

## Streaming Data Solutions On Aws With Amazon Kinesis

This document is intended to facilitate the deployment of the scalable hybrid cloud solution for data agility and collaboration using IBM® Spectrum Scale across multiple public clouds. To complete the tasks it describes, you must understand IBM Spectrum Scale and IBM Spectrum Scale Active File Management (AFM). The information in this document is distributed on an as-is basis without any warranty that is either expressed or implied. Support assistance for the use of this material is limited to situations where IBM Spectrum Scale or IBM Spectrum Scale Active File Management are supported and entitled, and where the issues are specific to a blueprint implementation. 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 Solutions Architect Study Guide to give you the same experience working in these labs as you prepare for the Certified Solutions Architect 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 Solutions Architect. 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 UPDATED AWS Certified Solutions Architect Study Guide, Third Edition, for the Associate SAA-C02 Exam will get you fully prepared. This study guide covers exam concepts, and provides key review of exam topics, including: Designing resilient architectures Designing high-performing architectures Designing secure applications and architectures Designing cost-optimized architectures 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. Readers will have access to Sybex's superior online interactive learning environment and test bank, including hundreds of test questions, practice exams, electronic flashcards, and a glossary of key terms. 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 Solutions Architect Labs with 12 unique lab modules based on the book.

Learn from the AWS subject-matter experts, apply real-world scenarios and clear the AWS Certified Solutions Architect –Associate exam Key Features Build highly reliable and scalable workloads on the AWS platform Pass the exam in less time and with confidence Get up and running with building and managing applications on the AWS platform Book Description Amazon Web Services (AWS) is currently the leader in the public cloud market. With an increasing global interest in leveraging cloud infrastructure, the AWS Cloud from Amazon offers a cutting-edge platform for architecting, building, and deploying web-scale cloud applications. As more the rate of cloud platform adoption increases, so does the need for cloud certification. The AWS Certified Solution Architect – Associate Guide is your one-stop solution to gaining certification. Once you have grasped what AWS and its prerequisites are, you will get insights into different types of AWS services such as Amazon S3, EC2, VPC, SNS, and more to get you prepared with core Amazon services. You will then move on to understanding how to design and deploy highly scalable applications. Finally, you will study security concepts along with the AWS best practices and mock papers to test your knowledge. By the end of this book, you will not only be fully prepared to pass the AWS Certified Solutions Architect – Associate exam but also capable of building secure and reliable applications. What you will learn Explore AWS terminology and identity and access management Acquaint yourself with important cloud services and features in categories such as compute, network, storage, and databases

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Define access control to secure AWS resources and set up efficient monitoring Back up your database and ensure high availability by understanding all of the database-related services in the AWS Cloud Integrate AWS with your applications to meet and exceed non-functional requirements Build and deploy cost-effective and highly available applications Who this book is for The AWS Certified Solutions Architect –Associate Guide is for you if you are an IT professional or Solutions Architect wanting to pass the AWS Certified Solution Architect – Associate 2018 exam. This book is also for developers looking to start building scalable applications on AWS

This book provides a comprehensive survey of techniques, technologies and applications of Big Data and its analysis. The Big Data phenomenon is increasingly impacting all sectors of business and industry, producing an emerging new information ecosystem. On the applications front, the book offers detailed descriptions of various application areas for Big Data Analytics in the important domains of Social Semantic Web Mining, Banking and Financial Services, Capital Markets, Insurance, Advertisement, Recommendation Systems, Bio-Informatics, the IoT and Fog Computing, before delving into issues of security and privacy. With regard to machine learning techniques, the book presents all the standard algorithms for learning – including supervised, semi-supervised and unsupervised techniques such as clustering and reinforcement learning techniques to perform collective Deep Learning. Multi-layered and nonlinear learning for Big Data are also covered. In turn, the book highlights real-life case studies on successful implementations of Big Data Analytics at large IT companies such as Google, Facebook, LinkedIn and Microsoft. Multi-sectorial case studies on domain-based companies such as Deutsche Bank, the power provider Opower, Delta Airlines and a Chinese City Transportation application represent a valuable addition. Given its comprehensive coverage of Big Data Analytics, the book offers a unique resource for undergraduate and graduate students, researchers, educators and IT professionals alike.

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

This is the eBook version of the print title. Note that the eBook does not provide access to the practice test software that accompanies the print book. Learn, prepare, and practice for AWS Certified Solutions Architect - Associate (SAA-C01) exam success with this Cert Guide from Pearson IT Certification, a leader in IT Certification learning. Master AWS Certified Solutions Architect - Associate (SAA-C01) exam topics Assess your knowledge with chapter-ending quizzes Review key concepts with exam preparation tasks AWS Certified Solutions Architect - Associate (SAA-C01) Cert Guide is a best-of-breed exam study guide. Best-selling author and expert instructor Anthony Sequeira shares

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preparation hints and test-taking tips, helping you identify areas of weakness and improve both your conceptual knowledge and hands-on skills. Material is presented in a concise manner, focusing on increasing your understanding and retention of exam topics. The book presents you with an organized test-preparation routine through the use of proven series elements and techniques. Exam topic lists make referencing easy. Chapter-ending Exam Preparation Tasks help you drill on key concepts you must know thoroughly. Review questions help you assess your knowledge, and a final preparation chapter guides you through tools and resources to help you craft your final study plan. Well regarded for its level of detail, assessment features, and challenging review questions and exercises, this study guide helps you master the concepts and techniques that will enable you to succeed on the exam the first time. The study guide helps you master all the topics on the AWS Certified Solutions Architect - Associate exam, including how to

- Design resilient architectures that ensure storage high availability while providing for decoupling mechanisms, multitier infrastructure, and high availability
- Define performant architectures with efficient storage and databases, caching optimizations, and improved elasticity
- Specify secure applications and architectures, encompassing application tiers, data, and networking infrastructure
- Design cost-optimized architectures, addressing both storage and compute
- Define operationally excellent architectures, and understand their characteristics

Internet of things (IoT) is an emerging research field that is rapidly becoming an important part of our everyday lives including home automation, smart buildings, smart things, and more. This is due to cheap, efficient, and wirelessly-enabled circuit boards that are enabling the functions of remote sensing/actuating, decentralization, autonomy, and other essential functions. Moreover, with the advancements in embedded artificial intelligence, these devices are becoming more self-aware and autonomous, hence making decisions themselves. Current research is devoted to the understanding of how decision support systems are integrated into industrial IoT. Decision Support Systems and Industrial IoT in Smart Grid, Factories, and Cities presents the internet of things and its place during the technological revolution, which is taking place now to bring us a better, sustainable, automated, and safer world. This book also covers the challenges being faced such as relations and implications of IoT with existing communication and networking technologies; applications like practical use-case scenarios from the real world including smart cities, buildings, and grids; and topics such as cyber security, user privacy, data ownership, and information handling related to IoT networks. Additionally, this book focuses on the future applications, trends, and potential benefits of this new discipline. This book is essential for electrical engineers, computer engineers, researchers in IoT, security, and smart cities, along with practitioners, researchers, academicians, and students interested in all aspects of industrial IoT and its applications.

- This is the latest practice test to pass the SAA-C02 AWS Amazon Certified Solutions Architect Associate Exam. - It contains 182 Questions and Answers. - All the questions are 100% valid and stable. - You can reply on this practice test to pass the exam with a good mark and in the first attempt.

There's a lot of information about big data technologies, but splicing these technologies into an end-to-end enterprise data platform is a daunting task not widely covered. With this practical book, you'll learn how to build big data infrastructure both on-premises and in the cloud and successfully architect a modern data platform. Ideal for enterprise architects, IT managers, application architects, and data engineers, this book shows you how to overcome the many challenges that emerge during Hadoop projects. You'll explore the vast landscape of tools available in the Hadoop and big data realm in a thorough technical primer before diving into: Infrastructure: Look at all component layers in a modern data platform, from the server to the data center, to establish a solid foundation for data in your enterprise Platform: Understand aspects of deployment, operation, security, high availability, and disaster recovery, along with everything you need to know to integrate your

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platform with the rest of your enterprise IT Taking Hadoop to the cloud: Learn the important architectural aspects of running a big data platform in the cloud while maintaining enterprise security and high availability

This practical guide takes a hands-on approach to implementation and associated methodologies to have you up and running with all that Amazon Kinesis has to offer. You'll work with use cases and practical examples to be able to ingest, process, analyze, and stream real-time data in no time.

This extraordinary book, written by leading players in a burgeoning technology revolution, is about the merger of finance and technology (fintech), and covers its various aspects and how they impact each discipline within the financial services industry. It is an honest and direct analysis of where each segment of financial services will stand. Fintech: The New DNA of Financial Services provides an in-depth introduction to understanding the various areas of fintech and terminology such as AI, big data, robo-advisory, blockchain, cryptocurrency, InsurTech, cloud computing, crowdfunding and many more. Contributions from fintech innovators discuss banking, insurance and investment management applications, as well as the legal and human resource implications of fintech in the future.

Latest SAA-C02 AWS Amazon Certified Solutions Architect Associate Exam Questions & Answers Pass Exam

Designing Cloud Data Platforms teaches you how to integrate data from multiple sources into a single, cloud-based, modern data platform. In it, you'll follow a six-layer approach to creating cloud data platforms that maximizes flexibility and manageability and reduces costs.

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 a hands-on guide to envisioning and designing a modern scalable data platform that takes full advantage of the flexibility of the cloud.

Designing Cloud Data Platforms teaches you how to integrate data from multiple sources into a single, cloud-based, modern data platform. In it, you'll follow a six-layer approach to creating cloud data platforms that maximizes flexibility and manageability and reduces costs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications.

COVERS THE NEW 2018 EXAM SAA-C01! This effective study guide provides 100% coverage of every topic on the AWS Certified Solutions Architect Associate exam. Get complete coverage of all objectives included on the February 2018 SAA-C01 exam from this comprehensive resource. Written by an expert AWS Solutions Architect and well-respected author, this authoritative guide fully addresses the knowledge and skills required for passing the AWS Certified Solutions Architect Associate exam. You'll find learning objectives at the beginning of each chapter, exam tips, practice exam questions, and in-depth explanations. Designed to help you pass the exam with ease, this definitive volume also serves as an essential on-the-job reference. Covers all exam domains, including: •Design Resilient Architectures •Define Performant Architectures •Specify Secure Applications and Architectures •Design Cost-Optimized Architectures •Define Operationally Excellent Architectures Digital content includes: •130 practice exam questions •Test engine that provides practice exams or quizzes that can be customized by chapter or exam objective

The AWS Certified Solutions Architect Professional exam validates advanced technical skills and experience in designing distributed applications and systems on the AWS platform. Example concepts you should understand for this exam include: - Designing and deploying dynamically scalable, highly available, fault-tolerant, and reliable applications on AWS - Selecting appropriate AWS services to design and deploy an application based on given requirements - Migrating complex, multi-tier applications on AWS - Designing and deploying enterprise-wide scalable operations on AWS - Implementing cost-control strategies - Recommended AWS Knowledge This book contains Free

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Resources. Preview the book & see what's inside.

While many companies ponder implementation details such as distributed processing engines and algorithms for data analysis, this practical book takes a much wider view of big data development, starting with initial planning and moving diligently toward execution. Authors Ted Malaska and Jonathan Seidman guide you through the major components necessary to start, architect, and develop successful big data projects. Everyone from CIOs and COOs to lead architects and developers will explore a variety of big data architectures and applications, from massive data pipelines to web-scale applications. Each chapter addresses a piece of the software development life cycle and identifies patterns to maximize long-term success throughout the life of your project. Start the planning process by considering the key data project types Use guidelines to evaluate and select data management solutions Reduce risk related to technology, your team, and vague requirements Explore system interface design using APIs, REST, and pub/sub systems Choose the right distributed storage system for your big data system Plan and implement metadata collections for your data architecture Use data pipelines to ensure data integrity from source to final storage Evaluate the attributes of various engines for processing the data you collect

The Amazon Web Services, AWS Certified Solutions Architect is among the most valuable and highly sought after cloud computing certifications in the world today. The Associate examination is intended for individuals who perform a solutions architect role and have one or more years of hands-on experience designing available, cost-efficient, fault-tolerant, and scalable distributed systems on AWS. The examination is comprised of 65 questions; either multiple choice or multiple response, and you have 130 minutes to complete the exam. AWS Certified Solutions Architect Associate Real Exam Preparation Practice test for the AWS Certified Solutions Architect -Associate certification. This will help assess how ready you are to pass the exam. This AWS Certified Solutions Architect Associate Practice Exam course update every month. Every day there is new security threats that's why I will keep you updated, every week I will publish a new question about AWS so you will always be updated. Certification Provider: Amazon Exam: AWS Certified Solutions Architect - Associate (SAA-001) Duration: 2 Hours Number of questions in the database: +150 and more Practice Exam Updated: Nov. 09.2, 2020 \*If you do not want to lose time and money, you can try this practice test. Why Amazon? Certification takes time and money, so you want to pick a certificate awarding institution that has real world value. Amazon is known for offering quality exams that give a variety of amazing certifications. You'll get world class work by taking any certification path they offer and hopefully learn some new incredible skills along the way! After all, Amazon is industry renowned and produces employees that work all across the world in different tech niches. Whether it's one exam or many, you'll find everything Amazon offers on ExamTopics so you can begin your journey to a rewarding career. You'll Also Get: ? Lifetime Access to course updates ? Fast & Friendly Support in the Q&A section Don't Miss Out! Every second you wait is costing you valuable leads . Go ahead and hit the "take this practice test" button to start test yourself today! Thank you very much and have a wonderful day!

Every industry will be positively affected by blockchain and AI technology at some point. However, blockchain is a misunderstood technology within the publishing realm. The scholarly publishing industry can significantly improve the flow of research, drive down costs, and introduce new efficiencies in the publishing industry with these new technologies. The scholarly publishing industry is in its early days of the digital transformation, and blockchain and AI technology could play a major role in this. However, the industry has been resistant to change. These reasons include but are not limited to staying with legacy systems, cost of new platforms, changing cultures, and understanding and adopting new technologies. With proper research and information provided, the publishing industry can adopt these technologies for beneficial

advancements and the generation of a bright future. Transforming Scholarly Publishing With Blockchain Technologies and AI explores the changing landscape of scholarly publishing and how blockchain technologies and AI are slowly being integrated and used within the industry. This book covers both the benefits and challenges of implementing technology and provides both cases and new developments. Topics highlighted include business model developments, new efficiencies in scholarly publishing, blockchain in research libraries, knowledge discovery, and blockchain in academic publishing. This book is a valuable reference tool for publishers, IT specialists, technologists, publishing vendors, researchers, academicians, and students who are interested in how blockchain technologies and AI are transforming and developing a modern scholarly publishing industry.

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-C01) 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.

Discover how to build a cloud-based data warehouse at petabyte-scale that is burstable and built to scale for end-to-end analytical solutions  
Key Features Discover how to translate familiar data warehousing concepts into Redshift implementation Use impressive Redshift features to optimize development, productionizing, and operations processes Find out how to use advanced features such as concurrency scaling, Redshift Spectrum, and federated queries  
Book Description Amazon Redshift is a fully managed, petabyte-scale AWS cloud data warehousing service. It enables you to build new data warehouse workloads on AWS and migrate on-premises traditional data warehousing platforms to Redshift. This book on Amazon Redshift starts by focusing on Redshift architecture, showing you how to perform database administration tasks on Redshift. You'll then learn how to optimize your data warehouse to quickly execute complex analytic queries against very large datasets. Because of the massive amount of data involved in data warehousing, designing your database for analytical processing lets you take full advantage of Redshift's columnar architecture and managed services. As you advance, you'll discover how to deploy fully automated and highly scalable extract, transform, and load (ETL) processes, which help minimize the operational efforts that you have to invest in managing regular ETL pipelines and ensure the timely and accurate refreshing of your data warehouse. Finally, you'll gain a clear

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understanding of Redshift use cases, data ingestion, data management, security, and scaling so that you can build a scalable data warehouse platform. By the end of this Redshift book, you'll be able to implement a Redshift-based data analytics solution and have understood the best practice solutions to commonly faced problems. What you will learn Use Amazon Redshift to build petabyte-scale data warehouses that are agile at scale Integrate your data warehousing solution with a data lake using purpose-built features and services on AWS Build end-to-end analytical solutions from data sourcing to consumption with the help of useful recipes Leverage Redshift's comprehensive security capabilities to meet the most demanding business requirements Focus on architectural insights and rationale when using analytical recipes Discover best practices for working with big data to operate a fully managed solution Who this book is for This book is for anyone involved in architecting, implementing, and optimizing an Amazon Redshift data warehouse, such as data warehouse developers, data analysts, database administrators, data engineers, and data scientists. Basic knowledge of data warehousing, database systems, and cloud concepts and familiarity with Redshift will be beneficial.

AWS Certified Solutions Architect Associate (SAA-C02) The AWS Certified Solutions Architect - Associate examination is intended for individuals who perform a solutions architect role and have one or more years of hands-on experience designing available, cost-efficient, fault-tolerant, and scalable distributed systems on AWS. Abilities Validated by the Certification Effectively demonstrate knowledge of how to architect and deploy secure and robust applications on AWS technologies Define a solution using architectural design principles based on customer requirements Provide implementation guidance based on best practices to the organization throughout the life cycle of the project Recommended Knowledge and Experience Hands-on experience using compute, networking, storage, and database AWS services Hands-on experience with AWS deployment and management services Ability to identify and define technical requirements for an AWS-based application Ability to identify which AWS services meet a given technical requirement Knowledge of recommended best practices for building secure and reliable applications on the AWS platform An understanding of the basic architectural principles of building on the AWS Cloud An understanding of the AWS global infrastructure An understanding of network technologies as they relate to AWS An understanding of security features and tools that AWS provides and how they relate to traditional services 435+ most up-to-date and unique questionnaires verified by our extensive years of experienced experts to prepare for AWS Certified Solutions Architect - Associate (SAA-C02) exam. We proud to says that, many students have easily cleared the exam with good score by practiced these questions and personal study guides. Don't hesitate!!! Please buy the book confidently because we always update the book with current level exam questions so that you can fully prepared for the actual exam.

"This book provides insight into the latest findings concerning data warehousing, data mining, and their applications in everyday human activities"--Provided by publisher.

The AWS Certified Solutions Architect - Associate examination is intended for individuals who perform a solutions architect role and have one or more years of hands-on experience designing available, cost-efficient, fault-tolerant, and scalable distributed systems on AWS. Preparing for the AWS Certified Solutions Architect Associate Exam (AWS CSAA) to become an AWS Certified Solutions Architect? Here we've brought 500+ AWS Solutions Architect Associate Exam Questions for you so that you can prepare well for the AWS Solution Architect Associate exam. This AWS Certified Solutions Architect - Associate exam practice test of AWS Web Services has been advanced to test your knowledge before taking the official exam. Unlike other online simulation practice tests, you get an eBook version easy to read & remember these questions. You can simply rely on these 500+ questions for successfully certifying this exam.

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Tap the power of Big Data with Microsoft technologies Big Data is here, and Microsoft's new Big Data platform is a valuable tool to help your company get the very most out of it. This timely book shows you how to use HDInsight along with HortonWorks Data Platform for Windows to store, manage, analyze, and share Big Data throughout the enterprise. Focusing primarily on Microsoft and HortonWorks technologies but also covering open source tools, Microsoft Big Data Solutions explains best practices, covers on-premises and cloud-based solutions, and features valuable case studies. Best of all, it helps you integrate these new solutions with technologies you already know, such as SQL Server and Hadoop. Walks you through how to integrate Big Data solutions in your company using Microsoft's HDInsight Server, HortonWorks Data Platform for Windows, and open source tools Explores both on-premises and cloud-based solutions Shows how to store, manage, analyze, and share Big Data through the enterprise Covers topics such as Microsoft's approach to Big Data, installing and configuring HortonWorks Data Platform for Windows, integrating Big Data with SQL Server, visualizing data with Microsoft and HortonWorks BI tools, and more Helps you build and execute a Big Data plan Includes contributions from the Microsoft and HortonWorks Big Data product teams If you need a detailed roadmap for designing and implementing a fully deployed Big Data solution, you'll want Microsoft Big Data Solutions.

This book presents the main theoretical foundations behind smart services as well as specific guidelines and practically proven methods on how to design them. Furthermore, it gives an overview of the possible implementation architectures and shows how the designed smart services can be realized with specific technologies. Finally, it provides four specific use cases that show how smart services have been realized in practice and what impact they have within the businesses. The first part of the book defines the basic concepts and aims to establish a shared understanding of terms, such as smart services, service systems, smart service systems or cyber-physical systems. On this basis, it provides an analysis of existing work and includes insights on how an organization incorporating smart services could enhance and adjust their management and business processes. The second part on the design of smart services elaborates on what constitutes a successful smart service and describes experiences in the area of interdisciplinary teams, strategic partnerships, the overall service systems and the common data basis. In the third part, technical reference architectures are presented in detail, encompassing topics on the design of digital twins in cyber physical systems, the communication between entities and sensors in the age of Industry 4.0 as well as data management and integration. The fourth part then highlights a number of analytical possibilities that can be realized and that can constitute or be part of smart services, including machine learning and artificial intelligence methods. Finally, the applicability of the introduced design and development method is demonstrated by considering specific real-world use cases. These include services in the industrial and mobility sector, which were developed in direct cooperation with industry partners. The main target audience of this book is industry-focused readers, especially practitioners from industry, who are involved in supporting and managing digital business. These include professionals working in business development, product management, strategy, and development, ranging from middle management to Chief Digital Officers. It conveys all the basics needed for developing smart services and successfully placing them on the market by explaining technical aspects as well as showcasing practical use cases.

This book constitutes the revised selected papers of the scientific satellite events that were held in conjunction with the 17th International Conference on Service-Oriented Computing, ICSOC 2019, held in Toulouse, France, in October 2019. The ICSOC 2019 workshop track consisted of five workshops on a wide range of topics that fall into the general area of service computing: - The 15th International Workshop on Engineering Service-Oriented Applications and Cloud Services (WESOACS). 4 papers over the 6 received submissions were accepted. -

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The 4th International Workshop on Adaptive Service-oriented and Cloud Applications (ASOCA). 2 papers over the 4 received submissions were accepted. Moreover, 2 invited papers were presented in this workshop. - The 4th International IoT Systems Provisioning & Management for Context-Aware Smart Cities (ISYCC). 3 papers over the 5 received submissions were accepted. Moreover, 3 invited papers were presented in this workshop. - The 1st edition of Towards Blockchain-Based Collaborative Enterprise (TBCE). It accepted 2 papers over the 3 received submissions. - The 1st edition of Smart daTa integRation And Processing on Service based environments (STRAPS). 3 papers over the 7 received submissions were accepted. An additional invited paper was presented in this workshop.

AWS certification is a level of Amazon Web Services cloud expertise that an IT professional obtains after passing one or more exams the public cloud provider offers. IT pros gain AWS certifications to demonstrate and validate technical cloud knowledge and skills.

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 their profession.

This book constitutes the thoroughly refereed post-conference proceedings of the second International Workshop on Interoperability and Open-Source Solutions for the Internet of Things, InterOSS-IoT 2016, held in Stuttgart, Germany, November 7, 2016. The 11 revised full papers presented were carefully reviewed and selected from 17 submissions during two rounds of reviewing. They are organized in topical sections on semantic interoperability, interoperable architectures and platforms, business models and security, platform performance and applications.

Succeed on the AWS Machine Learning exam or in your next job as a machine learning specialist on the AWS Cloud platform with this hands-on guide As the most popular cloud service in the world today, Amazon Web Services offers a wide range of opportunities for those interested in the development and deployment of artificial intelligence and machine learning business solutions. The AWS Certified Machine Learning Study Guide: Specialty (MLS-CO1) Exam delivers hyper-focused, authoritative instruction for anyone considering the pursuit of the prestigious Amazon Web Services Machine Learning certification or a new career as a machine learning specialist working within the AWS architecture. From exam to interview to your first day on the job, this study guide provides the domain-by-domain specific knowledge you need to build, train, tune, and deploy machine learning models with the AWS Cloud. And with the practice exams and assessments, electronic flashcards, and supplementary online resources that accompany this Study Guide, you'll be prepared for success in every subject area covered by the exam. You'll also find: An intuitive and organized layout perfect for anyone taking the exam for the first time or seasoned professionals seeking a refresher on machine learning on the AWS Cloud Authoritative instruction on a widely recognized certification that unlocks countless career opportunities in machine learning and data science Access to the Sybex online learning resources and test bank, with chapter review questions, a full-length practice exam, hundreds of electronic flashcards, and a glossary of key terms AWS Certified Machine Learning Study Guide: Specialty (MLS-CO1) Exam is an indispensable guide for anyone seeking to prepare themselves for success

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on the AWS Certified Machine Learning Specialty exam or for a job interview in the field of machine learning, or who wishes to improve their skills in the field as they pursue a career in AWS machine learning.

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.

Explore big data concepts, platforms, analytics, and their applications using the power of Hadoop 3 Key Features Learn Hadoop 3 to build effective big data analytics solutions on-premise and on cloud Integrate Hadoop with other big data tools such as R, Python, Apache Spark, and Apache Flink Exploit big data using Hadoop 3 with real-world examples Book Description Apache Hadoop is the most popular platform for big data processing, and can be combined with a host of other big data tools to build powerful analytics solutions. Big Data Analytics with Hadoop 3 shows you how to do just that, by providing insights into the software as well as its benefits with the help of practical examples. Once you have taken a tour of Hadoop 3's latest features, you will get an overview of HDFS, MapReduce, and YARN, and how they enable faster, more efficient big data processing. You will then move on to learning how to integrate Hadoop with the open source tools, such as Python and R, to analyze and visualize data and perform statistical computing on big data. As you get acquainted with all this, you will explore how to use Hadoop 3 with Apache Spark and Apache Flink for real-time data analytics and stream processing. In addition to this, you will understand how to use Hadoop to build analytics solutions on the cloud and an end-to-end pipeline to perform big data analysis using practical use cases. By the end of this book, you will be well-versed with the analytical capabilities of the Hadoop ecosystem. You will be able to build powerful solutions to perform big data analytics and get insight effortlessly. What you will learn Explore the new features of Hadoop 3 along with HDFS, YARN, and MapReduce Get well-versed with the analytical capabilities of Hadoop ecosystem using practical examples Integrate Hadoop with R and Python for more efficient big data processing Learn to use Hadoop with Apache Spark and Apache Flink for real-time data analytics Set up a Hadoop cluster on AWS cloud Perform big data analytics on AWS

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using Elastic Map Reduce Who this book is for Big Data Analytics with Hadoop 3 is for you if you are looking to build high-performance analytics solutions for your enterprise or business using Hadoop 3's powerful features, or you're new to big data analytics. A basic understanding of the Java programming language is required.

With this practical book, AI and machine learning practitioners will learn how to successfully build and deploy data science projects on Amazon Web Services. The Amazon AI and machine learning stack unifies data science, data engineering, and application development to help level up your skills. This guide shows you how to build and run pipelines in the cloud, then integrate the results into applications in minutes instead of days. Throughout the book, authors Chris Fregly and Antje Barth demonstrate how to reduce cost and improve performance. Apply the Amazon AI and ML stack to real-world use cases for natural language processing, computer vision, fraud detection, conversational devices, and more Use automated machine learning to implement a specific subset of use cases with SageMaker Autopilot Dive deep into the complete model development lifecycle for a BERT-based NLP use case including data ingestion, analysis, model training, and deployment Tie everything together into a repeatable machine learning operations pipeline Explore real-time ML, anomaly detection, and streaming analytics on data streams with Amazon Kinesis and Managed Streaming for Apache Kafka Learn security best practices for data science projects and workflows including identity and access management, authentication, authorization, and more

Investors and technology gurus have called big data one of the most important trends to come along in decades. Big Data Bootcamp explains what big data is and how you can use it in your company to become one of tomorrow's market leaders. Along the way, it explains the very latest technologies, companies, and advancements. Big data holds the keys to delivering better customer service, offering more attractive products, and unlocking innovation. That's why, to remain competitive, every organization should become a big data company. It's also why every manager and technology professional should become knowledgeable about big data and how it is transforming not just their own industries but the global economy. And that knowledge is just what this book delivers. It explains components of big data like Hadoop and NoSQL databases; how big data is compiled, queried, and analyzed; how to create a big data application; and the business sectors ripe for big data-inspired products and services like retail, healthcare, finance, and education. Best of all, your guide is David Feinleib, renowned entrepreneur, venture capitalist, and author of *Why Startups Fail*. Feinleib's Big Data Landscape, a market map featured and explained in the book, is an industry benchmark that has been viewed more than 150,000 times and is used as a reference by VMWare, Dell, Intel, the U.S. Government Accountability Office, and many other organizations. Feinleib also explains:

- Why every businessperson needs to understand the fundamentals of big data or get run over by those who do
- How big data differs from traditional database management systems
- How to create and run a big data project
- The technical details powering the big data revolution

Whether you're a Fortune 500 executive or the proprietor of a restaurant or web design studio, Big Data Bootcamp will explain how you can take full advantage of new technologies to transform your company and your career.

This up-to-date study guide offers 100% coverage of every objective for the current version of the AWS Certified Solutions

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Architect Professional exam Get complete coverage of all objectives included on the SAA-C02 exam from this comprehensive resource. Written by an expert AWS Solutions Architect and well-respected author, this authoritative guide fully addresses the knowledge and skills required for passing the AWS Certified Solutions Architect – Associate exam. You'll find learning objectives at the beginning of each chapter, exam tips, practice exam questions, and in-depth explanations. You'll also build your practical knowledge with the many hands-on labs found throughout this guide. Designed to help you pass the exam with ease, this definitive volume also serves as an essential on-the-job reference. Covers all exam domains, including: Design Resilient Architectures Design High-Performing Architectures Design Secure Applications and Architectures Design Cost-Optimized Architectures Online content includes: 130 practice exam questions Test engine that provides practice exams or quizzes that can be customized by chapter or exam objective

Before you can build analytics tools to gain quick insights, you first need to know how to process data in real time. With this practical guide, developers familiar with Apache Spark will learn how to put this in-memory framework to use for streaming data. You'll discover how Spark enables you to write streaming jobs in almost the same way you write batch jobs. Authors Gerard Maas and François Garillot help you explore the theoretical underpinnings of Apache Spark. This comprehensive guide features two sections that compare and contrast the streaming APIs Spark now supports: the original Spark Streaming library and the newer Structured Streaming API. Learn fundamental stream processing concepts and examine different streaming architectures Explore Structured Streaming through practical examples; learn different aspects of stream processing in detail Create and operate streaming jobs and applications with Spark Streaming; integrate Spark Streaming with other Spark APIs Learn advanced Spark Streaming techniques, including approximation algorithms and machine learning algorithms Compare Apache Spark to other stream processing projects, including Apache Storm, Apache Flink, and Apache Kafka Streams

This book gathers the most recent developments in fuzzy & intelligence systems and real complex systems presented at INFUS 2020, held in Istanbul on July 21–23, 2020. The INFUS conferences are a well-established international research forum to advance the foundations and applications of intelligent and fuzzy systems, computational intelligence, and soft computing, highlighting studies on fuzzy & intelligence systems and real complex systems at universities and international research institutions. Covering a range of topics, including the theory and applications of fuzzy set extensions such as intuitionistic fuzzy sets, hesitant fuzzy sets, spherical fuzzy sets, and fuzzy decision-making; machine learning; risk assessment; heuristics; and clustering, the book is a valuable resource for academics, M.Sc. and Ph.D. students, as well as managers and engineers in industry and the service sectors.

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