Api Driven Devops Strategies For Continuous Deployment

- This is the latest practice test to pass the Amazon DOP-C01 AWS DevOps Engineer Professional Exam. - It contains 260 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.

Use DevOps principles with Google Cloud Platform (GCP) to develop applications and services. This book builds chapter by chapter to a complete real-life scenario, explaining how to build, monitor, and maintain a complete application using DevOps in practice. Starting with core DevOps concepts, continuous integration, and continuous delivery, you'll cover common tools including Jenkins, Docker, and Kubernetes in the context of a real microservices application to deploy in the cloud. You will also create a monitor for your cloud and see how to use its data to prevent errors and improve the stability of the system. By the end of Pro DevOps with Google Cloud Platform, you will be able to deploy, maintain, and monitor a real application with GCP. What You Will Learn Build and deploy applications and services using DevOps on Google Cloud Platform Maintain a complete continuous integration (CI) and continuous delivery (CD) pipeline Use containerization with Docker and Kubernetes Carry out CD with GCP and Jenkins Create microservices with Jenkins, Docker, and Kubernetes Monitor your newly deployed application and its deployment and performance Set up security and manage your network with GCP Who This Book Is For Developers and software architects who want to implement DevOps in practice. Some prior programming experience is recommended as well as a basic knowledge of a Linux command-line environment.

Innovate at scale through well-architected API-led products that drive personalized, predictive, and adaptive customer experiences Key Features Strategize your IT investments by modeling enterprise solutions with an API-centric approach Build robust and reliable API platforms to boost business agility and omnichannel delivery Create digital value chains through the productization of your APIs Book Description API-centric architectures are foundational to delivering omnichannel experiences for an enterprise. With this book, developers will learn techniques to design loosely coupled, cloud-based, business-tier interfaces that can be consumed by a variety of client applications. Using real-world examples and case studies, the book helps you get to grips with the cloudbased design and implementation of reliable and resilient API-centric solutions. Starting with the evolution of enterprise applications, you'll learn how API-based integration architectures drive digital transformation. You'll then learn about the important principles and practices that apply to cloud-based API architectures and advance to exploring the different architecture styles and their implementation in Azure. This book is written from a practitioner's point of view, so you'll discover ideas and practices that have worked successfully in various customer scenarios. By the end of this book, you'll be able to architect, design, deploy, and monetize your API solutions in the Azure cloud while implementing best practices and industry standards. What you will learn Explore the benefits of API-led architecture in an enterprise Build highly reliable and resilient, cloud-based, API-centric solutions Plan technical initiatives based on Well-Architected Framework principles Get to grips with the productization and management of your API assets for value creation Design high-scale enterprise integration platforms on the Azure cloud Study the important principles and practices that apply to cloud-based API architectures Who this book is for This book is for solution architects, developers, engineers, DevOps professionals, and IT decision-makers who are responsible for designing and developing large distributed systems. Familiarity with enterprise solution architectures and cloud-based design will help you to comprehend the concepts covered in the book easily.

Many companies claim to have "gone to the cloud," yet returns from their efforts are meager or worse. Why? Because they've defined cloud as a destination, not a capability. Using cloud as a single-vendor, one-stop destination is fiction; in practice, today's organizations use a mosaic of capabilities across several vendors. Your cloud strategy needs to follow a hybrid multicloud model, one that delivers cloud's value at destinations you choose. This practical guide provides business leaders and C-level executives with guidance and insights across a wide range of cloud-related topics, such as distributed cloud, microservices, and other open source solutions for strengthening operations. You'll apply in-the-field best practices and lessons learned as you define your hybrid cloud strategy and drive your company's transformation strategy. Learn cloud fundamentals and patterns, including basic concepts and history Get a framework for cloud acumen phases to value-plot your cloud future Know which questions to ask a cloud provider before you sign Discover potential pitfalls for everything from the true cost of a cloud solution to adopting open source the right way

Enhance DevOps workflows by integrating the functionalities of Docker, Kubernetes, Spinnaker, Ansible, Terraform, Flux CD, CaaS, and more with the help of practical examples and expert tips Key Features Get up and running with containerization-as-a-service and infrastructure automation in the public cloud Learn container security techniques and secret management with Cloud KMS, Anchore Grype, and Grafeas Kritis Leverage the combination of DevOps, GitOps, and automation to continuously ship a package of software Book Description Containers have entirely changed how developers and end-users see applications as a whole. With this book, you'll learn all about containers, their architecture and benefits, and how to implement them within your development lifecycle. You'll discover how you can transition from the traditional world of virtual machines and adopt modern ways of using DevOps to ship a package of software continuously. Starting with a quick refresher on the core concepts of containers, you'll move on to study the architectural concepts to implement modern ways of application development. You'll cover topics around Docker, Kubernetes, Ansible, Terraform, Packer, and other similar tools that will help you to build a base. As you advance, the book covers the core elements of cloud integration (AWS ECS, GKE, and other CaaS services), continuous integration, and continuous delivery (GitHub actions, Jenkins, and Spinnaker) to help you understand the essence of container management and delivery. The later sections of the book will take you through container pipeline security and GitOps (Flux CD and Terraform). By the end of this DevOps book, you'll have learned best practices for automating your development lifecycle and making the most of containers, infrastructure automation, and CaaS, and be ready to develop applications using modern tools and techniques. What you will learn Become well-versed with AWS ECS, Google Cloud Run, and Knative Discover how to build and manage secure Docker images efficiently Understand continuous integration with Jenkins on Kubernetes and GitHub actions Get to grips with using Spinnaker for continuous deployment/delivery Manage immutable infrastructure on the cloud with Packer, Terraform, and Ansible Explore the world of GitOps with GitHub actions, Terraform, and Flux CD Who this book is for If you are a software engineer, system administrator, or operations engineer looking to step into the world of DevOps within public cloud platforms, this book is for you. Existing DevOps engineers will also find this book useful as it covers best practices, tips, and tricks to implement DevOps with a cloud-native mindset. Although no containerization experience is necessary, a basic understanding of the software development life cycle and delivery will help you get the most out of the book.

Boost your organization's growth by incorporating networking in the DevOps culture About This Book Implement networking fundamentals to the DevOps culture with ease, improving your organization's stability Leverage various open source tools such as Puppet and Ansible in order to automate your network This step-by-step learning guide collaborating the functions of developers and network administrators Who This Book Is For The book is aimed for Network Engineers, Developers, IT operations and System admins who are planning to incorporate

Networking in DevOps culture and have no knowledge about it. What You Will Learn Learn about public and private cloud networking using AWS and OpenStack as examples Explore strategies that can be used by engineers or managers to initiate the cultural changes required to enable the automation of network functions Learn about SDN and how an API-driven approach to networking can help solve common networking problems Get the hang of configuration management tools, such as Ansible and Jenkins, that can be used to orchestrate and configure network devices Setup continuous integration, delivery, and deployment pipelines for network functions Create test environments for network changes Understand how load balancing is becoming more software defined with the emergence of microservice applications In Detail Frustrated that your company's network changes are still a manual set of activities that slow developers down? It doesn't need to be that way any longer, as this book will help your company and network teams embrace DevOps and continuous delivery approaches, enabling them to automate all network functions. This book aims to show readers network automation processes they could implement in their organizations. It will teach you the fundamentals of DevOps in networking and how to improve DevOps processes and workflows by providing automation in your network. You will be exposed to various networking strategies that are stopping your organization from scaling new projects quickly. You will see how SDN and APIs are influencing DevOps transformations, which will in turn help you improve the scalability and efficiency of your organizations networks operations. You will also find out how to leverage various configuration management tools such as Ansible, to automate your network. The book will also look at containers and the impact they are having on networking as well as looking at how automation impacts network security in a software-defined network. Style and approach This will be a comprehensive, learning guide for teaching our readers how networking can be leveraged to improve the DevOps culture for any organization.

Secure your applications and development environments with Docker and Kubernetes DESCRIPTION Through this book, we will introduce the DevOps tools ecosystem and the main containers orchestration tools through an introduction to some platforms such as Kubernetes, Docker Swarm, and OpenShift. Among other topics, both good practices will be addressed when constructing the Docker images as well as best security practices to be applied at the level of the host in which those containers are executed, from Docker's own daemon to the rest of the components that make up its technological stack. We will review the topics such as static analysis of vulnerabilities on Docker images, the signing of images with Docker Content Trust and their subsequent publication in a Docker Registry will be addressed. Also, we will review the security state in Kubernetes. In the last section, we will review container management and administration open source tools for IT organizations that need to manage and monitor container-based applications, reviewing topics such as monitoring, administration, and networking in Docker. KEY FEATURES - Introducing Container platforms (Docker, Kubernetes, Swarm, OpenShift) - Discover how to manage high availability with Docker Swarm and Kubernetes - Learn how Docker can manage the security in images and containers - Discover how Docker can be integrated into development workflows in applications - Discover vulnerabilities in the Docker containers and images with practical examples to secure your container-based applications - Discover tools for monitoring and administration Docker and Kubernetes applications WHAT WILL YOU LEARN - Learn fundamental DevOps skills and tools, starting with the basic components and concepts of Docker. - Learn about Docker as a platform for the deployment of containers and Docker images taking into account the security of applications. - Learn about tools that allow us to audit the security of the machine where we execute Docker images, finding out how to secure your Docker host. - Learn how to secure your Docker environment and discover vulnerabilities and threats in Docker images. - Learn about creating and deploying containers in a security way with Docker and Kubernetes. - Learn about monitoring and administration in Docker with tools such as cadvisor, sysdig, portainer, and Rancher. WHO THIS BOOK IS FOR This book covers different techniques to help

developers improve DevOps and container security skills and can be useful for people who are involved in software development and want to learn how Docker works from a security point of view. It is recommended that readers have the knowledge about UNIX commands and they work with commands terminal. TABLE OF CONTENTS 1. Getting started with DevOps 2. Container platforms 3. Managing Containers and Docker images 4. Getting started with Docker security 5. Docker host security 6. Docker images security 7. Auditing and analyzing vulnerabilities in Docker containers 8. Kubernetes security 9. Docker container networking 10. Docker container monitoring 11. Docker container administration

This book investigates the real process of unleashing the power of Information and Communications Technology (ICT) through Open Innovation and strategic choices. It covers the most important aspects of ICT in a nutshell and details the road to the future through business innovation. ICT, of which telecom and IT constitute the core, is currently permeating and transforming every sphere of life, ranging from commerce, manufacturing, education and healthcare, to agriculture, banking, governance, media and entertainment. Today, telecommunication and ICT, in general, are essential to a country's economic development and competitiveness as recognized both by the World Bank and the Asian Development Bank. Due to the powerful, disruptive and rapid forces unleashed by ICT tsunami, organisations not only struggle to harness the potential of ICT but can also be overwhelmed by the changes, complexity, competition and regulatory environment it brings up. This book provides a clue to organisations on how to sustain and succeed by leveraging ICT in absence of extensive in-house expertise across the breadth and depth of these areas. The driving theme of the book is about opening up organizational and business models, by presenting an integrated roadmap to a future with ICT, by co-opting, cooperating and competing with other organisations. Constructing the right strategy and building the necessary social capital for open innovation through collaboration with partners, government, academia and users (Quadruple Helix Model) are essential steps in such a process.

Integrate Agile ALM and DevOps to Build Better Software and Systems at Lower Cost Agile Application Lifecycle Management (ALM) is a comprehensive development lifecycle that embodies essential Agile principles and guides all activities needed to deliver successful software or systems. Agile ALM embodies Agile Configuration Management (CM) and much more. Flexible and robust, it offers "just enough process" to get the job done and leverages DevOps to enhance interactions among all participants. Agile Application Lifecycle Management offers practical advice and strategies for implementing Agile ALM in your complex environment. Leading experts Bob Aiello and Leslie Sachs show how to fully leverage Agile benefits without sacrificing structure, traceability, or repeatability. You'll find realistic guidance for managing source code, builds, environments, change control, releases, and more. The authors help you support Agile in organizations that maintain traditional practices; conventional ALM systems; or siloed, non-Agile teams. They also show how to scale Agile ALM to large or distributed teams, and to environments from cloud to mainframe. Coverage includes Understanding key concepts underlying modern application and system lifecycles Creating your best processes for developing your most complex software and systems Automating build engineering, continuous integration, and continuous delivery/deployment Enforcing Agile ALM controls without compromising productivity Creating effective IT

operations that align with Agile ALM processes Gaining more value from testing and retrospectives Making ALM work in the cloud, and across the enterprise Preparing for the future of Agile ALM Today, you need maximum control, quality, and productivity, and this guide will help you achieve those by using Agile ALM, CM, and DevOps together.

Achieve streamlined, rapid production with enterprise-level DevOps Awarded DevOps 2017 Book of the Year, The DevOps Adoption Playbook provides practical, actionable, real-world guidance on implementing DevOps at enterprise scale. Author Sanjeev Sharma heads the DevOps practice for IBM; in this book, he provides unique guidance and insight on implementing DevOps at large organizations. Most DevOps literature is aimed at startups, but enterprises have unique needs, capabilities, limitations, and challenges; "DevOps for startups" doesn't work at this scale, but the DevOps paradigm can revolutionize enterprise IT. Deliver high-value applications and systems with velocity and agility by adopting the necessary practices, automation tools, and organizational and cultural changes that lead to innovation through rapid experimentation. Speed is an advantage in the face of competition, but it must never come at the expense of quality; DevOps allows your organization to keep both by intersecting development, quality assurance, and operations. Enterprise-level DevOps comes with its own set of challenges, but this book shows you just how easily they are overcome. With a slight shift in perspective, your organization can stay ahead of the competition while keeping costs, risks, and quality under control. Grasp the full extent of the DevOps impact on IT organizations Achieve high-value innovation and optimization with low cost and risk Exceed traditional business goals with higher product release efficiency Implement DevOps in large-scale enterprise IT environments DevOps has been one of IT's hottest trends for the past decade, and plenty of success stories testify to its effectiveness in organizations of any size, industry, or level of IT maturity, all around the world. The DevOps Adoption Playbook shows you how to get your organization on board so you can slip production into the fast lane and innovate your way to the top.

Building on his decades of experience as a consultant and project manager in the automotive industry, the author develops comprehensive and pragmatic recommendations for action regarding the digital transformation of the automotive and supplier industries. At the heart is the transition from a vehicle-focused to a mobility-oriented business model. Based on the catalysts of the digital change, four digitisation fields are structured, and a roadmap for their transformation is presented. The topics of comprehensive change in corporate culture and an agile and efficient information technology are covered in detail as vital success factors. Selected practical examples of innovative digitisation projects provide additional ideas and impulses. An outlook on the automotive industry in the year 2040 completes the discourse.

Learn how to successfully implement API management using Oracle's API Management Solution 12c About This Book

Explore the key concepts, goals, and objectives of API Management and learn how to implement it using the Oracle API Management Solution Understand the concepts and objectives of the Application Service Governance (ASG), along with the governance framework that encompasses people, processes, and technology Get to grips with API Management readiness assessments, gap analysis, digital reference architecture, and implementation roadmaps Who This Book Is For This book is for Enterprise Architects, Solution Architects, Technical Architects, and SOA and API consultants who want to successfully implement API Management using the Oracle API Management Solution products. What You Will Learn Understand how to manage a set of APIs Discover the differences and similarities between API Management and SOA Governance, and where and how these two disciplines converge into Application Services Governance (ASG) Grasp information about ASG and how to define an ASG governance framework Understand the challenges for organizations looking to expose APIs to the external world. Identify common scenarios and how to solve them Define an Oracle API management deployment topology Install and configure Oracle API Catalog (OAC), Oracle API Manager (OAPIM), and Oracle API Gateway (OAG) Learn about API subscriptions and API community management with the OAPIM portal Implement Oracle API Manager (OAPIM) including creation, publishing, management and deprecation of APIs In Detail Oracle SOA Governance is a comprehensive, service-orientated governance solution that is designed to make the transition to SOA easier. API management is the discipline that governs the software development lifecycle of APIs. It defines the tools and processes needed to build, publish and operate APIs including the management of the community of developers around it. This book illustrates how to successfully implement API Management in your organization. To achieve this, the importance of defining an API management strategy and implementation roadmap so that capabilities are implemented in the right order and timeframes is described. It starts by describing all of the fundamental concepts around API Management and related disciplines such as SOA Governance and DevOps in order to dispel the confusion surrounding these topics. The book then takes you on the journey of implementing API Management, using a realistic case study of an organization that needs an API Management solution. You will start by identifying the key business drivers to implement APIs and then create an API Management strategy and a roadmap to realize this strategy. You'll then go through a number of use cases, each focused on addressing specific business requirements. These will help you understand each of the Oracle API Management products, how they fit into an overall architecture, and how to implement them. The book concludes by providing some tips and guidelines around defining a deployment topology for the Oracle API Management products and the steps to install them. Style and approach This book is a comprehensive guide to successfully implementing a complete API Management solution from inception to implementation. The initial chapters introduce you to Oracle SOA Governance and API Management and from there, chapters are mainly hands-on and

provide a full step-by-step walkthrough of how to implement the products of the Oracle API management solution to address realistic use cases.

This book constitutes the proceedings of the 1st International Conference on Advances in Emerging Trends and Technologies (ICAETT 2019), held in Quito, Ecuador, on 29–31 May 2019, jointly organized by Universidad Tecnológica Israel, Universidad Técnica del Norte, and Instituto Tecnológico Superior Rumiñahui, and supported by SNOTRA. ICAETT 2019 brought together top researchers and practitioners working in different domains of computer science to share their expertise and to discuss future developments and potential collaborations. Presenting high-quality, peer-reviewed papers, the book discusses the following topics: Technology Trends Electronics Intelligent Systems Machine Vision Communication Security e-Learning e-Business e-Government and e-Participation

Authoritative advice on creating and running a successful API program. The number of articles, books, and documents available on the topic of Application Programming Interfaces (APIs) might lead you to believe the topic has been well researched and well documented. But in fact, confusion abounds, especially about the best ways to create and maintain a successful API program. This book addresses that confusion. It encapsulates years of practical experience on how to make the right decisions at the right times when planning, designing, developing, and marketing APIs. It's your go-to resource when you want to: · Understand how to develop your API program's business case · Discover how to best engage your API consumer audience · Learn the best ways to design, build, test, and deploy APIs regardless of technology · Improve the chances of success of your API program over the long haul Technology will come and go, but the best practices for building an API program are here to stay. Make your journey through the world of APIs a successful one with this book as your experienced guide. Petracek provides an excellent guide on how corporations should leverage an API based service ecosystem to deliver amazing digital customer experiences. —T.M. Ravi, Managing Director, The Hive Nelson has taken the complex, technical, arcane, but critical topic of application programming interfaces (APIs) and explained them in a manner that allows the reader and Information Technology practitioner to understand. —Salil Kulkarni, EVP & Interim Chief Information Officer, Caesar's Entertainment This book takes you through everything you need to think about and work through to build an API competency. Each chapter sets out concrete actions for making your program state-of-the-art, and I highly recommend it to anyone involved in that effort. — Maureen Fleming, Program Vice President & Analyst, IDC

Explore the world of APIs and learn how to integrate them with production-ready applications using Postman and the Newman CLI Key Features Learn the tenets of effective API testing and API design Gain an in-depth understanding of the various features Postman has to offer Know when and how to use Postman for creating high-quality APIs for software

and web apps Book Description Postman enables the exploration and testing of web APIs, helping testers and developers figure out how an API works. With Postman, you can create effective test automation for any APIs. If you want to put your knowledge of APIs to work quickly, this practical guide to using Postman will help you get started. The book provides a hands-on approach to learning the implementation and associated methodologies that will have you up and running with Postman in no time. Complete with step-by-step explanations of essential concepts, practical examples, and self-assessment questions, this book begins by taking you through the principles of effective API testing. A combination of theory coupled with real-world examples will help you learn how to use Postman to create well-designed, documented, and tested APIs. You'll then be able to try some hands-on projects that will teach you how to add test automation to an already existing API with Postman, and guide you in using Postman to create a well-designed API from scratch. By the end of this book, you'll be able to use Postman to set up and run API tests for any API that you are working with. What you will learn Find out what is involved in effective API testing Use data-driven testing in Postman to create scalable API tests Understand what a well-designed API looks like Become well-versed with API terminology, including the different types of APIs Get to grips with performing functional and non-functional testing of an API Discover how to use industry standards such as OpenAPI and mocking in Postman Who this book is for The book is for software testing professionals and software developers looking to improve product and API quality through API test automation. You will find this book useful if understand APIs and want to build your skills for creating, testing, and documenting APIs. The book assumes beginner-level knowledge of JavaScript and API development.

For many organizations, a big part of DevOps' appeal is software automation using infrastructure-as-code techniques. This book presents developers, architects, and infra-ops engineers with a more practical option. You'll learn how a container-centric approach from OpenShift, Red Hat's cloud-based PaaS, can help your team deliver quality software through a self-service view of IT infrastructure. Three OpenShift experts at Red Hat explain how to configure Docker application containers and the Kubernetes cluster manager with OpenShift's developer- and operational-centric tools. Discover how this infrastructure-agnostic container management platform can help companies navigate the murky area where infrastructure-as-code ends and application automation begins. Get an application-centric view of automation--and understand why it's important Learn patterns and practical examples for managing continuous deployments such as rolling, A/B, blue-green, and canary Implement continuous integration pipelines with OpenShift's Jenkins capability Explore mechanisms for separating and managing configuration from static runtime software Learn how to use and customize OpenShift's source-to-image capability Delve into management and operational considerations when working with OpenShift-based application workloads Install a self-contained local version of the OpenShift environment on your

computer

Boost your organization's growth by incorporating networking in the DevOps cultureAbout This Book* Implement networking fundamentals to the DevOps culture with ease, improving your organization's stability* Leverage various open source tools such as Puppet and Ansible in order to automate your network* This step-by-step learning guide collaborating the functions of developers and network administratorsWho This Book Is ForThe book is aimed for Network Engineers, Developers, IT operations and System admins who are planning to incorporate Networking in DevOps culture and have no knowledge about it.What you will learn* Learn public and private cloud networking using AWS and OpenStack as examples* Explore strategies, that can be used by engineers or managers, to initiate cultural changes required to enable the automation of network functions* Learn Software Defined Networking and how an API driven approach to networking can help solve common networking problems* Get the hang of configuration management tools such as Ansible and Puppet that can be used to orchestrate and configure network devices* Set-up continuous integration and delivery deployment pipelines for network functions* Create test environments for network changes* Understand how load balancing is becoming more software defined with the emergence of containersIn DetailFrustrated that your company's network changes are still a manual set of activities that slow developers down? It doesn't need to be that way any longer, as this book will help your company and network teams embrace DevOps and continuous delivery approaches, enabling them to automate all network functions.This book is aligned with network automation, which is an integral part of overall infrastructure automation. It will teach you the fundamentals of DevOps in networking and how to improve DevOps processes and workflows by providing automation in your network. You will be exposed to various networking strategies that are stopping your organization from scaling new projects quickly.You will see how SDN and APIs are influencing DevOps, which in turn will help you improve the scalability and efficiency of your organization, along with server virtualization impacting DevOps. You will also find out how to leverage various tools such as Puppet and Ansible to automate your network.The book ends with network security (network monitoring and analysis) so you know how to manage and automate your infrastructure and enhance the DevOps culture.

Gain in-depth insight into DevOps relative to your field of expertise and implement effective DevOps culture and processes within your organization Key Features Packed with step-by-step explanations and practical examples to help you get started with DevOps Develop the skills and knowledge you need to tackle the deployment of DevOps tools Discover technology trends such as FinOps and DevSecOps to get more value from DevOps Book Description DevOps is a set of best practices enabling operations and development teams to work together to produce higher-quality work and, among other things, quicker releases. This book helps you to understand the fundamentals needed to get started with DevOps, and prepares you to start deploying technical tools confidently. You will start by learning the key steps for implementing successful DevOps transformations. The book will help you to understand how aspects of culture, people, and process are all connected, and that without any one of these elements DevOps is unlikely to be successful. As you make progress, you will discover how to measure and quantify the success of DevOps in your organization, along with exploring the pros and cons of the main tooling involved in DevOps. In the concluding chapters, you will learn about the latest trends in DevOps and find out how the tooling changes when you work with these specialties. By the end of this DevOps book, you will have gained a clear understanding of the connection between culture, people, and processes within DevOps, and learned why all three are critically important. What you will learn Understand the importance of culture in DevOps Build, foster, and develop a successful DevOps culture Discover how to implement a successful DevOps framework Measure and

define the success of DevOps transformation Get to grips with techniques for continuous feedback and iterate process changes Discover the tooling used in different stages of the DevOps life cycle Who this book is for This book is for IT professionals such as support engineers and systems engineers and developers looking to learn DevOps and for those going through DevOps transformation. General knowledge of IT and business processes will be helpful. You'll also find this book useful if you are in a business or service role within technology such as service delivery management. Basic familiarity with DevOps and transformational methods such as value streams and process are needed to get the most out of this book.

This book constitutes extended, revised and selected papers from the 8th International Conference on Cloud Computing and Services Science, CLOSER 2018, held in Funchal, Portugal in March 2018. The 11 papers presented in this volume were carefully reviewed and selected from a total of 94 submissions. CLOSER 2018 focused on the emerging area of Cloud Computing, inspired by some latest advances that concern the infrastructure, operations and available services throughout the global network.

Six years ago, Infrastructure as Code was a new concept. Today, as even banks and other conservative organizations plan moves to the cloud, development teams for companies worldwide are attempting to build large infrastructure codebases. With this practical book, Kief Morris of ThoughtWorks shows you how to effectively use principles, practices, and patterns pioneered by DevOps teams to manage cloud-age infrastructure. Ideal for system administrators, infrastructure engineers, software developers, team leads, and architects, this updated edition demonstrates how you can exploit cloud and automation technology to make changes easily, safely, quickly, and responsibly. You'll learn how to define everything as code and apply software design and engineering practices to build your system from small, loosely coupled pieces. This book covers: Foundations: Use Infrastructure as Code to drive continuous change and raise the bar of operational quality, using tools and technologies to build cloud-based platforms Working with infrastructure stacks: Learn how to define, provision, test, and continuously deliver changes to infrastructure resources Working with servers and other platforms: Use patterns to design provisioning and configuration of servers and clusters Working with large systems and teams: Learn workflows, governance, and architectural patterns to create and manage infrastructure elements

Many organizations are facing the uphill battle of modernizing their legacy IT infrastructure. Most have evolved over the years by taking lessons from traditional or legacy manufacturing: creating a production process that puts the emphasis on the process instead of the people performing the tasks, allowing the organization to treat people like resources to try to achieve high-quality outcomes. But those practices and ideas are failing modern IT, where collaboration and creativeness are required to achieve high-performing, high-quality success. Mirco Hering, a thought leader in managing IT within legacy organizations, lays out a roadmap to success for IT managers, showing them how to create the right ecosystem, how to empower people to bring their best to work every day, and how to put the right technology in the driver's seat to propel their organization to success. But just having the right methods and tools will not magically transform an organization; the cultural change that is the hardest is also the most impactful. Using principles from Agile, Lean, and DevOps as well as first-hand examples from the enterprise world, Hering addresses the different challenges that legacy organizations face as they transform into modern IT departments.

In today's business in motion environments, workers expect to be connected to their critical business processes while on-the-go. It is imperative to deliver more meaningful user engagements by extending business processes to the mobile working environments. This IBM® Redbooks® publication provides an overview of the market forces that push organizations to reinvent their process with Mobile in mind. It

describes IBM Mobile Smarter Process and explains how the capabilities provided by the offering help organizations to mobile-enable their processes. This book outlines an approach that organizations can use to identify where within the organization mobile technologies can offer the greatest benefits. It provides a high-level overview of the IBM Business Process Manager and IBM Worklight® features that can be leveraged to mobile-enable processes and accelerate the adoption of mobile technologies, improving time-to-value. Key IBM Worklight and IBM Business Process Manager capabilities are showcased in the examples included in this book. The examples show how to integrate with IBM BluemixTM as the platform to implement various supporting processes. This IBM Redbooks publication discusses architectural patterns for exposing business processes to mobile environments. It includes an overview of the IBM MobileFirst reference architecture and deployment considerations. Through use cases and usage scenarios, this book explains how to build and deliver a business process using IBM Business Process Manager and how to develop a mobile app that enables remote users to interact with the business process while on-the-go, using the IBM Worklight Platform. The target audience for this book consists of solution architects, developers, and technical consultants who will learn the following information: What is IBM Mobile Smarter Process Patterns and benefits of a mobile-enabled Smarter Process IBM BPM features to mobile-enable processes IBM Worklight features to mobile-enable processes Mobile architecture and deployment topology IBM BPM interaction patterns Enterprise mobile security with IBM Security Access Manager and IBM Worklight Implementing mobile apps to mobile-enabled business processes

A lot of work is required to release an API, but the effort doesn't always pay off. Overplanning before an API matures is a wasted investment, while underplanning can lead to disaster. This practical guide provides maturity models for individual APIs and multi-API landscapes to help you invest the right human and company resources for the right maturity level at the right time. How do you balance the desire for agility and speed with the need for robust and scalable operations? Four experts from the API Academy show software architects, program directors, and product owners how to maximize the value of their APIs by managing them as products through a continuous life cycle. Learn which API decisions you need to govern and how and where to do so Design, deploy, and manage APIs using an API-as-a-product (AaaP) approach Examine ten pillars that form the foundation of API product work Learn how the continuous improvement model governs changes throughout an API's lifetime Explore the five stages of a complete API product life cycle Delve into team roles needed to design, build, and maintain your APIs Learn how to manage your API landscape—the set of APIs published by your organization

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 "get 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

Transform your IT organization from one weighed down by set practices to one with a DevOps culture and a cloud-first strategy that is

optimized by automation and other lean practices. In this engaging read, you will discover the opportunities, challenges, lessons, and rewards that CA Technologies encountered when making their agile and DevOps transformation. In Enterprise DevOps Framework author Shamayel Farooqui shows you how agile adoption will enable your organization to stay ahead in an ever-changing business environment and meet your customers' needs. He includes detailed references to key concepts such as agile, hybrid and cloud technology, infrastructure management, and process automation. What You'll Learn Establish the focus areas for your IT organization Prepare for the challenges of transforming your enterprise to a DevOps, agile organization Know the key steps for executing an enterprise DevOps strategy Build a strong team of DevOps individuals focused on improving the efficiency of your organization through Agile methodologies, automation, cloud adoption, and "infrastructure as code" practices Who This Book Is For IT administrators, operational personnel, cloud professionals, DevOps professionals, human resources professionals, managers, and C-level staff

Hands-On Security in DevOps explores how the techniques of DevOps and Security should be applied together to make cloud services safer. By the end of this book, readers will be ready to build security controls at all layers, monitor and respond to attacks on cloud services, and add security organization-wide through risk management and training.

Nowadays it is impossible to imagine a business without technology as most industries are becoming "smarter" and more tech-driven, ranging from small individual tech initiatives to complete business models with intertwined supply chains and "platform"-based business models. New ways of working, such as agile and DevOps, have been introduced, leading to new risks. These risks come in the form of new challenges for teams working together in a distributed manner, privacy concerns, human autonomy, and cybersecurity concerns. Technology is now integrated into the business discipline and is here to stay leading to the need for a thorough understanding of how to address these risks and all the potential problems that could arise. With the advent of organized crime, such as hacks and denial-of-service attacks, all kinds of malicious actors are infiltrating the digital society in new and unique ways. Systems with poor design, implementation, and configurations are easily taken advantage of. When it comes to integrating business and technology, there needs to be approaches for assuring security against risks that can threaten both businesses and their digital platforms. Strategic Approaches to Digital Platform Security Assurance offers comprehensive design science research approaches to extensively examine risks in digital platforms and offer pragmatic solutions to these concerns and challenges. This book addresses significant problems when transforming an organization embracing API-based platform models, the use of DevOps teams, and issues in technological architectures. Each section will examine the status quo for business technologies, the current challenges, and core success factors and approaches that have been used. This book is ideal for security analysts, software engineers, computer engineers, executives, managers, IT consultants, business professionals, researchers, academicians, and students who want to gain insight and deeper knowledge of security in digital platforms and gain insight into the most important success factors and approaches utilized by businesses.

Application programming interfaces (API) act as the digital glue that links services, applications, and systems together to create compelling customer experiences. Using APIs you can create interfaces between back-end systems and applications that can help you bring new digital services to market, open revenue channels, and exceed customer expectations. IBM® API Connect is an API management solution from IBM that offers capabilities to create, run, manage, and secure APIs and microservices, thus managing the full lifecycle of APIs for both on-premises and cloud environments. This IBM RedpaperTM publication gives a broad overview of APIs and API Connect and covers key considerations for managing the lifecycle of APIs. This paper is targeted for owners of an API Connect based API, such as, C-level

executives, members of the business development teams, product managers, and technical evangelists. For practical scenarios using API Connect, refer to the companion IBM Redbooks® publication, Getting Started with IBM API Connect: Scenarios Guide, REDP-5350. DevOps Adoption Strategies: Principles, Processes, Tools, and TrendsEmbracing DevOps through effective culture, people, and processesPackt Publishing Ltd

Businesses are always looking for ways to improve the customer experience. They need to connect with existing and new customers in innovative ways and deliver experiences that never disappoint. They also require technology-strengthened business strategies with the flexibility to adapt to new opportunities quickly. To achieve this agile state, many are using cloud-based solutions to create personalized customer experiences and harness existing enterprise applications, data, and services for a competitive advantage. IBM® WebSphere® Application Server on cloud (WebSphere on cloud) helps businesses like yours take advantage of the cloud as a strategic environment to realize various benefits: Reduce costs by optimizing the entire application-related infrastructure. Create opportunities by rapidly creating and integrating cloud-based applications. Reap more value from existing applications by augmenting them with cloud services. Deliver compelling customer experiences across all channels. Speed time to market at a lower cost through rapid creation and deployment of APIs and microservices. Increase brand reach or drive new revenue by publishing APIs externally. Drive innovation by enhancing your Java applications with IBM Bluemix® services. Optimize existing workloads by lifting and shifting them unchanged to the cloud in just minutes, allowing you to take advantage of fast and flexible provisioning, and pay-as-you-go pricing. This IBM Redbooks® RedguideTM publication introduces the WebSphere on cloud capabilities and highlights key concepts that are associated with this IBM WebSphere offering. The guide discusses the business value offered by WebSphere on cloud, provides a high-level architectural view, and explains three common entry points (Create, Connect, and Optimize) to cloud. The guide also identifies the IBM products that play important roles in those entry points. It includes real-world examples of how customers are using WebSphere on cloud to resolve business challenges and enhance return on investment (ROI).

This book constitutes the proceedings of the 16th International Conference on Service-Oriented Computing, ICSOC 2018, held in Hangzhou, China, in November 2018. The 63 full papers presented together with 3 keynotes in this volume were carefully reviewed and selected from numerous submissions. The papers have been organized in the following topical sections: Microservices; Services and Processes; Service Trust and Security; Business Services and Processes; Edge + IoT Services; Social and Interactive Services; Recommendation; Service Analytics; Quality of Service; Service Engineering; Service Applications; Service Management.

Learn to design, implement, measure, and improve DevOps programs that are tailored to your organization. This concise guide assists leaders who are accountable for the rapid development of high-quality software applications. In DevOps for Digital Leaders, deep collective experience on both sides of the dev–ops divide informs the global thought leadership and penetrating insights of the authors, all three of whom are cross-portfolio DevOps leaders at CA Technologies. Aruna Ravichandran, Kieran Taylor, and Peter Waterhouse analyze the organizational benefits, costs, freedoms, and constraints of DevOps. They chart the coordinated strategy of organizational change, metrics, lean thinking, and investment that an enterprise must undertake to realize the full potential of DevOps and reach the sweet spot where accelerating code deployments drive increasing customer satisfaction, revenue, and profitability. Digital leaders are charged to bridge the dev–ops disconnect if their organizations are to survive and flourish in a business world increasingly differentiated by the degree to which dynamic application software development harmonizes with operational resilience and reliability. This short book applies the DevOps

perspective to the competitive challenge, faced by every high-performance IT organization today, of integrating and automating open source, cloud, and enterprise tools, processes, and techniques across the software development life cycle from requirements to release. What You Will Learn: Remove dependencies and constraints so that parallel practices can accelerate the development of defect-free software Automate continuous delivery across the software life cycle to eliminate release bottlenecks, manual labor waste, and technical debt accumulation Generate virtualized production-style testing of applications through real-time behavioral analytics Adopt agile practices so operations teams can support developer productivity with automated feedback, streamline infrastructure monitoring, spot and resolve operations issues before they impact production, and improve customer experience Identify the DevOps metrics appropriate to your organization and integrate DevOps with your existing best practices and investment Who This Book Is For: IT leaders in large companies and government agencies who have any level of responsibility for the rapid development of high-quality software applications. The secondary readership is members of development and operations teams, security professionals, and service managers.

Choose the best cloud solutions for your needs Cloud computing is a topic that technology pros need to know to stay ahead of the computing game. Cloud Computing For Dummies comes to the rescue of those still trying to sort out the many options in the world of cloud. Judith Hurwitz and her team of analysts share the cloud insights they earned by consulting with some of the world's largest companies. Peek inside to sort out topics like multi-cloud architecture, hybrid-cloud infrastructure, development in the cloud, and software as a service. Understand how the cloud can improve your business Explore cloud models including hybrid and multi-cloud environments See how infrastructure and software can be delivered as a service Discover best practices This edition is written for IT professionals, decision makers, and others who need general knowledge about cloud computing, how it works, and what options they have.

A journey toward containerized applications in production with a cloud-portable, secure, robust and highly available Docker Enterprise platform. Key Features Get an insider's view into the container movement and Docker Enterprise Manage the transformation associated with enterprise container adoption Walk through the enterprise container adoption journey Book Description While known mostly as the open source engine behind tens of millions of server nodes, Docker also offers commercially supported enterprise tooling known as the Docker Enterprise. This platform leverages the deep roots from Docker Engine - Community (formerly Docker CE) and Kubernetes, but adds support and tooling to efficiently operate a secure container platform at scale. With hundreds of enterprises on board, best practices and adoption patterns are emerging rapidly. These learning points can be used to inform adopters and help manage the enterprise transformation associated with enterprise container adoption. This book starts by explaining the case for Docker Enterprise, as well as its structure and reference architecture. From there, we progress through the PoC,pilot and production stages as a working model for adoption, evolving the platform's design and configuration for each stage and using detailed application examples along the way to clarify and demonstrate important concepts.The book concludes with Docker's impact on other emerging software technologies, such as Blockchain and Serverless computing. By the end of this book, you'll have a better understanding of what it takes to get your enterprise up and running with Docker Enterprise and beyond. What you will learn Understand why containers are important to an enterprise Understand the features and components of Docker Enterprise 2 Find out about the PoC, pilot, and production adoption phases Get to know the best practices for installing and operating Docker Enterprise Understand what is important for a Docker Enterprise in production Run Kubernetes on Docker Enterprise Who this book is for This book is for Software Architects, DevOps Engineers, Tech Ops, Docker professionals, or any IT professional working with Docker and containers who wants to move containerized workloads to production. This book discusses the

enterprise adoption of Docker and Kubernetes,therefore a basic understanding of Docker concepts will be helpful.
Build, deploy, test, and run cloud-native serverless applications using AWS Lambda and other popular AWS services Key Features Learn how to write, run, and deploy serverless applications in Amazon Web Services Make the most of AWS Lambda functions to build scalable and cost-efficient systems Build and deploy serverless applications with Amazon API Gateway and AWS Lambda functions Book Description Serverless computing is a way to run your code without having to provision or manage servers. Amazon Web Services provides serverless services that you can use to build and deploy cloud-native applications. Starting with the basics of AWS Lambda, this book takes you through combining Lambda with other services from AWS, such as Amazon API Gateway, Amazon DynamoDB, and Amazon Step Functions. You'll learn how to write, run, and test Lambda functions using examples in Node.js, Java, Python, and C# before you move on to developing and deploying serverless APIs efficiently using the Serverless Framework. In the concluding chapters, you'll discover tips and best practices for leveraging Serverless Framework to increase your development productivity. By the end of this book, you'll have become well-versed in building, securing, and running serverless applications using Amazon API Gateway and AWS Lambda without having to manage any servers. What you will learn Understand the core concepts of serverless computing in AWS Create your own AWS Lambda functions and build serverless APIs using Amazon API Gateway Explore best practices for developing serverless applications at scale using Serverless Framework Discover the DevOps patterns in a modern CI/CD pipeline with AWS CodePipeline Build serverless data processing jobs to extract, transform, and load data Enforce resource tagging policies with continuous compliance and AWS Config Create chatbots with natural language understanding to perform automated tasks Who this book is for This AWS book is for cloud architects and developers who want to build and deploy serverless applications using AWS Lambda. A basic understanding of AWS is required to get the most out of this book. Learn to use some of the most exciting and powerful tools to deliver world-class quality software with continuous delivery and DevOps About This Book Get to know the background of DevOps so you understand the collaboration between different aspects of an IT organization and a software developer Deploy top-quality software and ensure software maintenance and release management with this practical guide This course covers some of the most exciting technology available to DevOps engineers, and demonstrates multiple techniques for using them Real-world and realistic examples are provided to help you as you go about the implementation and adoption of continuous delivery and DevOps Who This Book Is For This course is for developers who want to understand how the infrastructure that builds today's enterprises works, and how to painlessly and regularly ship quality software. What You Will Learn Set up and familiarize yourself with all the tools you need to be efficient with DevOps Design an application that is suitable for continuous deployment systems with DevOps in mind Test the code using automated regression testing with Jenkins Selenium Managing the lifecycle of hosts, from creation to ongoing management using Puppet Razor Find out how to manage, use, and work with Code in the Git version management system See what traps, pitfalls, and hurdles to look out for as you implement continuous delivery and DevOps In Detail Harness the power of DevOps to boost your skill set and make your IT organization perform better. If you're keen to employ DevOps techniques to better your software development, this course contains all you need to overcome the day-to-day complications of managing complex infrastructures the DevOps way. Start with your first module – Practical DevOps - that encompasses the entire flow from code from testing to production. Get a solid ground-level knowledge of how to monitor code for any anomalies, perform code testing, and make sure the code is running smoothly through a series of real-world exercise, and develop practical skills by creating a sample enterprise Java application. In the second module, run through a series of tailored mini-tutorials designed to give you a complete understanding of every DevOps automation technique. Create real change in the way you deliver

your projects by utilizing some of the most commendable software available today. Go from your first steps of managing code in Git to configuration management in Puppet, monitoring using Sensu, and more. In the final module, get to grips with the continuous delivery techniques that will help you reduce the time and effort that goes into the delivery and support of software. This Learning Path combines some of the best that Packt has to offer in one complete, curated package. It includes content from the following Packt products: Practical DevOps by Joakim Verona DevOps Automation Cookbook by Michael Duffy Continuous Delivery and DevOps : A Quickstart Guide - Second Edition by Paul Swartout Style and approach This course is an easy to follow project based guide for all those with a keen interest in deploying world-class software using some of the most effective and remarkable technologies available.

The organization pursuing digital transformation must embrace new ways to use and deploy integration technologies, so they can move quickly in a manner appropriate to the goals of multicloud, decentralization, and microservices. The integration layer must transform to allow organizations to move boldly in building new customer experiences, rather than forcing models for architecture and development that pull away from maximizing the organization's productivity. Many organizations have started embracing agile application techniques, such as microservice architecture, and are now seeing the benefits of that shift. This approach complements and accelerates an enterprise's API strategy. Businesses should also seek to use this approach to modernize their existing integration and messaging infrastructure to achieve more effective ways to manage and operate their integration services in their private or public cloud. This IBM® Redbooks® publication explores the merits of what we refer to as agile integration; a container-based, decentralized, and microservice-aligned approach for integration solutions that meets the demands of agility, scalability, and resilience required by digital transformation. It also discusses how the IBM Cloud Pak for Integration marks a significant leap forward in integration technology by embracing both a cloud-native approach and container technology to achieve the goals of agile integration. The target audiences for this book are cloud integration architects, IT specialists, and application developers.

Learn, understand, and apply people-, process-, and technology-related practices to make OpenShift and DevOps adoption a success within your organization.

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