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AWS Certified Security Study Guide Sep 21 2020 Get prepared for the AWS Certified Security Specialty certification with this excellent resource By earning the AWS Certified Security Specialty certification, IT professionals can gain valuable recognition as cloud security experts. The AWS Certified Security Study Guide: Specialty (SCS-C01) Exam helps cloud security practitioners prepare for success on the certification exam. It's also an excellent reference for professionals, covering security best practices and the implementation of security features for clients or employees. Architects and engineers with knowledge of cloud computing architectures will find significant value in this book which offers guidance on primary security threats and defense principles. Amazon Web Services security control tools are explained through real-world scenarios. These examples demonstrate how professionals can design, build, and operate secure cloud environments that run modern applications. The study guide serves as a primary source for those who are ready to apply their skills and seek certification. It addresses how cybersecurity can be improved in the AWS cloud and its native security services. Readers will benefit from detailed coverage of AWS Certified Security Specialty Exam topics. Covers all AWS Certified Security Specialty exam topics Explains AWS cybersecurity techniques and incident response Covers logging and monitoring using the Amazon cloud Examines infrastructure security Describes access management and data protection With a single study resource, you can learn how to enhance security through the automation, troubleshooting, and development integration capabilities available with cloud computing. You will also discover services and tools to develop security plans that work in sync with cloud adoption.

Handbook of Research on Cloud Infrastructures for Big Data Analytics May 30 2021 Clouds are being positioned as the next-generation consolidated, centralized, yet federated IT infrastructure for hosting all kinds of IT platforms for deploying, maintaining, and managing a wider variety of personal, as well as professional applications and services. Handbook of Research on Cloud Infrastructures for Big Data Analytics focuses exclusively on the topic of cloud-sponsored big data analytics for creating flexible and futuristic organizations. This book helps researchers and practitioners, as well as business entrepreneurs, to make informed decisions and consider appropriate action to simplify and streamline the arduous journey towards smarter enterprises.

Amazon Cloud Computing with Java Jan 14 2020 Amazon Cloud Computing With Java provides A comprehensive look at the emerging Amazon Web Services Platform and a peep into the emerging paradigm of cloud computing from the perspective of the leading Cloud vendors offerings. It will enable you to plan migration efforts from enterprise softwares to ones operating from the cloud. The book is technical in nature and walks the reader through the development of tools and programs which work with AWS. The book is accompanied by the complete source code for the exercises covered in the book, which can be downloaded from the authors website. 'A no fluff just stuff' approach to utilizing AWS. Amazon Cloud Computing With Java covers - EC2 - CloudWatch - Elastic LoadBalancing - AutoScaling - S3 - Virtual Private Cloud - SimpleDB - RDS - CloudFront - SQS - Elastic MapReduce - Agile Continuous Integration with AWS - Using Eclipse For AWS Development

AWS Certified Solutions Architect Study Guide Oct 11 2019 Master the intricacies of Amazon Web Services and efficiently prepare for the SAA-C02 Exam with this comprehensive study guide AWS Certified Solutions Study Guide: Associate (SAA-C02) Exam, Third Edition comprehensively and efficiently prepares you for the SAA-C02 Exam. The study guide contains robust and effective study tools that will help you succeed on the exam. The guide grants you access to the regularly updated Sybex online learning environment and test bank, which contains hundreds of test questions, bonus practice exams, electronic flashcards, and a glossary of key terms. In this study guide, accomplished and experienced authors Ben Piper and David Clinton show you how to: Design resilient architectures Create high-performing architectures Craft secure applications and architectures Design cost-optimized architectures Perfect for anyone who hopes to begin a new career as an Amazon Web Services cloud professional, the study guide also belongs on the bookshelf of any existing AWS professional who wants to brush up on the fundamentals of the profession.

Applied Machine Learning and High-Performance Computing on AWS Sep 20 2021 Build, train, and deploy large machine learning models at scale in various domains such as computational fluid dynamics, genomics, autonomous vehicles, and numerical optimization using Amazon SageMaker Key Features Understand the need for high-performance computing (HPC) Build, train, and deploy large ML models with billions of parameters using Amazon SageMaker Learn best practices and architectures for implementing ML at scale using HPC Book Description Machine learning (ML) and high-performance computing (HPC) on AWS run compute-intensive workloads across

industries and emerging applications. Its use cases can be linked to various verticals, such as computational fluid dynamics (CFD), genomics, and autonomous vehicles. This book provides end-to-end guidance, starting with HPC concepts for storage and networking. It then progresses to working examples on how to process large datasets using SageMaker Studio and EMR. Next, you'll learn how to build, train, and deploy large models using distributed training. Later chapters also guide you through deploying models to edge devices using SageMaker and IoT Greengrass, and performance optimization of ML models, for low latency use cases. By the end of this book, you will be able to build, train, and deploy your own large-scale ML application, using HPC on AWS, following industry best practices and addressing the key pain points encountered in the application life cycle. What you will learn

- Explore data management, storage, and fast networking for HPC applications
- Focus on the analysis and visualization of a large volume of data using Spark
- Train visual transformer models using SageMaker distributed training
- Deploy and manage ML models at scale on the cloud and at the edge
- Get to grips with performance optimization of ML models for low latency workloads
- Apply HPC to industry domains such as CFD, genomics, AV, and optimization

Who this book is for: The book begins with HPC concepts, however, it expects you to have prior machine learning knowledge. This book is for ML engineers and data scientists interested in learning advanced topics on using large datasets, training large models using distributed training concepts on AWS, deploying models at scale, and performance optimization for low latency use cases. Practitioners in fields such as numerical optimization, computation fluid dynamics, autonomous vehicles, and genomics, who require HPC for applying ML models to applications at scale will also find the book useful.

Programming Amazon Web Services May 10 2022 Building on the success of its storefront and fulfillment services, Amazon now allows businesses to "rent" computing power, data storage and bandwidth on its vast network platform. This book demonstrates how developers working with small- to mid-sized companies can take advantage of Amazon Web Services (AWS) such as the Simple Storage Service (S3), Elastic Compute Cloud (EC2), Simple Queue Service (SQS), Flexible Payments Service (FPS), and SimpleDB to build web-scale business applications. With AWS, Amazon offers a new paradigm for IT infrastructure: use what you need, as you need it, and pay as you go. Programming Amazon Web Services explains how you can access Amazon's open APIs to store and run applications, rather than spend precious time and resources building your own. With this book, you'll learn all the technical details you need to

- Store and retrieve any amount of data using application servers, unlimited data storage, and bandwidth with the Amazon S3 service
- Buy computing time using Amazon EC2's interface to requisition machines, load them with an application environment, manage access permissions, and run your image using as many or few systems as needed
- Use Amazon's web-scale messaging infrastructure to store messages as they travel between computers with Amazon SQS
- Leverage the Amazon FPS service to structure payment instructions and allow the movement of money between two entities, humans or computers
- Create and store multiple data sets, query your data easily, and return the results using Amazon SimpleDB

Scale up or down at a moment's notice, using these services to employ as much time and space as you need. Whether you're starting a new online business, need to ramp up existing services, or require offsite backup for your home, Programming Amazon Web Services gives you the background and the practical knowledge you need to start using AWS. Other books explain how to build web services. This book teaches business how to take make use of existing services from an established technology leader.

Amazon Web Services for Mobile Developers Oct 15 2022 A practical, real-world introduction to AWS tools and concepts Amazon Web Services for Mobile Developers: Building Apps with AWS presents a professional view of cloud computing and AWS for experienced iOS/Android developers and technical/solution architects. Cloud computing is a rapidly expanding ecosystem, and working professionals need a practical resource to bring them up-to-date on tools that are rapidly becoming indispensable; this book helps expand your skill set by introducing you to AWS offerings that can make your job easier, with a focus on real-world application. Author and mobile applications developer Abhishek Mishra shows you how to create IAM accounts and try out some of the most popular services, including EC2, Lambda, Mobile Analytics, Device Farm, and more. You'll build a chat application in both Swift (iOS) and Java (Android), running completely off AWS Infrastructure to explore SDK installation, Xcode, Cognito authentication, DynamoDB, Amazon SNS Notifications, and other useful tools. By actually using the tools as you learn about them, you develop a more intuitive understanding that feels less like a shift and more like a streamlined integration. If you have prior experience with Swift or Java and a solid knowledge of web services, this book can help you quickly transfer your skills to the next level with a practical approach to learning that translates easily into real-world use. Under the key concepts of AWS as applied to both iOS and Android developers

- Explore major AWS offerings for mobile developers, including DynamoDB, RDS, EC2, SNS, Cognito, and more
- Learn what people are talking about when they use buzzwords like PaaS, IaaS, SaaS, and APaaS

Work through explanations by building apps that tie into the AWS ecosystem. Any job is easier with the right tools, and Amazon Web Services for Mobile Developers: Building Apps with AWS gets you acquainted with an ever-expanding toolkit for mobile app development.

AWS Certified Solutions Architect - Associate Exam Guide Feb 24 2021 This book is a comprehensive exam guide to help prepare for AWS Certified Solutions Architect -- Associate exam. The book has extensive diagrams to help understand topics much easier way. The book is divided into different sections to logically group related chapters into one section. It has the following sections: AWS Fundamentals (What is AWS, AWS Account, AWS Free Tier, AWS Cost & Billing Management, AWS Global Cloud Infrastructure (part I)), IAM, EC2) AWS Advanced (EC2 Advanced, ELB, Advanced S3, Route 53, AWS Global Cloud Infrastructure (part II), Advanced Storage on AWS, AWS Monitoring, Audit, and Performance), AWS RDS and Databases (AWS RDS and Cache, AWS Databases) Serverless (Serverless Computing, AWS Integration, and Messaging) Container & CI/CD (Container, AWS CI/CD services) Data & Analytics (Data & Analytics) Machine Learning (AWS ML/AI Services) Security (AWS Security & Encryption, AWS Shared Responsibility Model, How to get Support on AWS, Advanced Identity) Networking (AWS Networking) Disaster Management (Backup, Recovery & Migrations) Solutions Architecture (Cloud Architecture Key Design Principles, AWS Well-Architected Framework, Classic Solutions Architecture, Serverless Solutions Architecture, Solutions Architecture Miscellaneous) Practice Tests Includes 325 Practice Exam Questions with Answers The book Includes AWS services/features such as IAM, S3, EC2, EC2 purchasing options, EC2 placement groups, Load Balancers, Auto Scaling, S3 Glacier, S3 Storage classes, Route 53 Routing policies, CloudFront, Global Accelerator, EFS, EBS, Instance Store, AWS Snow Family, AWS Storage Gateway, AWS Transfer Family, Amazon CloudWatch, EventBridge, CloudWatch Insights, AWS CloudTrail, AWS Config, Amazon RDS, Amazon Aurora, Amazon ElastiCache, Amazon DocumentDB, Amazon Keyspaces, Amazon Quantum Ledger Database, Amazon Timestream, Amazon Managed Blockchain, AWS Lambda, Amazon DynamoDB, Amazon API Gateway, SQS, SNS, SES, Amazon Kinesis, Amazon Kinesis Firehose, Amazon Kinesis Data Analytics, Amazon Kinesis Data Streams, Amazon Kinesis ECS, Amazon Kinesis ECR, Amazon EKS, AWS CloudFormation, AWS Elastic Beanstalk, AWS CodeBuild, AWS OpsWorks, AWS CodeGuru, AWS CodeCommit, Amazon Athena, Amazon Redshift, Amazon EMR, Amazon QuickSight, AWS Glue, AWS Lake Formation, Amazon MSK, Amazon Rekognition, Amazon Transcribe, Amazon Polly, Amazon Translate, Amazon Lex, Amazon Connect, Amazon Comprehend, Amazon Comprehend Medical, Amazon SageMaker, Amazon Forecast, Amazon Kendra, Amazon Personalize, Amazon Textract, Amazon Fraud Detector, Amazon Sumerian, AWS WAF, AWS Shield Standard, AWS Shield Advanced, AWS Firewall Manager, AWS GuardDuty, Amazon Inspector, Amazon Macie, Amazon Detective, SSM Session Manager, AWS Systems Manager, S3 Replication & Encryption, AWS Organization, AWS Control Tower, AWS SSO, Amazon Cognito, AWS VPC, NAT Gateway, VPC Endpoints, VPC Peering, AWS Transit Gateway, AWS Site-to-Site VPC, Database Management Service (DMS), and many others. In the last section (Practice Tests), there are five practice test sets with answers containing 65 exam-like questions. These questions will help you apply your learning to better prepare for the exam.

Amazon S3 Nov 16 2022 Are there Amazon S3 Models? What would be the goal or target for a Amazon S3's improvement team? What are our Amazon S3 Processes? What about Amazon S3 Analysis of results? Who is the main stakeholder, with ultimate responsibility for driving Amazon S3 forward? This one-of-a-kind Amazon S3 self-assessment will make you the entrusted Amazon S3 domain veteran by revealing just what you need to know to be fluent and ready for any Amazon S3 challenge. How do I reduce the effort in the Amazon S3 work to be done to solve problems solved? How can I ensure that plans of action include every Amazon S3 task and that every Amazon S3 outcome is in place? How will I save time investigating strategic and tactical options and ensuring Amazon S3 opportunity costs are low? How can I deliver tailored Amazon S3 advice instantly with structured going-forward plans? There's no better guide through these mind-expanding questions than acclaimed best-selling author Gerard Blokdyk. Blokdyk ensures all Amazon S3 essentials are covered, from every angle: the Amazon S3 self-assessment shows succinctly and clearly that what needs to be clarified to organize the business/project activities and processes that Amazon S3 outcomes are achieved. Contains extensive criteria grounded in past and current successful projects and activities by experienced Amazon S3 practitioners. Their mastery, combined with the uncommon elegance of the self-assessment, provides its superior value to you in knowing how to ensure the outcome of any efforts in Amazon S3 are maximized with professional results. Your purchase includes access to the \$249 value Amazon S3 self-assessment dashboard download which gives you your dynamically prioritized projects-ready tool and shows your organization exactly what to do next. Your exclusive instant access details can be found in your book.

AWS Certified Cloud Practitioner Exam Guide Mar 28 2021 Develop proficiency in AWS technologies and validate your skills by becoming an AWS Certified Cloud Practitioner Key Features Develop the skills to design highly available and fault-tolerant solutions in the cloud Learn how to adopt best-practice security measures in your cloud applications Achieve credibility through industry-recognized AWS Cloud Practitioner certification Book Description Amazon Web Services is the largest cloud computing service provider in the world. Its foundational certification, AWS Certified Cloud Practitioner (CLF-C01), is the first step to fast-tracking your career in cloud computing. This

certification will add value even to those in non-IT roles, including professionals from sales, legal, and finance who may be working with cloud computing or AWS projects. If you are a seasoned IT professional, this certification will make it easier for you to prepare for more technical certifications to progress up the AWS ladder and improve your career prospects. The book is divided into four parts. The first part focuses on the fundamentals of cloud computing and the AWS global infrastructure. The second part examines key AWS technology services, including compute, network, storage, and database services. The third part covers AWS security, the shared responsibility model, and several security tools. In the final part, you'll study the fundamentals of cloud economics and AWS pricing models and billing practices. Complete with exercises that highlight best practices for designing solutions, detailed use cases for each of the AWS services, quizzes, and two complete practice tests, this CLF-C01 exam study guide will help you gain the knowledge and hands-on experience necessary to ace the AWS Certified Cloud Practitioner exam. What you will learn

- Create an AWS account to access AWS cloud services in a secure and isolated environment
- Understand identity and access management (IAM), encryption, and multifactor authentication (MFA) protection
- Configure multifactor authentication for your IAM accounts
- Configure AWS services such as EC2, ECS, Lambda, VPCs, and Route53
- Explore various storage and database services such as S3, EBS, and Amazon RDS
- Study the fundamentals of modern application design to shift from a monolithic to microservices architecture
- Design highly available solutions with decoupling ingrained in your design architecture

Who this book is for If you're looking to advance your career and gain expertise in cloud computing, with particular focus on the AWS platform, this book is for you. This guide will help you ace the AWS Certified Cloud Practitioner Certification exam, enabling you to embark on a rewarding career in cloud computing. No previous IT experience is essential to get started with this book, since it covers core IT fundamentals from the ground up.

Terraform: Up & Running Aug 21 2020 Terraform has become a key player in the DevOps world for defining, launching, and managing infrastructure as code (IaC) across a variety of cloud and virtualization platforms, including AWS, Google Cloud, Azure, and more. This hands-on second edition, expanded and thoroughly updated for Terraform version 0.12 and beyond, shows you the fastest way to get up and running. Gruntwork cofounder Yevgeniy (Jim) Brikman walks you through code examples that demonstrate Terraform's simple, declarative programming language for deploying and managing infrastructure with a few commands. Veteran sysadmins, DevOps engineers, and novice developers will quickly go from Terraform basics to running a full stack that can support a massive amount of traffic and a large team of developers. Explore changes from Terraform 0.9 through 0.12, including backends, workspaces, and first-class expressions

- Learn how to write production-grade Terraform modules
- Dive into manual and automated testing for Terraform code
- Compare Terraform to Chef, Puppet, Ansible, CloudFormation, and Salt Stack
- Deploy server clusters, load balancers, and databases
- Use Terraform to manage the state of your infrastructure
- Create reusable infrastructure with Terraform modules
- Use advanced Terraform syntax to achieve zero-downtime deployment

Amazon Web Services For Dummies Aug 13 2022 Create dynamic cloud-based websites with Amazon Web Services and this friendly guide! As the largest cloud computing platform in the world, Amazon Web Services (AWS) provides one of the most popular web services options available. This easy-to-understand guide is the perfect introduction to the Amazon Web Services platform and all it can do for you. You'll learn about the Amazon Web Services tool set, how different web services (including S3, Amazon EC2, and Amazon Flexible Payments) and Glacier work; and how you can implement AWS in your organization. Explains how to use Amazon Web Services to store objects, take payments, manage large quantities of data, send e-mails, deploy push notifications, and more from your website. Details how AWS can reduce costs, improve efficiency, increase productivity, and cut down on expensive hardware investments - and administrative headaches - in your organization. Includes practical examples and helpful step-by-step lists to help you experiment with different AWS features and create a robust website that meets your needs. Amazon Web Services For Dummies is exactly what you need to get your head in the cloud with Amazon Web Services!

AWS for System Administrators Feb 07 2022 Take your AWS SysOps skills to the next level by learning infrastructure automation techniques using CloudFormation, Terraform, and Boto3

- Key Features
- Explore AWS automation using CloudFormation, Terraform, and Boto3
- Leverage AWS to make your infrastructure flexible and highly available
- Discover various AWS features for building a secure and reliable environment to host your application

Book Description Amazon Web Services (AWS) is one of the most popular and efficient cloud platforms for administering and deploying your applications to make them resilient and robust. AWS for System Administrators will help you to learn several advanced cloud administration concepts for deploying, managing, and operating highly available systems on AWS. Starting with the fundamentals of identity and access management and for securing your environment, this book will gradually take you through AWS networking and monitoring tools. As you make your way through the chapters, you'll get to grips with VPC, EC2, load balancer, Auto Scaling, RDS

database, and data management. The book will also show you how to initiate AWS automated backups and store them in S3, and how to keep track of log files. Later, you'll work with AWS APIs and understand how to use them along with CloudFormation, Python Boto3 Script, and Terraform to automate infrastructure. By the end of this AWS book, you'll be ready to build your two-tier startup with all the necessary infrastructure, monitoring, and logging components in place. What you will learn

- Adopt a security-first approach by giving users minimum access using IAM roles and policies
- Build your first Amazon Elastic Compute Cloud (EC2) instance using the AWS CLI, Boto3, and Terraform
- Set up your datacenter in AWS Cloud using VPC
- Scale your application based on demand using Auto Scaling
- Monitor your application using services using CloudWatch and SNS
- Work with centralized logs for analysis (CloudWatch Logs)
- Back up your data using Amazon Simple Storage Service (Amazon S3), Data Lifecycle Manager, and AWS Backup

Who this book is for: This Amazon Web Services book is for system administrators and solution architects who want to build highly available and flexible AWS Cloud platforms for their applications. Software engineers and programmers looking to deploy their applications to AWS Cloud will also find this book useful. Basic knowledge of Linux and AWS is necessary to get started.

Enterprise Software Architecture and Design 2020 This book fills a gap between high-level overview texts that are often too general and low-level detail oriented technical handbooks that lose sight of the "big picture". This book discusses SOA from the low-level perspective of middleware, various XML-based technologies, and basic service design. It also examines broader implications of SOA, particularly where it intersects with business process management and process modeling. Concrete overviews will be provided of the methodologies in those fields, so that students will have a hands-on grasp of how they may be used in the context of SOA.

AWS Automation Cookbook Nov 23 2020 Automate release processes, deployment, and continuous integration of your application as well as infrastructure automation with the powerful services offered by AWS

About This Book Accelerate your infrastructure's productivity by implementing a continuous delivery pipeline within your environment Leverage AWS services and Jenkins 2.0 to perform complete application deployments on Linux servers This recipe-based guide that will help you minimize application deployment downtime

Who This Book Is For This book is for developers and system administrators who are responsible for hosting their application and managing instances in AWS. It's also ideal for DevOps engineers looking to provide continuous integration, deployment, and delivery. A basic understanding of AWS, Jenkins, and some scripting knowledge is needed.

What You Will Learn

- Build a sample Maven and NodeJS Application using CodeBuild
- Deploy the application in EC2/Auto Scaling and see how CodePipeline helps you integrate AWS services
- Build a highly scalable and fault tolerant CI/CD pipeline
- Achieve the CI/CD of a microservice architecture application in AWS ECS using CodePipeline, CodeBuild, ECR, and CloudFormation
- Automate the provisioning of your infrastructure using CloudFormation and Ansible
- Automate daily tasks and audit compliance using AWS Lambda
- Deploy microservices applications on Kubernetes using Jenkins Pipeline 2.0

In Detail AWS CodeDeploy, AWS CodeBuild, and CodePipeline are scalable services offered by AWS that automate an application's build and deployment pipeline. In order to deliver tremendous speed and agility, every organization is moving toward automating an entire application pipeline. This book will cover all the AWS services required to automate your deployment to your instances. You'll begin by setting up and using one of the AWS services for automation – CodeCommit. Next, you'll learn how to build a sample Maven and NodeJS Application using CodeBuild. After you've built the application, you'll see how to use CodeDeploy to deploy the application in EC2/Autoscaling. You'll also build a highly scalable and fault tolerant continuous integration (CI)/continuous deployment (CD) pipeline using some easy-to-follow recipes. Following this, you'll achieve CI/CD for Microservice application and reduce the risk within your software development lifecycle. You'll also learn to set up an infrastructure using CloudFormation Template and Ansible, and see how to automate AWS resources using AWS Lambda. Finally, you'll learn to automate instances in AWS and automate the deployment lifecycle of applications

At the end of this book, you'll be able to minimize application downtime and implement CI/CD, gaining total control over your software development lifecycle.

Style and approach This book takes a "How to do it" approach, providing with easy solutions to automate common maintenance and deployment tasks.

Simplify Big Data Analytics with Amazon EMR Oct 03 2021 Design scalable big data solutions using Hadoop, Spark, and AWS cloud native services

Key Features

- Build data pipelines that require distributed processing capabilities on a large volume of data
- Discover the security features of EMR such as data protection and granular permission management
- Explore best practices and optimization techniques for building data analytics solutions in Amazon EMR

Book Description Amazon EMR, formerly Amazon Elastic MapReduce, provides a managed Hadoop cluster in Amazon Web Services (AWS) that you can use to implement batch or streaming data pipelines. By gaining expertise in Amazon EMR, you can design and implement data analytics pipelines with persistent or transient EMR clusters in AWS. This book is a practical guide to Amazon EMR for building data pipelines. You'll start by understanding the Amazon EMR architecture, cluster nodes, features, and deployment options, along with their pricing. Next, the book

covers the various big data applications that EMR supports. You'll then focus on the advanced configuration of EMR for applications, hardware, networking, security, troubleshooting, logging, and the different SDKs and APIs it provides. Later chapters will show you how to implement common Amazon EMR use cases, including batch ETL with Spark, real-time streaming with Spark Streaming, and handling UPSERT in S3 Data Lake with Apache Hudi. Finally, you'll learn how to orchestrate your EMR jobs and strategize on-premises Hadoop cluster migration to EMR. In addition to this, you'll explore best practices and cost optimization techniques while implementing your data analytics pipeline in EMR. At the end of this book, you'll be able to build and deploy Hadoop- or Spark-based apps on Amazon EMR and also migrate your existing on-premises Hadoop workloads to AWS. What you will learn

- Explore Amazon EMR features, architecture, Hadoop interfaces, and EMR Studio
- Configure, deploy, and orchestrate Hadoop or Spark jobs in production
- Implement the security, data governance, and monitoring capabilities of EMR
- Build applications for batch and real-time streaming data analytics solutions
- Perform interactive development with a persistent EMR cluster
- Notebook
- Orchestrate an EMR Spark job using AWS Step Functions and Apache Airflow

Who this book is for This book is for data engineers, data analysts, data scientists, and solution architects who are interested in building data analytics solutions with the Hadoop ecosystem services and Amazon EMR. Prior experience in either Python programming, Scala, or the Java programming language and a basic understanding of Hadoop and AWS will help you make the most out of this book.

Amazon.com **2022 Foreword by Werner Vogels, Vice President and Corporate Technology Officer, Amazon** The AWS exam has been updated. Your study guide should be updated too. The AWS Certified Developer Official Study Guide—Associate Exam is your ultimate preparation resource for the latest exam! Covering all exam objectives, this invaluable resource puts a team of AWS experts at your side with expert guidance, clear explanations, and the wisdom of experience with AWS best practices. You'll master core AWS services and basic architecture, and equip yourself to develop, deploy, and debug cloud-based applications using AWS. The AWS Developer certification is earned by those who demonstrate the technical knowledge and skill associated with best practices for building secure, reliable cloud-based applications using AWS technology. This book is your official exam prep companion, providing everything you need to know to pass with flying colors. Study the AWS Certified Developer Exam objectives Gain expert insight on core AWS services and best practices Test your understanding of key concepts with challenging chapter questions Access online study tools including electronic flashcards, a searchable glossary, practice exams, and more Cloud computing offers businesses the opportunity to replace up-front capital infrastructure expenses with low, variable costs that scale as they grow. This customized responsiveness has negated the need for far-future infrastructure planning, putting thousands of servers at the disposal as needed—and businesses have responded, propelling AWS to the number-one spot among cloud service providers. Now these businesses need qualified AWS developers, and the AWS certification validates the exact skills and knowledge they're looking for. When you're ready to get serious about your cloud credentials, the AWS Certified Developer Official Study Guide—Associate Exam is the resource you need to pass the exam with flying colors. NOTE: As of October 7, 2019, the accompanying code for hands-on exercises in the book is available for download from the secure Resources area in the online test bank. You'll find code for Chapters 1, 2, 11, and 12.

Amazon.com **2019 Product Description** Amazon Cloud Computing With C#/.Net provides a comprehensive look at the emerging Amazon Web Services Platform and a peep into the emerging paradigm of cloud computing from the perspective of the leading Cloud vendors offerings. It will enable you to plan migration efforts from enterprise softwares to ones operating from the cloud. The book is technical in nature and walks the reader through development of tools and programs which work with AWS. The book is accompanied by complete source code to the exercises covered in the book, which can be downloaded from the authors website. 'No fluff just stuff' approach to utilizing AWS. Amazon Cloud Computing With C#/.Net covers - EC2 - CloudWatch - Elastic LoadBalancing - AutoScaling - S3 - Virtual Private Cloud - SimpleDB - RDS - CloudFront - SQS - Elastic MapReduce - Agile Continuous Integration with AWS

Amazon.com **2022** This latest textbook from bestselling author, Douglas E. Comer, is a classic, well-tested book providing a comprehensive introduction to cloud computing. Focusing on concepts and principles, rather than commercial offerings by cloud providers and vendors, The Cloud Computing Book: The Future of Computing Explained gives readers a complete picture of the advantages and growth of cloud computing, cloud infrastructure virtualization, automation and orchestration, and cloud-native software design. The book explains real and virtual data center facilities, including computation (e.g., servers, hypervisors, Virtual Machines, and containers), networking (e.g., leaf-spine architecture, VLANs, and VxLAN), and storage mechanisms (e.g., SAN, NAS, and object storage). Chapters on automation and orchestration cover the conceptual organization of systems that automate software deployment and scaling. Chapters on cloud-native software cover parallelism, microservices, MapReduce, control plane based designs, and serverless computing. Although it focuses on concepts and principles, the book uses popular

technologies in examples, including Docker containers and Kubernetes. Final chapters explain security in a cloud environment and the use of models to help control the complexity involved in designing software for the cloud. The text is suitable for a one-semester course for software engineers who want to understand cloud, and for IT managers moving an organization's computing to the cloud.

AWS Certified Solutions Architect Official Study Guide Dec 5 2021 Validate your AWS skills. This is your opportunity to take the next step in your career by expanding and validating your skills on the AWS cloud. AWS has been the frontrunner in cloud computing products and services, and the AWS Certified Solutions Architect Official Study Guide for the Associate exam will get you fully prepared through expert content, and real-world knowledge. Key exam essentials, chapter review questions, access to Sybex's interactive online learning environment, and much more. This official study guide, written by AWS experts, covers exam concepts, and provides key review on exam topics, including: Mapping Multi-Tier Architectures to AWS Services, such as web/app servers, firewalls, caches and load balancers Understanding managed RDBMS through AWS RDS (MySQL, Oracle, SQL Server, Postgres, Aurora) Understanding Loose Coupling and Stateless Systems Comparing Different Consistency Models in AWS Services Understanding how AWS CloudFront can make your application more cost efficient, faster and secure Implementing Route tables, Access Control Lists, Firewalls, NAT, and DNS Applying AWS Security Features along with traditional Information and Application Security Using Compute, Networking, Storage, and Database AWS services Architecting Large Scale Distributed Systems Understanding of Elasticity and Scalability Concepts Understanding of Network Technologies Relating to AWS Deploying and Managing Services with tools such as CloudFormation, OpsWorks and Elastic Beanstalk. Learn from the AWS subject-matter experts, review with proven study tools, and apply real-world scenarios. If you are looking to take the AWS Certified Solutions Architect Associate exam, this guide is what you need for comprehensive content and robust study tools that will help you gain the edge on exam day and throughout your career.

Amazon S3 Essentials Dec 17 2022 Get started with Amazon S3 for virtually unlimited cloud and Internet storage. About This Book Familiarize yourself with the concepts of Amazon S3 Understand basic operations of bucket, folder and objects using Amazon S3 SDK Java Leverage the power of Amazon S3 to effectively store and retrieve data. This Book Is For This book is intended for System Engineers/ Developers, Software Architects, Project managers, and users who want to explore Amazon S3 SDK Java. If you want to learn about Amazon S3 quickly, then this book is for you. Basic knowledge of Java programming is expected. What You Will Learn Start with the basic concepts of Amazon S3 to get you going Use Copy Object and Multipart Copy Object for objects of different sizes Understand how to use the Amazon Management Console for Amazon S3 Learn how to use the AWS SDK of Java and consume Amazon S3 Get to grips with managing the bucket life cycle Configure CORS to share resources to a different domain Discover how to develop and deploy the static website on Amazon S3 using different services of Amazon In Detail Amazon Simple Storage Service (Amazon S3), provides developers and IT teams with secure, durable, and highly-scalable object storage. Amazon S3 is easy to use, with a simple web services interface to store and retrieve any amount of data from anywhere on the web. S3 is automatically web scalable and responds to the requirements of your application and traffic, and therefore offers a key element to help companies deal dynamically with any spike in traffic for their application (such as a free e-book offer). This book starts with the basics of the Amazon S3 and its features, and you will quickly get an understanding how to use the Amazon Management Console for Amazon S3, which is the simplest way to manage Amazon S3. Next, we will cover basic operations on bucket, folder, objects and the basic operations are understood, you will know how to use Amazon S3 using Java SDK. Following that, you will learn about Copy Objects and Multipart copy objects for large objects size. You will also learn to manage the life cycle of bucket and how to share resources to the different domain by configuring CORS. The book will then guide you through the development and deployment of a static website on Amazon S3 using different services of Amazon. By the end of the book, you will be able to create a scalable application using Amazon S3. Style and approach This paced book is a pragmatic guide to writing Amazon S3 applications. Each chapter is blended beautifully with lucid concepts and pertinent examples.

AWS Ultimate Guide: From Beginners to Advanced Dec 26 2021 This is a very comprehensive book on AWS, from beginners to advanced. The book has extensive diagrams to help understand topics much easier way. To make understanding the subject a smoother experience, the book is divided into the following sections: Cloud Computing AWS Fundamentals (What is AWS, AWS Account, AWS Free Tier, AWS Cost & Billing Management, AWS Global Cloud Infrastructure (part I)), IAM, EC2) AWS Advanced (EC2 Advanced, ELB, Advanced S3, Route 53, AWS Global Cloud Infrastructure (part II), Advanced Storage on AWS, AWS Monitoring, Audit, and Performance), AWS RDS and Databases (AWS RDS and Cache, AWS Databases) Serverless (Serverless Computing, AWS Integration, and Messaging) Container & CI/CD (Container, AWS CI/CD services) Data & Analytics (Data & Analytics) Machine Learning (AWS ML/AI Services) Security (AWS Security & Encryption, AWS Shared Responsibility Model, How to

get Support on AWS, Advanced Identity) Networking (AWS Networking) Disaster Management (Backup, Recovery & Migrations) Solutions Architecture (Cloud Architecture Key Design Principles, AWS Well-Architected Framework, Classic Solutions Architecture) Practice Tests Includes AWS services/features such as IAM, S3, EC2, EC2 purchasing options, EC2 placement groups, Load Balancers, Auto Scaling, S3 Glacier, S3 Storage classes, Route 53 Routing policies, CloudFront, Global Accelerator, EFS, EBS, Instance Store, AWS Snow Family, AWS Storage Gateway, AWS Transfer Family, Amazon CloudWatch, EventBridge, CloudWatch Insights, AWS CloudTrail, AWS Config, Amazon RDS, Amazon Aurora, Amazon ElastiCache, Amazon DocumentDB, Amazon Keyspaces, Amazon Quantum Ledger Database, Amazon Timestream, Amazon Managed Blockchain, AWS Lambda, Amazon DynamoDB, Amazon API Gateway, SQS, SNS, SES, Amazon Kinesis, Amazon Kinesis Firehose, Amazon Kinesis Data Analytics, Amazon Kinesis Data Streams, Amazon Kinesis ECS, Amazon Kinesis ECR, Amazon EKS, AWS CloudFormation, AWS Elastic Beanstalk, AWS CodeBuild, AWS OpsWorks, AWS CodeGuru, AWS CodeCommit, Amazon Athena, Amazon Redshift, Amazon EMR, Amazon QuickSight, AWS Glue, AWS Lake Formation, Amazon MSK, Amazon Rekognition, Amazon Transcribe, Amazon Polly, Amazon Translate, Amazon Lex, Amazon Connect, Amazon Comprehend, Amazon Comprehend Medical, Amazon SageMaker, Amazon Forecast, Amazon Kendra, Amazon Personalize, Amazon Textract, Amazon Fraud Detector, Amazon Sumerian, AWS WAF, AWS Shield Standard, AWS Shield Advanced, AWS Firewall Manager, AWS GuardDuty, Amazon Inspector, Amazon Macie, Amazon Detective, SSM Session Manager, AWS Systems Manager, S3 Replication & Encryption, AWS Organization, AWS Control Tower, AWS SSO, Amazon Cognito, AWS VPC, NAT Gateway, VPC Endpoints, VPC Peering, AWS Transit Gateway, AWS Site-to-Site VPC, Database Management Service (DMS), and many others. In the last section there are five practice test sets with answers, each containing 65 exam-like questions. Though these questions are more geared towards the AWS Certified Cloud Practitioner exam, the knowledge gained from them may help you on many AWS certification exams.

Intelligent Document Processing with AWS AI/ML 11 2022 Build real-world artificial intelligence applications across industries with the help of intelligent document processing Key Features Tackle common document processing problems to extract value from any type of document Unlock deeper levels of insights on IDP in a more structured and accelerated way using AWS AI/ML Apply your knowledge to solve real document analysis problems in various industry applications Book Description With the volume of data growing exponentially in this digital era, it has become paramount for professionals to process this data in an accelerated and cost-effective manner to get value out of it. Data that organizations receive is usually in raw document format, and being able to process these documents is critical to meeting growing business needs. This book is a comprehensive guide to helping you get to grips with the fundamentals and their application in document processing use cases. You'll begin by understanding the challenges faced in legacy document processing and discover how you can build end-to-end document processing pipelines using AWS AI services. As you advance, you'll get hands-on experience with popular Python libraries to process and extract insights from documents. This book starts with the basics, taking you through real industry use cases for document processing to deliver value-based care in the healthcare industry and accelerate loan application processing in the financial industry. Throughout the chapters, you'll find out how to apply your skillset to solve practical problems. At the end of this AWS book, you'll have mastered the fundamentals of document processing with machine learning through practical implementation. What you will learn Understand the requirements and challenges in deriving insights from a document Explore common stages in the intelligent document processing pipeline Discover how AWS AI/ML can successfully automate IDP pipelines Find out how to write clean and elegant Python code by leveraging AWS services Get to grips with the concepts and functionalities of AWS AI services Explore IDP across industries such as insurance, healthcare, finance, and the public sector Determine how to apply business rules in IDP Build, train, and deploy models with serverless architecture for IDP Who this book is for This book is for technical professionals and business leaders who want to understand and solve business problems by leveraging insights from their documents. If you want to learn about machine learning and artificial intelligence, and work with real-world use cases such as document processing with technology, this book is for you. To make the most of this book, you should have basic knowledge of AI/ML and python programming concepts. This book is also especially useful for developers looking to explore AI/ML with industry use cases.

Python for DevOps in 18 2020 Much has changed in technology over the past decade. Data is hot, the cloud is ubiquitous, and many organizations need some form of automation. Throughout these transformations, Python has become one of the most popular languages in the world. This practical resource shows you how to use Python for everyday Linux systems administration tasks with today's most useful DevOps tools, including Docker, Kubernetes, and Terraform. Learning how to interact and automate with Linux is essential for millions of professionals. Python makes it much easier. With this book, you'll learn how to develop software and solve problems using containers, as well as how to monitor, instrument, load-test, and operationalize your software. Looking for effective ways to "g

stuff done" in Python? This is your guide. Python foundations, including a brief introduction to the language How to automate text, write command-line tools, and automate the filesystem Linux utilities, package management, build systems, monitoring and instrumentation, and automated testing Cloud computing, infrastructure as code, Kubernetes, and serverless Machine learning operations and data engineering from a DevOps perspective Building, deploying, and operationalizing a machine learning project

AWS Certified SysOps Administrator Practice Tests 2021 Study and prepare for the AWS Certified SysOps Administrator Associate (SOA-C01) Exam You can prepare for test success with AWS Certified SysOps Administrator Practice Tests: Associate (SOA-C01) Exam. It provides a total of 1,000 practice questions that get you ready for the exam. The majority of questions are found within seven practice tests, which correspond to the SOA-C01 AWS Certified SysOps Administrator Associate SOA-C01 Exam objective domains. Additionally, you can take advantage of an extra practice exam, or utilize an online test bank as an additional study resource. Practice tests allow you to demonstrate your knowledge and ability to: Deploy, manage, and operate scalable and fault-tolerant systems on the service Implement and control data flow as it goes to and from AWS Choose the right AWS service depending upon requirements Identify the proper use of AWS best practices during operations Estimate AWS costs and pin-point cost controls Migrate workloads to Amazon Web Services As someone working to deliver cloud-based solutions, you can earn an AWS Certification to demonstrate your expertise with the technology. The certification program recognizes proficiency in technical skills and knowledge related to best practices for building cloud-based applications with AWS.

Latest Amazon AWS DevOps Engineer - Professional DOP-C01 Exam Questions and Answers 2022 Exam Name : Amazon AWS DevOps Engineer - Professional Exam Code : DOP-C01 Edition : Latest Verison (100% valid and stable) Number of Questions : 260 Questions with Answer

Amazon S3 Cookbook Jan 18 2023 Over 30 hands-on recipes that will get you up and running with Amazon Simple Storage Service (S3) efficiently About This Book Learn how to store, manage, and access your data with AWS S3. Study the Amazon S3 pricing model and learn how to calculate costs by simulating practical scenarios Optimize your Amazon S3 bucket by following step-by-step instructions of how to deliver your content with CloudFront, secure your S3 bucket with IAM, and lower costs with object life cycle management Who This Book Is For This book is for cloud developers who have experience of using Amazon S3 and are also familiar with Amazon S3. What You Will Learn Host a static website on Amazon S3 Calculate costs with AWS Simple Monthly Calculators Deploy a static website with CloudFormation Distribute your content via CloudFront Secure resources with bucket policies and IAM Protect your objects using server-side and client-side encryption Enable Cross-Origin Resource Sharing Manage objects' life cycle to lower costs Optimize performance for uploading as well as downloading objects Enable S3 event notifications create Lambda functions Manage common operations with AWS SDKs In Detail Amazon S3 is one of the most famous and trailblazing cloud object storage services, which is highly scalable, low-latency, and economical. Users only pay for what they use and can store and retrieve any amount of data at any time over the Internet, which is a major advantage over Hadoop users who run clusters on EC2. The book starts by showing you how to install several AWS SDKs such as the AWS SDK for iOS, Java, Node.js, PHP, Python, and Ruby and shows you how to manage objects. Then, you'll be taught how to use the installed AWS SDKs to develop applications with Amazon S3. Furthermore, you will explore the Amazon S3 pricing model and will learn how to annotate S3 billing with cost allocation tagging. In addition to this, the book covers several practical recipes about how to distribute your content with CloudFront, secure your content with IAM, optimize Amazon S3 performance, and notify S3 events with Lambda. By the end of this book, you will be successfully implementing pro-level practices, techniques, and solutions in Amazon S3. Style and approach A step-by-step practical guide that will show you how to efficiently store, manage, and control your data in Amazon S3.

Programming Elastic MapReduce Apr 09 2022 Although you don't need a large computing infrastructure to process massive amounts of data with Apache Hadoop, it can still be difficult to get started. This practical guide shows you how to quickly launch data analysis projects in the cloud by using Amazon Elastic MapReduce (EMR), the hosted Hadoop framework in Amazon Web Services (AWS). Authors Kevin Schmidt and Christopher Phillips demonstrate best practices for using EMR and various AWS and Apache technologies by walking you through the construction of a sample MapReduce log analysis application. Using code samples and example configurations, you'll learn how to assemble the building blocks necessary to solve your biggest data analysis problems. Get an overview of the AWS and Apache software tools used in large-scale data analysis Go through the process of executing a Job Flow with a log analyzer Discover useful MapReduce patterns for filtering and analyzing data sets Use Apache Hive and Pig instead of Java to build a MapReduce Job Flow Learn the basics for using Amazon EMR to run machine learning algorithms Develop a project cost model for using Amazon EMR and other AWS tools

AWS Certified Data Analytics Study Guide with Online Labs Nov 15 2019 Virtual, hands-on learning labs allow you to apply your technical skills in realistic environments. So Sybex has bundled AWS labs from XtremeLabs with our

popular AWS Certified Data Analytics Study Guide to give you the same experience working in these labs as you prepare for the Certified Data Analytics Exam that you would face in a real-life application. These labs in addition to the book are a proven way to prepare for the certification and for work as an AWS Data Analyst. AWS Certified Data Analytics Study Guide: Specialty (DAS-CO1) Exam is intended for individuals who perform in a data analytics-focused role. This UPDATED exam validates an examinee's comprehensive understanding of using AWS services to design, build, secure, and maintain analytics solutions that provide insight from data. It assesses an examinee's ability to define AWS data analytics services and understand how they integrate with each other; and explain how AWS data analytics services fit in the data lifecycle of collection, storage, processing, and visualization. The book focuses on the following domains: • Collection • Storage and Data Management • Processing • Analysis and Visualization • Data Security This is your opportunity to take the next step in your career by expanding and validating your skills on the AWS cloud. AWS is the frontrunner in cloud computing products and services, and the AWS Certified Data Analytics Study Guide: Specialty exam will get you fully prepared through expert content, and real-world knowledge, key exam essentials, chapter review questions, and much more. Written by an AWS subject-matter expert, this study guide covers exam concepts, and provides key review on exam topics. Readers will also have access to Sybex's superior online interactive learning environment and test bank, including chapter tests, practice exams, a glossary of key terms, and electronic flashcards. And included with this version of the book, XtremeLabs virtual labs that run from your browser. The registration code is included with the book and gives you 6 months of unlimited access to XtremeLabs AWS Certified Data Analytics Labs with 3 unique lab modules based on the book.

Practical Amazon EC2, SQS, Kinesis, and S3 04 2021 Provide solutions to all your Amazon EC2, SQS, Kinesis, and S3 problems, including implementation using the AWS Management Console, AWS CLI, and AWS SDK (Java). You'll find recipes on implementation and configuration of Amazon EC2, SQS, Kinesis, and S3 along with the code snippets and AWS CLI commands. Practical Amazon EC2, SQS, Kinesis, and S3 uses focused examples that include only the details you need to get things done. You'll see production use cases of Amazon EC2, SQS, Kinesis, and S3 and how to implement cloud watch in projects for these services. Learn how to raise an alarm on Amazon EC2, SQS, Kinesis, and S3 as part of a continuous monitoring system designed to increase performance and avoid side effects on your services. What You'll Learn Manage Amazon EC2, SQS, Kinesis, and S3 using the AWS Management Console Use the AWS CLI Employ the AWS Java SDK Configure alarms on Amazon EC2, SQS, Kinesis, and S3 Who This Book Is For Software developers and architects, system engineers, and project managers

Learning Hadoop Jul 20 2020 If you are a system or application developer interested in learning how to solve practical problems using the Hadoop framework, then this book is ideal for you. You are expected to be familiar with the Unix/Linux command-line interface and have some experience with the Java programming language. Familiarity with Hadoop would be a plus.

Serverless Analytics with Amazon Athena 08 2022 Get more from your data with Amazon Athena's ease-of-use, interactive performance, and pay-per-query pricing Key FeaturesExplore the promising capabilities of Amazon Athena and Athena's Query Federation SDKUse Athena to prepare data for common machine learning activitiesCover best practices for setting up connectivity between your application and Athena and security considerationsBook Description Amazon Athena is an interactive query service that makes it easy to analyze data stored in Amazon S3 using SQL, without needing to manage any infrastructure. This book begins with an overview of the serverless analytics experience offered by Athena and teaches you how to build and tune an S3 Data Lake using Athena, including how to structure your tables using open-source file formats like Parquet. You'll learn how to build, secure, and connect to a data lake with Athena and Lake Formation. Next, you'll cover key tasks such as ad hoc analysis, working with ETL pipelines, monitoring and alerting KPI breaches using CloudWatch Metrics, running customizable connectors with AWS Lambda, and more. Moving on, you'll work through easy integrations, troubleshooting and tuning common Athena issues, and the most common reasons for query failure. You will also review tips to help diagnose and correct failing queries in your pursuit of operational excellence. Finally, you'll explore advanced concepts such as Athena Query Federation and Athena ML to generate powerful insights without needing to touch a single server. By the end of this book, you'll be able to build and use a data lake with Amazon Athena to add data-driven features to your app and perform the kind of ad hoc data analysis that often precedes many of today's ML modeling exercises. What you will learnSecure and manage the cost of querying your dataUse Athena ML and User Defined Functions (UDFs) to add advanced features to your reportsWrite your own Athena Connector to integrate with a custom data sourceDiscover your datasets on S3 using AWS Glue CrawlersIntegrate Amazon Athena into your applicationsSetup Identity and Access Management (IAM) policies to limit access to tables and databases in Glue Data CatalogAdd an Amazon SageMaker Notebook to your Athena queriesGet to grips with using Athena for ETL pipelinesWho this book is for Business intelligence (BI) analysts, application developers, and system administrators who are looking to generate insights from an ever-growing sea of data while controlling

and limiting operational burden, will find this book helpful. Basic SQL knowledge is expected to make the most of this book.

[Practical AWS Networking](#) Mar 16 2020 Your one step guide to learn all about AWS networking. Key Features Master your networking skills on Public Cloud Gain hands-on experience of using Amazon VPC, Elastic Load Balancing, Direct Connect and other AWS products Implement troubleshooting skills and best practices for security on AWS network Book Description Amazon Web Services (AWS) dominates the public cloud market by a huge margin and continues to be the first choice for many organizations. Networking has been an area of focus for all leading cloud service providers. AWS has a suite of network-related products which help in performing network-related task on AWS. This book initially covers the basics of networking in AWS. Then we use AWS VPC to create an isolated virtual cloud for performing network-related tasks. We then provide an overview of AWS Direct Connect after taking a deep dive into scalability and load balancing using the auto scaling feature, Elastic Load Balancing, Amazon Route S3. Toward the end of the book, we cover troubleshooting tips and security best practices for your network. By the end of this book, you will have hands-on experience of working with network tasks on AWS. Who this book is for This book is for cloud architects, cloud solution providers, or any stakeholders dealing with networking on AWS Cloud. A prior idea of Amazon Web Services will be an added advantage.

[Amazon Cloud Engineering Solutions - AWS](#) Dec 25 2020 AWS enables you to select the operating system, programming language, web application platform, database, and other services you need. With AWS, you receive a virtual environment that lets you load the software and services your application requires.

[The Definitive Guide to AWS Application Integration](#) Oct 23 2020 Build reliable, asynchronous, and distributed applications using message queuing and task orchestration capabilities of Amazon Web Services (AWS) Application Integration. This book prepares you to build distributed applications and administrators, and manage queues, workflows, and state machines. You'll start by reviewing key AWS prerequisite services such as EC2, Lambda, S3, DynamoDB, CloudWatch, and IAM. Simple Queue Service (SQS) and SNS Simple Notification Service (SNS) are then covered to show how applications interact with each other in a reliable and resilient fashion. Next, workflow building with (Simple Workflow Service (SWF) for orchestration of tasks is explained and in the final chapter learn the techniques for building a state using Step Functions, Simple Workflow Service along with Flow Framework. The book illustrates all the concepts using numerous examples that work with SDK, CLI, and Console. Most of the code examples are in Java, followed by Python and JavaScript. What You Will Learn Understand the important prerequisites of AWS, such as EC2, Lambda, S3, and DynamoDB Work with SQS, SNS, and SWS functions Review Step functions Who This Book Is For AWS developers and software developers proficient in Java, Python and JavaScript.

[Data Engineering with AWS](#) Apr 28 2021 The missing expert-led manual for the AWS ecosystem — go from foundations to building data engineering pipelines effortlessly Purchase of the print or Kindle book includes a free eBook in the PDF format. Key Features Learn about common data architectures and modern approaches to generating value from big data Explore AWS tools for ingesting, transforming, and consuming data, and for orchestrating pipelines Learn how to architect and implement data lakes and data lakehouses for big data analysis from a data lakes expert Book Description Written by a Senior Data Architect with over twenty-five years of experience in the business, Data Engineering for AWS is a book whose sole aim is to make you proficient in using the AWS ecosystem. Using a thorough and hands-on approach to data, this book will give aspiring and new data engineers a solid theoretical and practical foundation to succeed with AWS. As you progress, you'll be taken through the services and the skills you need to architect and implement data pipelines on AWS. You'll begin by reviewing important data engineering concepts and some of the core AWS services that form a part of the data engineer's toolkit. You'll then architect a data pipeline, review raw data sources, transform the data, and learn how the transformed data is used by various data consumers. You'll also learn about populating data marts and data warehouses along with how a data lakehouse fits into the picture. Later, you'll be introduced to AWS tools for analyzing data, including those for ad-hoc SQL queries and creating visualizations. In the final chapters, you'll understand how the power of machine learning and artificial intelligence can be used to draw new insights from data. By the end of this AWS book, you'll be able to carry out data engineering tasks and implement a data pipeline on AWS independently. What you will learn Understand data engineering concepts and emerging technologies Ingest streaming data with Amazon Kinesis Data Firehose Optimize, denormalize, and join datasets with AWS Glue Studio Use Amazon S3 events to trigger a Lambda process to transform a file Run complex SQL queries on data lake data using Amazon Athena Load data into a Redshift data warehouse and run queries Create a visualization of your data

using Amazon QuickSight Extract sentiment data from a dataset using Amazon Comprehend Who this book is for This book is for data engineers, data analysts, and data architects who are new to AWS and looking to extend their skills to the AWS cloud. Anyone new to data engineering who wants to learn about the foundational concepts will gain practical experience with common data engineering services on AWS will also find this book useful. A basic understanding of big data-related topics and Python coding will help you get the most out of this book but it's not a prerequisite. Familiarity with the AWS console and core services will also help you follow along.

Amazon S3 Programming Guide Feb 19 2023 This book is a guide for you on how to program the Amazon Simple Storage Service (S3). Most people and companies have turned to using the Amazon S3 for the purpose of storing data. The first part of the book guides you on how to upload your files to the Amazon S3. In this chapter, you will use Play 2 for creation of a Java app. This app will help you to upload your files to the Amazon S3, making your work much easier. You will learn how to use the AWS Library as well as the Play 2 S3 library. The Node.js can be used for the purpose of performing direct uploads of files to the Amazon S3. In most apps, this is done by use of a web app that the files can be uploaded to the web server. In this book, you are guided on how to use Node.js to create an app which directly uploads the files to the S3 server, and you will not be expected to create or use a web app. This mechanism employs the use of Cross-Origin Resource Sharing (CORS). This book guides you on how to implement this. You will also be shown how to setup a private maven repository which you can use for your projects. You will also need to read the S3 files in a programmatic manner. This book guides you on how to do this. The following topics are discussed in this book: - Uploading Files - Direct Uploads in S3 and Node.js - Private Maven Repository Setup - Working with the Object-Oriented Java Adapter in AWS S3 - Reading from S3 Files - Working with Nginx as the Proxy

AWS Certified Solutions Architect - Lab Manual Aug 01 2021 This book is specially designed for those people who are either already working on AWS Cloud, or looking to work on AWS Cloud services, or want to achieve the real-world AWS Cloud hands-on skills and proficiency. There are about 45+ high quality, step by step, industry-based, enterprise-level hands-on lab exercises with clean and clear how to instructions. With all the lab exercises, selected and useful official documentation links are mentioned so you can take an overview of the service that you are going to use. All the hands-on lab exercises are doable with the AWS Free Tier account so you don't need to spend much to learn AWS cloud services. The book has been designed by starting from basics so a beginner can also perform all the hands-on labs without any issue. The following is the high level list of the lab exercises contained in the book: 1. Sign Up for AWS Free Tier Account 2. Getting Familiarized with AWS Console 3. Creating an AWS IAM User 4. Managing Virtual Private Cloud (VPC) 5. Creating and Configuring Internet Gateways 6. Creating and Configuring NAT Gateways 7. Configuring Routing Tables 8. VPC Peering Between Two VPCs 9. Working with Amazon Elastic Cloud Compute (EC2) 10. Creating and Configuring Security Groups 11. Connecting EC2 Linux Instance Using PuTTY, Gitbash, and Console 12. Connecting Private Instance using SSH Agent Forwarding 13. Accessing EC2 Linux Instance Using RDP with GUI Interface 14. Recovering and connecting EC2 instance if the SSH key is lost 15. Changing Instance type, security groups, volumes & other settings 16. Start, Stop, Reboot, and Terminate EC2 Instance 17. Creating and configuring Elastic Load Balancer 18. Scheduling Auto Snapshot of Volumes 19. Creating AMI and Recovering EC2 Instance Using AMI 20. Configuring CloudWatch Monitoring 21. Configuring Amazon Simple Notification Service (SNS) 22. Configuring Centralized Log Management Using CloudWatch Log 23. Schedule Auto, Start, Stop, and Reboot EC2 Instances 24. Creating and Recovering EC2 Instance Using Snapshots 25. Working with IAM User Properties 26. Creating and Using an IAM Role 27. Configuring Password Policies for IAM Users 28. Installing and configuring AWS CLI 29. Configuring OpenVPN Server to Securely Access Instances 30. Connecting OpenVPN Server 31. Configuring Linux Bastion Server for Securely Accessing EC2 Instances via SSH 32. Working with S3 Buckets 33. Configuring Permissions and Policy for S3 Buckets 34. Configuring S3 Bucket Policies for Specific IAM Users 35. Configuring S3 Bucket Versioning and Logging 36. Configuring S3 Bucket Alerts and Notifications 37. Configuring S3 Bucket Lifecycle Rule 38. Implementing Cross-Region S3 Replication 39. Enabling and configuring AWS CloudTrail 40. Working with Auto Scaling Group 41. Configuring Amazon Route 53 42. Working with Amazon WorkDocs 43. Working with AWS Trusted Advisor

The Machine Learning Solutions Architect Handbook May 18 2020 Build highly secure and scalable machine learning platforms to support the fast-paced adoption of machine learning solutions Key Features Explore different ML tools and frameworks to solve large-scale machine learning challenges in the cloud Build an efficient data science environment for data exploration, model building, and model training Learn how to implement bias detection, privacy, and explainability in ML model development Book Description When equipped with a highly scalable machine learning (ML) platform, organizations can quickly scale the delivery of ML products for faster business value realization. There is a huge demand for skilled ML solutions architects in different industries, and this handbook will help you master the design patterns, architectural considerations, and the latest technology insights

you'll need to become one. You'll start by understanding ML fundamentals and how ML can be applied to solve real-world business problems. Once you've explored a few leading problem-solving ML algorithms, this book will help you tackle data management and get the most out of ML libraries such as TensorFlow and PyTorch. Using open source technology such as Kubernetes/Kubeflow to build a data science environment and ML pipelines will be covered before moving on to building an enterprise ML architecture using Amazon Web Services (AWS). You'll also learn about security and governance considerations, advanced ML engineering techniques, and how to apply bias detection, explainability, and privacy in ML model development. And finally, you'll get acquainted with AWS AI services and their applications in real-world use cases. By the end of this book, you'll be able to design and build an ML platform to support common use cases and architecture patterns like a true professional. What you will learn

- Apply ML methodologies to solve business problems
- Design a practical enterprise ML platform architecture
- Implement ML for ML workflow automation
- Build an end-to-end data management architecture using AWS
- Train large-scale ML models and optimize model inference latency
- Create a business application using an AI service and a custom ML model
- Use AWS services to detect data and model bias and explain models

Who this book is for This book is for data scientists, data engineers, cloud architects, and machine learning enthusiasts who want to become machine learning solutions architects. You'll need basic knowledge of the Python programming language, AWS, linear algebra, probability, and networking concepts before you get started with this handbook.

AWS Certified SysOps Administrator Official Study Guide **Apr 16 2020** Comprehensive, interactive exam preparation and so much more The AWS Certified SysOps Administrator Official Study Guide: Associate Exam is a comprehensive exam preparation resource. This book bridges the gap between exam preparation and real-world readiness, covering exam objectives while guiding you through hands-on exercises based on situations you'll likely encounter as an AWS Certified SysOps Administrator. From deployment, management, and operations to migration, data flow, cost control, and beyond, this guide will help you internalize the processes and best practices associated with AWS. The Sybex interactive online study environment gives you access to invaluable preparation aids, including an assessment test that helps you focus your study on areas most in need of review, and chapter tests to help you master your mastery of the material. Electronic flashcards make it easy to study anytime, anywhere, and a bonus practice exam gives you a sneak preview so you know what to expect on exam day. Cloud computing offers businesses a more effective, instantly scalable IT infrastructure. The AWS Certified SysOps Administrator - Associate credential shows that you have technical expertise in deployment, management, and operations on AWS. Study exam objectives Gain practical experience with hands-on exercises Apply your skills to real-world scenarios Test your understanding with challenging review questions Earning your AWS Certification is much more than just passing an exam—you must be able to perform the duties expected of an AWS Certified SysOps Administrator in a real-world setting. This book does more than coach you through the test: it trains you in the tools, procedures, and thought processes to get the job well. If you're serious about validating your expertise and working at a higher level, the AWS Certified SysOps Administrator Official Study Guide: Associate Exam is the resource you've been seeking.

sisalto.vooler.fi