2-3 years of networking experience, this certification provides validation of your cloud infrastructure knowledge. With over 30 years of combined experience in cloud computing, the author team provides the latest expert perspectives on enterprise-level mobile computing, and covers the most essential topics for building and maintaining cloud-based systems, including: Understanding basic cloud-related computing concepts, terminology, and characteristics; Identifying cloud delivery solutions and deploying new infrastructure; Managing cloud technologies, services, and networks; Monitoring hardware and software performance. Featuring real-world examples and interactive exercises, **Deploying and Managing a Cloud Infrastructure** delivers practical knowledge you can apply immediately. And, in addition, you also get access to a full set of electronic study tools including: Interactive Test Environment; Electronic Flashcards; Glossary of Key Terms. Now is the time to learn the cloud computing skills you need to take that next step in your IT career.

Big Data Processing Using Spark in Cloud Mar 15 2021 The book describes the emergence of big data technologies and the role of Spark in the entire big data stack. It compares Spark and Hadoop and identifies the shortcomings of Hadoop that have been overcome by Spark. The book mainly focuses on the in-depth architecture of Spark and our understanding of Spark RDDs and how RDD complements big data's immutable nature, and solves it with lazy evaluation, cacheable and type inference. It also addresses advanced topics in Spark, starting with the basics of Scala and the core Spark framework, and exploring Spark data frames, machine learning using Mllib, graph analytics using Graph X and real-time processing with Apache Kafka, AWS Kinesis, and Azure Event Hub. It then goes on to investigate Spark using PySpark and R. Focusing on the current big data stack, the book examines the interaction with current big data tools,

with Spark being the core processing layer for all types of data. The book is intended for data engineers and scientists working on massive datasets and big data technologies in the cloud. In addition to industry professionals, it is helpful for aspiring data processing professionals and students working in big data processing and cloud computing environments.

Overview and Issues for Implementation of the Federal Cloud Computing Initiative Jun 29 2022 Cloud computing is a new name for an old concept: the delivery of computing services from a remote location, analogous to the way electricity, water, and other utilities are provided to most customers. Cloud computing services are delivered through a network, usually the Internet. Some cloud services are adaptations of familiar applications, such as email and word processing. Others are new applications that never existed as a local application, such as online maps and social networks. Since 2009, the federal government has been shifting its data storage needs to cloud-based services and away from agency-owned data centers. This shift is intended to reduce the total investment by the federal government in information technology (IT) (data centers), as well as realize other stated advantages of cloud adoption: efficiency, accessibility, collaboration, rapidity of innovation, reliability, and security. In December 2010, the U.S. Chief Information Officer (CIO) released “A 25-Point Implementation Plan to Reform Federal IT Management” as part of a comprehensive effort to increase the operational efficiency of federal technology assets. One element of the 25-Point Plan is for agencies to shift to a “Cloud First” policy, which is being implemented through the Federal Cloud Computing Strategy. The Cloud First policy means that federal agencies must (1) implement cloud-based solutions whenever a secure, reliable, and cost-effective cloud option exists; and (2) begin reevaluating and modifying their individual IT budget strategies to include cloud computing. However, there are challenges facing agencies as they make this shift. For example, some agency CIOs have stated that in spite of the stated security advantages of cloud computing, they are, in fact, concerned about moving their data from their data centers, which they manage and control, to outsourced cloud services. This and other concerns must be addressed to build an agency culture that trusts the cloud. Congress has a number of means to monitor the status of the Federal Cloud Computing Initiative (FCCI). Individual committees may wish to monitor agencies under their jurisdiction by holding hearings; requesting review of an agency's status through the agency itself or a GAO study; and/or assessing an agency's progress and projected goals against the stated goals of the FCCI.

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