

# API Driven DevOps Strategies For Continuous Deployment

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**Continuous Integration, Delivery, and Deployment** - Sander Rossel  
2017-10-30

Getting started with the processes and the tools to continuously deliver high-quality software About This Book Incorporate popular development practices to prevent messy code Automate your build, integration, release, and deployment processes with Jenkins, Git, and Gulp?and learn how continuous integration (CI) can save you time and money Gain an end-to-end overview of Continuous Integration using different languages (JavaScript and C#) and tools (Gulp and Jenkins) Who This Book Is For This book is for developers who want to understand and implement Continuous Integration and Delivery in their daily work. A basic knowledge of at least JavaScript and HTML/CSS is required. Knowing C# and SQL will come in handy. Most programmers who have programmed in a (compiled) C-like language will be able to follow along. What You Will Learn Get to know all the aspects of Continuous Integration, Deployment, and Delivery Find out how Git can be used in a CI environment Set up browser tests using Karma and Selenium and unit tests using Jasmine Use Node.js, npm, and Gulp to automate tasks such as linting, testing, and minification Explore different Jenkins jobs to integrate with Node.js and C# projects Perform

Continuous Delivery and Deployment using Jenkins Test and deliver a web API In Detail The challenge faced by many teams while implementing Continuous Deployment is that it requires the use of many tools and processes that all work together. Learning and implementing all these tools (correctly) takes a lot of time and effort, leading people to wonder whether it's really worth it. This book sets up a project to show you the different steps, processes, and tools in Continuous Deployment and the actual problems they solve. We start by introducing Continuous Integration (CI), deployment, and delivery as well as providing an overview of the tools used in CI. You'll then create a web app and see how Git can be used in a CI environment. Moving on, you'll explore unit testing using Jasmine and browser testing using Karma and Selenium for your app. You'll also find out how to automate tasks using Gulp and Jenkins. Next, you'll get acquainted with database integration for different platforms, such as MongoDB and PostgreSQL. Finally, you'll set up different Jenkins jobs to integrate with Node.js and C# projects, and Jenkins pipelines to make branching easier. By the end of the book, you'll have implemented Continuous Delivery and deployment from scratch. Style and approach This practical book takes a step-by-step approach to

explaining all the concepts of Continuous Integration and delivery, and how it can help you deliver a high-quality product.

**Designing API-First Enterprise Architectures on Azure** - Subhajt Chatterjee 2021-08-24

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 cloud-based 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.

The DevOps Handbook - Gene Kim 2016-10-06

Increase profitability, elevate work culture, and exceed productivity goals through DevOps practices. More than ever, the effective management of technology is critical for business competitiveness. For decades, technology leaders have struggled to balance agility, reliability, and security. The consequences of failure have never been greater—whether it's the healthcare.gov debacle, cardholder data breaches, or missing the boat with Big Data in the cloud. And yet, high performers using DevOps principles, such as Google, Amazon, Facebook, Etsy, and Netflix, are routinely and reliably deploying code into production hundreds, or even thousands, of times per day. Following in the footsteps of The Phoenix Project, The DevOps Handbook shows leaders how to replicate these incredible outcomes, by showing how to integrate Product Management, Development, QA, IT Operations, and Information Security to elevate your company and win in the marketplace.

*DevOps for Networking* - Steven Armstrong 2016-12-30

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 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 containers

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 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.

*Transforming Your Business with AWS* - Philippe Abdoulaye 2021-10-06  
Expert guidance on how to use Amazon Web Services to supercharge your digital services business In *Transforming Your Business with AWS: Getting the Most Out of Using AWS to Modernize and Innovate Your Digital Services*, renowned international consultant and sought-after speaker Philippe Abdoulaye delivers a practical and accessible guide to using Amazon Web Services to modernize your business and the digital services you offer. This book provides you with a concrete action plan to build a team capable of creating world-class digital services and long-term competitive advantages. You'll discover what separates merely average digital service organizations from the truly outstanding, as well as how moving to the cloud will enable your business to deliver your services

faster, better, and more efficiently. This book also includes: A comprehensive overview of building industry-leading digital service delivery capabilities, including discussions of the development lifecycle, best practices, and AWS-based development infrastructure Explanations of how to implement a digital business transformation strategy An exploration of key roles like DevOps Continuous Delivery, Continuous Deployment, Continuous Integration, Automation, and DevSecOps Hands-on treatments of AWS application management tools, including Elastic Beanstalk, CodeDeploy, and CodePipeline Perfect for executives, managers, and other business leaders attempting to clarify and implement their organization's digital vision and strategy, *Transforming Your Business with AWS* is a must-read reference that answers the "why" and, most importantly, the "how," of digital transformation with Amazon Web Services.

**Cloud Computing and Services Science** - Víctor Méndez Muñoz  
2019-08-09

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 is 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.

GitOps - Anja Kammer 2021-07-15

GitOps has caused quite some fuss on Twitter and KubeCon, and still continues to do so. This book aggregates the essence of GitOps to help clear up the confusion. This book answers the following questions: What is GitOps? Why should I use GitOps? How does GitOps work? How to get started with GitOps on Kubernetes? What's the Future of GitOps? Early Praise "Software development nowadays requires to be fast and iterative, infrastructure needs to adapt and evolve with the same velocity. GitOps is fundamental for modern infrastructure implementation. With GitOps your source of truth is one or more Git repositories, your process is automated

and, most likely, your infrastructure is implemented in a declarative manner. For over four years I've been helping companies implementing GitOps. In this book, you find a great introduction to GitOps and how to apply it to real-world use cases with great hands-on examples." Vincenzo Ferme, Cloud Native Tech Lead at Kiratech "GitOps - Cloud-native Continuous Deployment is at the heart of modern Cloud development, automation is king and efficiency is what you get. This GitOps book is very much the same as GitOps development: nice and handy." Dr. Andreas Schönberger, Founder Lion5 GmbH "Informative and concise introduction to a neat CI/CD method built around Git." Dr. Michael Oberparleiter, Software consultant at TNG Technology Consulting

#### **Continuous API Management** - Mehdi Medjaoui 2018-11-14

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

#### **Mastering Jenkins** - Jonathan McAllister 2015-10-27

Configure and extend Jenkins to architect, build, and automate efficient software delivery pipelines About This Book Configure and horizontally scale a Jenkins installation to support a development organization of any size Implement Continuous Integration, Continuous Delivery, and

Continuous Deployment solutions in Jenkins A step-by-step guide to help you get the most out of the powerful automation orchestration platform that is Jenkins Who This Book Is For If you are a novice or intermediate-level Jenkins user who has used Jenkins before but are not familiar with architecting solutions and implementing it in your organization, then this is the book for you. A basic understanding of the core elements of Jenkins is required to make the best use of this book. What You Will Learn Create and manage various types of build jobs, and implement automation tasks to support a software project of any kind Get to grips with the automated testing architecture, and scalable automated testing techniques Facilitate the delivery of software across the SDLC by creating scalable automated deployment solutions Manage scalable automation pipelines in Jenkins using the latest build, test, and deployment strategies Implement a scalable master / slave build automation platform, which can support Windows, Mac OSX, and Linux software solutions Cover troubleshooting and advanced configuration techniques for Jenkins slave nodes Support a robust build and delivery system by implementing basic infrastructure as code solutions in configuration management tools such as Ansible In Detail With the software industry becoming more and more competitive, organizations are now integrating delivery automation and automated quality assurance practices into their business model. Jenkins represents a complete automation orchestration system, and can help converge once segregated groups into a cohesive product development and delivery team. By mastering the Jenkins platform and learning to architect and implement Continuous Integration, Continuous Delivery, and Continuous Deployment solutions, your organization can learn to outmanoeuvre and outpace the competition. This book will equip you with the best practices to implement advanced continuous delivery and deployment systems in Jenkins. The book begins with giving you high-level architectural fundamentals surrounding Jenkins and Continuous Integration. You will cover the different installation scenarios for Jenkins, and see how to install it as a service, as well as the advanced XML configurations. Then, you will proceed to learn more about the architecture and implementation of the Jenkins Master/Slave node system, followed by creating and managing

Jenkins build jobs effectively. Furthermore, you'll explore Jenkins as an automation orchestration system, followed by implementing advanced automated testing techniques. The final chapters describe in depth the common integrations to Jenkins from third-party tools such as Jira, Artifactory, Amazon EC2, and getting the most out of the Jenkins REST-based API. By the end of this book, you will have all the knowledge necessary to be the definitive resource for managing and implementing advanced Jenkins automation solutions for your organization. Style and approach This book is a step-by-step guide to architecting and implementing automated build solutions, automated testing practices, and automated delivery methodologies. The topics covered are based on industry-proven techniques, and are explained in a simple and easy to understand manner.

The DevOps 2.3 Toolkit - Viktor Farcic 2018-09-13

Learn from an expert on how to use Kubernetes, the most adopted container orchestration platform. About This Book Get a detailed, hands-on exploration of everything from the basic to the most advanced aspects of Kubernetes Explore the tools behind not only the official project but also the third-party add-ons Learn how to create a wide range of tools, including clusters, Role Bindings, and Ingress Resources with default backends, among many applicable, real-world creations Discover how to deploy and manage highly available and fault-tolerant applications at scale with zero downtime Who This Book Is For This book is for professionals experienced with Docker, looking to get a detailed overview from the basics to the advanced features of Kubernetes. What You Will Learn Let Viktor show you the wide range of features available in Kubernetes—from the basic to the most advanced features Learn how to use the tools not only from the official project but also from the wide range of third-party add-ons Understand how to create a pod, how to Scale Bids with Replica Sets, and how to install both Kubectl and Minikube Explore the meaning of terms such as container scheduler and Kubernetes Discover how to create a local Kubernetes cluster and what to do with it In Detail Building on The DevOps 2.0 Toolkit, The DevOps 2.1 Toolkit: Docker Swarm, and The DevOps 2.2 Toolkit: Self-Sufficient Docker

Clusters, Viktor Farcic brings his latest exploration of the DevOps Toolkit as he takes you on a journey to explore the features of Kubernetes. The DevOps 2.3 Toolkit: Kubernetes is a book in the series that helps you build a full DevOps Toolkit. This book in the series looks at Kubernetes, the tool designed to, among other roles, make it easier in the creation and deployment of highly available and fault-tolerant applications at scale, with zero downtime. Within this book, Viktor will cover a wide range of emerging topics, including what exactly Kubernetes is, how to use both first and third-party add-ons for projects, and how to get the skills to be able to call yourself a “Kubernetes ninja.” Work with Viktor and dive into the creation and exploration of Kubernetes with a series of hands-on guides. Style and approach Readers join Viktor Farcic as he continues his exploration of DevOps and begins to explore the opportunities presented by Kubernetes.

*DevOps for Networking* - Steven Armstrong 2016-10-28

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.

Pipeline as Code - Mohamed Labouardy 2021-11-23

Start thinking about your development pipeline as a mission-critical application. Discover techniques for implementing code-driven infrastructure and CI/CD workflows using Jenkins, Docker, Terraform, and cloud-native services. In Pipeline as Code, you will master: Building and deploying a Jenkins cluster from scratch Writing pipeline as code for cloud-native applications Automating the deployment of Dockerized and Serverless applications Containerizing applications with Docker and Kubernetes Deploying Jenkins on AWS, GCP and Azure Managing, securing and monitoring a Jenkins cluster in production Key principles for a successful DevOps culture Pipeline as Code is a practical guide to automating your development pipeline in a cloud-native, service-driven world. You'll use the latest infrastructure-as-code tools like Packer and Terraform to develop reliable CI/CD pipelines for numerous cloud-native

applications. Follow this book's insightful best practices, and you'll soon be delivering software that's quicker to market, faster to deploy, and with less last-minute production bugs. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology Treat your CI/CD pipeline like the real application it is. With the Pipeline as Code approach, you create a collection of scripts that replace the tedious web UI wrapped around most CI/CD systems. Code-driven pipelines are easy to use, modify, and maintain, and your entire CI pipeline becomes more efficient because you directly interact with core components like Jenkins, Terraform, and Docker. About the book In Pipeline as Code you'll learn to build reliable CI/CD pipelines for cloud-native applications. With Jenkins as the backbone, you'll programmatically control all the pieces of your pipeline via modern APIs. Hands-on examples include building CI/CD workflows for distributed Kubernetes applications, and serverless functions. By the time you're finished, you'll be able to swap manual UI-based adjustments with a fully automated approach! What's inside Build and deploy a Jenkins cluster on scale Write pipeline as code for cloud-native applications Automate the deployment of Dockerized and serverless applications Deploy Jenkins on AWS, GCP, and Azure Grasp key principles of a successful DevOps culture About the reader For developers familiar with Jenkins and Docker. Examples in Go. About the author Mohamed Labouardy is the CTO and co-founder of Crew.work, a Jenkins contributor, and a DevSecOps evangelist. Table of Contents PART 1 GETTING STARTED WITH JENKINS 1 What's CI/CD? 2 Pipeline as code with Jenkins PART 2 OPERATING A SELF-HEALING JENKINS CLUSTER 3 Defining Jenkins architecture 4 Baking machine images with Packer 5 Discovering Jenkins as code with Terraform 6 Deploying HA Jenkins on multiple cloud providers PART 3 HANDS-ON CI/CD PIPELINES 7 Defining a pipeline as code for microservices 8 Running automated tests with Jenkins 9 Building Docker images within a CI pipeline 10 Cloud-native applications on Docker Swarm 11 Dockerized microservices on K8s 12 Lambda-based serverless functions PART 4 MANAGING, SCALING, AND MONITORING JENKINS 13 Collecting continuous delivery metrics 14 Jenkins administration and best practices

## **Accelerate** - Nicole Forsgren PhD 2018-03-27

Winner of the Shingo Publication Award Accelerate your organization to win in the marketplace. How can we apply technology to drive business value? For years, we've been told that the performance of software delivery teams doesn't matter—that it can't provide a competitive advantage to our companies. Through four years of groundbreaking research to include data collected from the State of DevOps reports conducted with Puppet, Dr. Nicole Forsgren, Jez Humble, and Gene Kim set out to find a way to measure software delivery performance—and what drives it—using rigorous statistical methods. This book presents both the findings and the science behind that research, making the information accessible for readers to apply in their own organizations. Readers will discover how to measure the performance of their teams, and what capabilities they should invest in to drive higher performance. This book is ideal for management at every level.

## **DEVOPS USING SPRING CLOUD AND NETFLIX** - DHIRAJ KUMAR BARAIK

Chapter 1, Introduction to DevOps, will introduce you to the microservices architecture, cloud environment, etc. You will learn the difference between a microservice based application and a monolith application while also learning how to migrate to a microservices application. Chapter 2, Spring for DevOps & Microservices, will introduce you Spring Boot framework. You will learn how to effectively use it to create microservice application. We will cover such topics like creating REST API using Spring MVC annotations, providing API documentation using Swagger2, and exposing health checks and metrics using Spring Boot Actuator endpoints. Chapter 3, Spring Cloud Overview, will provide a short description of the main projects being a part of Spring Cloud. It will focus on describing the main patterns implemented by Spring Cloud and assigning them to the particular projects. Chapter 4, Service Discovery, will describe a service discovery pattern with Spring Cloud Netflix Eureka. You will learn how to run Eureka server in standalone mode and how to run multiple server instances with peer-to-peer replication. You will also learn how to enable discovery on the client side and register these clients in different zones.

Chapter 5, Distributed Configuration with Spring Cloud Config, will describe how use distributed configuration with Spring Cloud Config in your applications. You will learn how to enable different backend repositories of property sources and push change notifications using Spring Cloud Bus. We will compare discovery first bootstrap and config first bootstrap approaches to illustrate integration between discovery service and configuration server. Chapter 6, Communication Between Microservices, will describe the most important elements taking a part in an inter-service communication: HTTP clients and load balancers. You will learn how to use Spring RestTemplate, Ribbon, and Feign clients with or without service discovery. Chapter 7, Advanced Load Balancing and Circuit Breakers, will described more advanced topics related to inter-service communication between microservices. You will learn how to implement different load balancing algorithms with Ribbon client, enabling circuit breaker pattern using Hystrix and using Hystrix dashboard to monitor communication statistics. Chapter 8, Routing and Filtering with API Gateway, will compare two projects used as an API gateway and proxy for Spring Cloud applications: Spring Cloud Netflix Zuul and Spring Cloud Gateway. You will learn how to integrate them with service discovery and create simple and more advanced routing and filtering rules. Chapter 9, Distributed Logging and Tracing, will introduce some popular tools for collecting and analyzing logging and tracing information generated by microservices. You will learn how to use Spring Cloud Sleuth to append tracing information and correlating messages. We will run sample applications that integrates with Elastic Stack in order to sent there log messages, and Zipkin to collect traces. Chapter 10, Additional Configuration and Discovery Features, will introduce two popular products used for service discovery and distributed configuration: Consul and ZooKeeper. You will learn how to run these tools locally, and intergrate your Spring Cloud applications with them. Chapter 11, Message-Driven Microservices, will guide you how to provide asynchronous, message-driven communication between your microservices. You will learn how to integrate RabbitMQ and Apache Kafka message brokers with your Spring Cloud application to enable asynchronous one-to-one and

publish/subscribe communication styles. Chapter 12, Securing an API, will describe various ways of securing your microservices. We will implement a system consisting of all previously introduced elements, that communicates with each other over SSL. You will also learn how to use OAuth2 and JWT token to authorize requests coming to your API. Chapter 13, Testing Java Microservices, will describe different strategies of microservices testing. It will focus on showing consumer-driven contract tests, especially useful in microservice-based environment. You will learn how to use such frameworks like Hoverfly, Pact, Spring Cloud Contract, Gatling for implementing different types of automated tests. Chapter 14, Docker Support, will provide a short introduction to Docker. It will focus on describing most commonly used Docker commands, which are used for running and monitoring microservices in containerized environment. You will also learn how to build and run containers using popular continuous integration server - Jenkins, and deploy them on Kubernetes platform. Chapter 15, Spring Microservices on Cloud Platforms, will introduce two popular cloud platforms that support Java applications: Pivotal Cloud Foundry and Heroku. You will learn how to deploy, start, scale and monitor your applications on these platforms using command-line tools or web console.

**Oracle API Management 12c Implementation** - Luis Augusto Weir  
2015-09-30

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.

**A Practical Guide to Continuous Delivery** - Eberhard Wolff 2017-02-24

Using Continuous Delivery, you can bring software into production more rapidly, with greater reliability. A Practical Guide to Continuous Delivery is a 100% practical guide to building Continuous Delivery pipelines that automate rollouts, improve reproducibility, and dramatically reduce risk. Eberhard Wolff introduces a proven Continuous Delivery technology stack, including Docker, Chef, Vagrant, Jenkins, Graphite, the ELK stack, JBehave, and Gatling. He guides you through applying these technologies throughout build, continuous integration, load testing, acceptance testing, and monitoring. Wolff's start-to-finish example projects offer the basis for your own experimentation, pilot programs, and full-fledged deployments. A Practical Guide to Continuous Delivery is for everyone who wants to introduce Continuous Delivery, with or without DevOps. For managers, it introduces core processes, requirements, benefits, and technical consequences. Developers, administrators, and architects will gain essential skills for implementing and managing pipelines, and for integrating Continuous Delivery smoothly into software architectures and IT organizations. Understand the problems that Continuous Delivery solves, and how it solves them Establish an infrastructure for maximum software automation Leverage virtualization and Platform as a Service (PAAS) cloud solutions Implement build automation and continuous integration with Gradle, Maven, and Jenkins Perform static code reviews with SonarQube and repositories to store build artifacts Establish automated GUI and textual acceptance testing with behavior-driven design Ensure appropriate performance via capacity testing Check new features and problems with exploratory testing Minimize risk throughout automated production software rollouts Gather and analyze metrics and

logs with Elasticsearch, Logstash, Kibana (ELK), and Graphite Manage the introduction of Continuous Delivery into your enterprise Architect software to facilitate Continuous Delivery of new capabilities

*The Docker Book* - James Turnbull 2014-07-14

Updated for Docker Community Edition v18.09! Docker book designed for SysAdmins, SREs, Operations staff, Developers and DevOps who are interested in deploying the open source container service Docker. In this book, we'll walk you through installing, deploying, managing, and extending Docker. We're going to do that by first introducing you to the basics of Docker and its components. Then we'll start to use Docker to build containers and services to perform a variety of tasks. We're going to take you through the development lifecycle, from testing to production, and see where Docker fits in and how it can make your life easier. We'll make use of Docker to build test environments for new projects, demonstrate how to integrate Docker with continuous integration workflow, and then how to build application services and platforms. Finally, we'll show you how to use Docker's API and how to extend Docker yourself. We'll teach you how to: \* Install Docker. \* Take your first steps with a Docker container. \* Build Docker images. \* Manage and share Docker images. \* Run and manage more complex Docker containers. \* Deploy Docker containers as part of your testing pipeline. \* Build multi-container applications and environments. \* Learn about orchestration using Compose and Swarm for the orchestration of Docker containers and Consul for service discovery. \* Explore the Docker API. \* Getting Help and Extending Docker.

Team Topologies - Matthew Skelton 2019-09-17

In Team Topologies DevOps consultants Matthew Skelton and Manuel Pais share secrets of successful team patterns and interactions to help readers choose and evolve the right team patterns for their organization, making sure to keep the software healthy and optimize value streams. Team Topologies will help readers discover: • Team patterns used by successful organizations. • Common team patterns to avoid with modern software systems. • When and why to use different team patterns • How to evolve teams effectively. • How to split software and align to teams.

DevOps with OpenShift - Stefano Picozzi 2017-07-10

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.

**DevOps: Continuous Delivery, Integration, and Deployment with DevOps** - Sricharan Vadapalli 2018-03-13

Explore the high-in demand core DevOps strategies with powerful DevOps tools such as Ansible, Jenkins, and Chef. Key Features ● Get acquainted with methodologies and tools of the DevOps framework ● Perform continuous integration, delivery, deployment, and monitoring using DevOps tools ● Explore popular tools such as Git, Jenkins, Maven, Gerrit, Nexus, Selenium, and so on ● Embedded with assessments that will help you revise the concepts you have learned in this book. Book Description DevOps is the most widely used software engineering culture and practice that aim at software development and operation. Continuous integration is a cornerstone technique of DevOps that merges software code updates

from developers into a shared central mainline. This book takes a practical approach and covers the tools and strategies of DevOps. It starts with familiarizing you with DevOps framework and then shows how to perform continuous delivery, integration, and deployment with DevOps. You will explore DevOps process maturity frameworks and progression models with checklist templates for each phase of DevOps. You will also be familiar with agile terminology, methodology, and the benefits accrued by an organization by adopting it. You will also get acquainted with popular tools such as Git, Jenkins, Maven, Gerrit, Nexus, Selenium, and so on. You will learn configuration, automation, and the implementation of infrastructure automation (Infrastructure as Code) with tools such as Chef and Ansible. This book is ideal for engineers, architects, and developers, who wish to learn the core strategies of DevOps. What you will learn ● Get familiar with life cycle models, maturity states, progression and best practices of DevOps frameworks ● Learn to set up Jenkins and integrate it with Git ● Know how to build jobs and perform testing with Jenkins ● Implement infrastructure automation (Infrastructure as Code) with tools such as Chef and Ansible ● Understand continuous monitoring process with tools such as Splunk and Nagios ● Learn how Splunk improves the code quality. Who this book is for This book is for engineers, architects, and developers, who wish to learn the core strategies of DevOps.

*Cloud Native Microservices with Spring and Kubernetes* - Rajiv Srivastava 2021-07-03

Build and deploy scalable cloud native microservices using the Spring framework and Kubernetes. KEY FEATURES ● Complete coverage on how to design, build, run, and deploy modern cloud native microservices. ● Includes numerous sample code exercises on microservices, Spring and Kubernetes. ● Develop a stronghold on Kubernetes, Spring, and the microservices architecture. ● Complete guide of application containerization on Kubernetes containers. ● Coverage on managing modern applications and infrastructure using observability tools. DESCRIPTION The main objective of this book is to give an overview of cloud native microservices, their architecture, design patterns, best practices, real use cases and practical coverage of modern applications.

This book covers a strong understanding of the fundamentals of microservices, API first approach, Testing, observability, API Gateway, Service Mesh and Kubernetes alternatives of Spring Cloud. This book covers the implementation of various design patterns of developing cloud native microservices using Spring framework docker and Kubernetes libraries. It covers containerization concepts and hands-on lab exercises like how to build, run and manage microservices applications using Kubernetes. After reading this book, the readers will have a holistic understanding of building, running, and managing cloud native microservices applications on Kubernetes containers. WHAT YOU WILL LEARN ● Learn fundamentals of microservice and design patterns. ● Learn microservices development using Spring Boot and Kubernetes. ● Learn to develop reactive, event-driven, and batch microservices. ● Perform end-to-end microservices testing using Cucumber. ● Implement API gateway, authentication & authorization, load balancing, caching, rate limiting. ● Learn observability and monitoring techniques of microservices. WHO THIS BOOK IS FOR This book is for the Spring Developers, Microservice Developers, Cloud Engineers, DevOps Consultants, Technical Architect and Solution Architects, who have some familiarity with application development, Docker and Kubernetes containers. TABLE OF CONTENTS 1. Overview of Cloud Native microservices 2. Microservice design patterns 3. API first approach 4. Build microservices using the Spring Framework 5. Batch microservices 6. Build reactive and event-driven microservices 7. The API gateway, security, and distributed caching with Redis 8. Microservices testing and API mocking 9. Microservices observability 10. Containers and Kubernetes overview and architecture 11. Run microservices on Kubernetes 12. Service Mesh and Kubernetes alternatives of Spring Cloud

### **Building Micro-Frontends** - Luca Mezzalira 2021-11-17

What's the answer to today's increasingly complex web applications? Micro-frontends. Inspired by the microservices model, this approach lets you break interfaces into separate features managed by different teams of developers. With this practical guide, Luca Mezzalira shows software architects, tech leads, and software developers how to build and deliver

artifacts atomically rather than use a big bang deployment. You'll learn how micro-frontends enable your team to choose any library or framework. This gives your organization technical flexibility and allows you to hire and retain a broad spectrum of talent. Micro-frontends also support distributed or colocated teams more efficiently. Pick up this book and learn how to get started with this technological breakthrough right away. Explore available frontend development architectures Learn how microservice principles apply to frontend development Understand the four pillars for creating a successful micro-frontend architecture Examine the benefits and pitfalls of existing micro-frontend architectures Learn principles and best practices for creating successful automation strategies Discover patterns for integrating micro-frontend architectures using microservices or a monolith API layer

### **DevOps with OpenShift** - Stefano Picozzi 2017-07-10

Chapter 7. Application Management; Integrated Logging; Container Logs Are Transient; Aggregated Logging; Kibana; Some General Aggregated Kibana Queries; Simple Metrics; Resource Scheduling; Quotas; Quota Scopes; Quota Enforcement; Limit Ranges and Requests Versus Limits; Multiproject Quotas; Applications; Eviction and Pod Rescheduling; Overcommit; Auto Pod Scaling; Java-Based Application Monitoring and Management Using Jolokia; Summary; Afterword; What We Covered; Final Words; Appendix A. OpenShift and 12 Factor Apps; Codebase; Dependencies; Configuration; Backing Services.

### Azure DevOps Explained - Sjoukje Zaal 2020-12-11

Implement real-world DevOps and cloud deployment scenarios using Azure Repos, Azure Pipelines, and other Azure DevOps tools Key Features Improve your application development life cycle with Azure DevOps in a step-by-step manner Apply continuous integration and continuous deployment to reduce application downtime Work with real-world CI/CD scenarios curated by a team of renowned Microsoft MVPs and MCTs Book Description Developing applications for the cloud involves changing development methodologies and procedures. Continuous integration and continuous deployment (CI/CD) processes are a must today, but are often difficult to implement and adopt. Azure DevOps is a

Microsoft Azure cloud service that enhances your application development life cycle and enables DevOps capabilities. Starting with a comprehensive product overview, this book helps you to understand Azure DevOps and apply DevOps techniques to your development projects. You'll find out how to adopt DevOps techniques for your development processes by using built-in Azure DevOps tools. Throughout the course of this book, you'll also discover how to manage a project with the help of project management techniques such as Agile and Scrum, and then progress toward development aspects such as source code management, build pipelines, code testing and artifacts, release pipelines, and GitHub integration. As you learn how to implement DevOps practices, this book will also provide you with real-world examples and scenarios of DevOps adoption. By the end of this DevOps book, you will have learned how to adopt and implement Azure DevOps features in your real-world development processes. What you will learn

Get to grips with Azure DevOps  
Find out about project management with Azure Boards  
Understand source code management with Azure Repos  
Build and release pipelines  
Run quality tests in build pipelines  
Use artifacts and integrate Azure DevOps in the GitHub flow  
Discover real-world CI/CD scenarios with Azure DevOps  
Who this book is for  
This book is for developers, solutions architects, and DevOps engineers interested in getting started with cloud DevOps practices on Azure. Prior understanding of Azure architecture and services is necessary. Some knowledge of DevOps principles and techniques will be useful.

*DevOps for Digital Leaders* - Aruna Ravichandran 2016-11-09

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.

*Securing DevOps* - Julien Vehent 2018-08-20

Summary *Securing DevOps* explores how the techniques of DevOps and security should be applied together to make cloud services safer. This introductory book reviews the latest practices used in securing web applications and their infrastructure and teaches you techniques to integrate security directly into your product. You'll also learn the core concepts of DevOps, such as continuous integration, continuous delivery,

and infrastructure as a service. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the Technology An application running in the cloud can benefit from incredible efficiencies, but they come with unique security threats too. A DevOps team's highest priority is understanding those risks and hardening the system against them. About the Book Securing DevOps teaches you the essential techniques to secure your cloud services. Using compelling case studies, it shows you how to build security into automated testing, continuous delivery, and other core DevOps processes. This experience-rich book is filled with mission-critical strategies to protect web applications against attacks, deter fraud attempts, and make your services safer when operating at scale. You'll also learn to identify, assess, and secure the unique vulnerabilities posed by cloud deployments and automation tools commonly used in modern infrastructures. What's inside An approach to continuous security Implementing test-driven security in DevOps Security techniques for cloud services Watching for fraud and responding to incidents Security testing and risk assessment About the Reader Readers should be comfortable with Linux and standard DevOps practices like CI, CD, and unit testing. About the Author Julien Vehent is a security architect and DevOps advocate. He leads the Firefox Operations Security team at Mozilla, and is responsible for the security of Firefox's high-traffic cloud services and public websites. Table of Contents Securing DevOps PART 1 - Case study: applying layers of security to a simple DevOps pipeline Building a barebones DevOps pipeline Security layer 1: protecting web applications Security layer 2: protecting cloud infrastructures Security layer 3: securing communications Security layer 4: securing the delivery pipeline PART 2 - Watching for anomalies and protecting services against attacks Collecting and storing logs Analyzing logs for fraud and attacks Detecting intrusions The Caribbean breach: a case study in incident response PART 3 - Maturing DevOps security Assessing risks Testing security Continuous security

[Continuous Delivery in Java](#) - Daniel Bryant 2018-11-09

Continuous delivery adds enormous value to the business and the entire

software delivery lifecycle, but adopting this practice means mastering new skills typically outside of a developer's comfort zone. In this practical book, Daniel Bryant and Abraham Marín-Pérez provide guidance to help experienced Java developers master skills such as architectural design, automated quality assurance, and application packaging and deployment on a variety of platforms. Not only will you learn how to create a comprehensive build pipeline for continually delivering effective software, but you'll also explore how Java application architecture and deployment platforms have affected the way we rapidly and safely deliver new software to production environments. Get advice for beginning or completing your migration to continuous delivery Design architecture to enable the continuous delivery of Java applications Build application artifacts including fat JARs, virtual machine images, and operating system container (Docker) images Use continuous integration tooling like Jenkins, PMD, and find-sec-bugs to automate code quality checks Create a comprehensive build pipeline and design software to separate the deploy and release processes Explore why functional and system quality attribute testing is vital from development to delivery Learn how to effectively build and test applications locally and observe your system while it runs in production

[Continuous API Management](#) - Mehdi Medjaoui 2021-10-18

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. The second edition of this book 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 show software architects, program directors, and product owners how to maximize the value of their APIs by managing them as products through a continuous lifecycle. Learn which API decisions you need to govern Design, deploy, and manage APIs using an API-as-a-product (AaaS) approach Examine 10 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 lifecycle Delve into team roles needed to design, build, and maintain your APIs Learn how to manage APIs published by your organization

*Cloud-Native Continuous Integration and Delivery* - Onur Yılmaz  
2018-12-24

This course teaches concepts by deep-dive on-hand exercises. Throughout the course, you will learn the required toolset by using both on-premise, open-source, and hosted cloud solutions. You'll find checklists, best practices, and critical points mentioned throughout the lessons, making things more interesting. Key Features Explains in detail cloud-native continuous integration and delivery Demonstrates how to run a build in a CI/CD system Shows continuous delivery to Docker Registry and continuous deployment to Kubernetes Book Description Cloud-native software development is based on developing distributed applications focusing on speed, stability, and high availability. With this paradigm shift, software development has changed substantially and converted into a more agile environment where distributed teams develop distributed applications. In addition, the environment where the software is built, tested and deployed has changed from bare-metal servers to cloud systems. In this course, the new concepts of cloud-native Continuous Integration and Delivery are discussed in depth. Cloud-native tooling and services such as cloud providers (AWS, Google Cloud) containerization with Docker, container-orchestrators such as Kubernetes will be a part of this course to teach how to analyze and design modern software delivery pipelines. What you will learn Learn the basics of DevOps patterns for cloud-native architecture Learn the cloud-native way of designing CI/CD systems Create multi-stage builds and tests for Docker. Apply the best practices for Docker container images Experiment using GitLab CI/CD pipelines for continuous integration Build and test their applications on cloud Learn how to continuously deliver to Docker registry Learn how to continuously deploy to Kubernetes Experiment using GitLab CI/CD pipelines for Continuous Delivery Configure and deploy software to Kubernetes using Helm Who this book is for This book is ideal for

professionals interested in cloud-native software development. To benefit the most from this book, you must be familiar with developing, building, testing, integrating, and deploying containerized microservices into cloud systems.

**Cracking The Java Interviews (Java 8), 3rd Edition** - Munish Chandel  
2015-01-01

240+ Real Java Interview Questions on Core Java, Threads and Concurrency, Algorithms, Data Structures, Design Patterns, Spring, Hibernate, Puzzles & Sample Interview Questions for Investment Banks, HealthCare IT, Startups, Product and Service based companies. This book is ideal if you are preparing for Java Job Interview in Indian Market. Topics Covered in eBook Core Java (Collections, Concurrency & multi-threading, Lambda, Stream & Generics) Hibernate & Spring Problems Object Oriented Design Problems. Data structure and Algorithm problems This book tries to fill in the knowledge gaps for Java developers appearing for interviews in investment banking domain (RBS, BlackRock, UBS, Morgan Stanley, CitiGroup, Credit Suisse, Barclays Capital, Goldman, J.P. Morgan, Bank of America & Nomura, HSBC), product company (Oracle, Adobe, Markit), or service sector companies (Wipro, Infosys, HCL, Sapient, TCS). This book contains collection of Java related questions which are considered important for the interview preparation. A fair try has been given to address the Question, otherwise references has been provided for in depth study.

**AWS Certified Security Study Guide** - Marcello Zillo Neto 2021-01-27  
Get prepared for the AWS Certified Security Specialty certification with this excellent resource By earning the AWS Certified Security Specialty certification, IT professionals can gain valuable recognition as cloud security experts. The AWS Certified Security Study Guide: Specialty (SCS-C01) Exam helps cloud security practitioners prepare for success on the certification exam. It's also an excellent reference for professionals, covering security best practices and the implementation of security features for clients or employers. Architects and engineers with knowledge of cloud computing architectures will find significant value in this book, which offers guidance on primary security threats and defense

principles. Amazon Web Services security controls and tools are explained through real-world scenarios. These examples demonstrate how professionals can design, build, and operate secure cloud environments that run modern applications. The study guide serves as a primary source for those who are ready to apply their skills and seek certification. It addresses how cybersecurity can be improved using the AWS cloud and its native security services. Readers will benefit from detailed coverage of AWS Certified Security Specialty Exam topics. Covers all AWS Certified Security Specialty exam topics Explains AWS cybersecurity techniques and incident response Covers logging and monitoring using the Amazon cloud Examines infrastructure security Describes access management and data protection With a single study resource, you can learn how to enhance security through the automation, troubleshooting, and development integration capabilities available with cloud computing. You will also discover services and tools to develop security plans that work in sync with cloud adoption.

*Cybersecurity Threats, Malware Trends, and Strategies* - Tim Rains  
2023-01-25

Implement effective cybersecurity strategies to help you and your security team protect, detect, and respond to modern-day threats Purchase of the print or Kindle book includes a free eBook in PDF format. Key Features Protect your organization from cybersecurity threats with field-tested strategies Understand threats such as exploits, malware, internet-based threats, and governments Measure the effectiveness of your organization's current cybersecurity program against modern attackers' tactics Book Description Tim Rains is Microsoft's former Global Chief Security Advisor and Amazon Web Services' former Global Security Leader for Worldwide Public Sector. He has spent the last two decades advising private and public sector organizations all over the world on cybersecurity strategies. *Cybersecurity Threats, Malware Trends, and Strategies, Second Edition* builds upon the success of the first edition that has helped so many aspiring CISOs, and cybersecurity professionals understand and develop effective data-driven cybersecurity strategies for their organizations. In this edition, you'll examine long-term trends in

vulnerability disclosures and exploitation, regional differences in malware infections and the socio-economic factors that underpin them, and how ransomware evolved from an obscure threat to the most feared threat in cybersecurity. You'll also gain valuable insights into the roles that governments play in cybersecurity, including their role as threat actors, and how to mitigate government access to data. The book concludes with a deep dive into modern approaches to cybersecurity using the cloud. By the end of this book, you will have a better understanding of the threat landscape, how to recognize good Cyber Threat Intelligence, and how to measure the effectiveness of your organization's cybersecurity strategy. What you will learn Discover enterprise cybersecurity strategies and the ingredients critical to their success Improve vulnerability management by reducing risks and costs for your organization Mitigate internet-based threats such as drive-by download attacks and malware distribution sites Learn the roles that governments play in cybersecurity and how to mitigate government access to data Weigh the pros and cons of popular cybersecurity strategies such as Zero Trust, the Intrusion Kill Chain, and others Implement and then measure the outcome of a cybersecurity strategy Discover how the cloud can provide better security and compliance capabilities than on-premises IT environments Who this book is for This book is for anyone who is looking to implement or improve their organization's cybersecurity strategy. This includes Chief Information Security Officers (CISOs), Chief Security Officers (CSOs), compliance and audit professionals, security architects, and cybersecurity professionals. Basic knowledge of Information Technology (IT), software development principles, and cybersecurity concepts is assumed.

**Accelerating Modernization with Agile Integration** - Adeline SE Chun  
2020-07-01

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.

*Agile Application Lifecycle Management* - Bob Aiello 2016-06-01  
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.

*Cloud Native DevOps with Kubernetes* - John Arundel 2019-03-08  
Kubernetes is the operating system of the cloud native world, providing a reliable and scalable platform for running containerized workloads. In this friendly, pragmatic book, cloud experts John Arundel and Justin Domingus show you what Kubernetes can do—and what you can do with it. You’ll learn all about the Kubernetes ecosystem, and use battle-tested solutions to everyday problems. You’ll build, step by step, an example cloud native application and its supporting infrastructure, along with a development environment and continuous deployment pipeline that you can use for your own applications. Understand containers and Kubernetes from first principles; no experience necessary  
Run your own clusters or choose a managed Kubernetes service from Amazon, Google, and others  
Use Kubernetes to manage resource usage and the container lifecycle  
Optimize clusters for cost, performance, resilience, capacity, and scalability  
Learn the best tools for developing, testing, and deploying your applications  
Apply the latest industry practices for security, observability, and monitoring  
Adopt DevOps principles to help make your development teams lean, fast, and effective

**DevOps For Dummies** - Emily Freeman 2019-07-29  
Develop faster with DevOps  
DevOps embraces a culture of unifying the creation and distribution of technology in a way that allows for faster release cycles and more resource-efficient product updating. DevOps For Dummies provides a guidebook for those on the development or operations side in need of a primer on this way of working. Inside, DevOps



evangelist Emily Freeman provides a roadmap for adopting the management and technology tools, as well as the culture changes, needed to dive head-first into DevOps. Identify your organization's needs  
Create a DevOps framework  
Change your organizational structure  
Manage projects in the DevOps world  
DevOps For Dummies is essential reading for developers and operations professionals in the early stages of DevOps adoption.

Business Innovation and ICT Strategies - Sriram Birudavolu 2018-11-13

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.

Continuous Delivery - Jez Humble 2010-07-27

Winner of the 2011 Jolt Excellence Award! Getting software released to users is often a painful, risky, and time-consuming process. This

groundbreaking new book sets out the principles and technical practices that enable rapid, incremental delivery of high quality, valuable new functionality to users. Through automation of the build, deployment, and testing process, and improved collaboration between developers, testers, and operations, delivery teams can get changes released in a matter of hours— sometimes even minutes—no matter what the size of a project or the complexity of its code base. Jez Humble and David Farley begin by presenting the foundations of a rapid, reliable, low-risk delivery process. Next, they introduce the “deployment pipeline,” an automated process for managing all changes, from check-in to release. Finally, they discuss the “ecosystem” needed to support continuous delivery, from infrastructure, data and configuration management to governance. The authors introduce state-of-the-art techniques, including automated infrastructure management and data migration, and the use of virtualization. For each, they review key issues, identify best practices, and demonstrate how to mitigate risks. Coverage includes

- Automating all facets of building, integrating, testing, and deploying software
- Implementing deployment pipelines at team and organizational levels
- Improving collaboration between developers, testers, and operations
- Developing features incrementally on large and distributed teams
- Implementing an effective configuration management strategy
- Automating acceptance testing, from analysis to implementation
- Testing capacity and other non-functional requirements
- Implementing continuous deployment and zero-downtime releases
- Managing infrastructure, data, components and dependencies
- Navigating risk management, compliance, and auditing

Whether you're a developer, systems administrator, tester, or manager, this book will help your organization move from idea to release faster than ever—so you can deliver value to your business rapidly and reliably.

**Continuous Delivery 2.0** - Qiao Liang 2021-12-30

The agile transformation is an act of transforming an organization's form or nature gradually to one that can embrace and thrive in a flexible, collaborative, self-organizing, and fast-changing environment. It seems like most of the companies starting an agile transformation never reach the goal of agility, but there are those few that truly become agile and

reap incredible benefits by utilizing DevOps as well. This book introduces the theory and practice of the "double-flywheels model" of Continuous Delivery 2.0: Discovery Loop, which allows information technology (IT) organizations to help businesses figure out the most efficacious ways to develop. Additionally, it explores applications of the Verification Loop that allows IT organizations to deliver value quickly and safely with high quality. Along the way, the book provides an array of insights and case studies that dive into all the aspects of software delivery, and how to implement Continuous Delivery in the most economical way for long-run business development. Features Organization culture and software architecture Business requirement management Pipeline and tooling Branching and releasing strategy Automation strategy Configuration and artefacts management Deployment and production healthy The case studies at the end of the book—scenarios in which the author was personally involved—are explored in depth and meticulously detailed in order to represent typical agile transition scenarios that will benefit all readers.

[DevOps Tools for Java Developers](#) - Stephen Chin 2022-04-15

With the rise of DevOps, low-cost cloud computing, and container

technologies, the way Java developers approach development today has changed dramatically. This practical guide helps you take advantage of microservices, serverless, and cloud native technologies using the latest DevOps techniques to simplify your build process and create hyperproductive teams. Stephen Chin, Melissa McKay, Ixchel Ruiz, and Baruch Sadogursky from JFrog help you evaluate an array of options. The list includes source control with Git, build declaration with Maven and Gradle, CI/CD with CircleCI, package management with Artifactory, containerization with Docker and Kubernetes, and much more. Whether you're building applications with Jakarta EE, Spring Boot, Dropwizard, MicroProfile, Micronaut, or Quarkus, this comprehensive guide has you covered. Explore software lifecycle best practices Use DevSecOps methodologies to facilitate software development and delivery Understand the business value of DevSecOps best practices Manage and secure software dependencies Develop and deploy applications using containers and cloud native technologies Manage and administrate source control repositories and development processes Use automation to set up and administer build pipelines Identify common deployment patterns and antipatterns Maintain and monitor software after deployment