

Master Jenkins Ci For Devops And Developers Udemey

IBM® CICS® is a mixed language application server that runs on IBM Z®. Over the 50 years since CICS was introduced in 1969, enterprises have used the qualities of service (QoSs) that CICS provides to allow them to create high throughput and secure transactional applications that have powered their business. As the IT landscape has evolved, so has CICS to allow these applications to integrate with new platforms and still provide value to the rest of the business. Because of this capability, many businesses still rely on CICS to power their core applications. This IBM Redpaper publication focuses on modernizing these CICS applications, allowing them to integrate with cloud-native applications. This modernization can be achieved either by constructing application programming interfaces (APIs) that allow new cloud-native applications to connect to your existing assets, rewriting parts of your application in newer languages and hosting them back on CICS, or by using CICS capabilities to extend your applications to provide new capabilities and functions. The paper takes a traditional example application and shows you how it works. Then, the paper extends the example, rewrites portions of its functions, and enables its APIs. It also explains how CICS applications can use continuous integration (CI) and continuous delivery (CD) to deliver, test, and deploy code into CICS easily and with quality.

Pipeline as Code is a practical guide to automating your development pipeline in a cloud-native, service-driven world. Learn how to think about your development pipeline as a mission-critical application, with techniques for implementing code-driven infrastructure and CI/CD systems using Jenkins, Docker, Terraform, and cloud-native services. 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.

A step-by-step guide to implement Continuous Integration and Continuous Delivery (CI/CD) for Flutter, Ionic, Android, and Angular applications. KEY FEATURES ? This book covers all Declarative Pipelines that can be utilized in real-life scenarios with sample applications written in Android, Angular, Ionic Cordova, and Flutter. ? This book utilizes the YAML Pipeline feature of Jenkins. A step-by-step implementation of Continuous Practices of DevOps makes it easy to understand even for beginners. DESCRIPTION This book brings solid practical knowledge on how to create YAML pipelines using Jenkins for efficient and scalable CI/CD pipelines. It covers an introduction to various essential topics such as DevOps, DevOps History, Benefits of DevOps Culture, DevOps and Value Streams, DevOps Practices, different

types of pipelines such as Build Pipeline, Scripted Pipeline, Declarative Pipeline, YAML Pipelines, and Blue Ocean. This book provides an easy journey to readers in creating YAML pipelines for various application systems, including Android, AngularJS, Flutter, and Ionic Cordova. You will become a skilled developer by learning how to run Static Code Analysis using SonarQube or Lint tools, Unit testing, calculating code coverage, publishing unit tests and coverage reports, verifying the threshold of code coverage, creating build/package, and distributing packages across different environments. By the end of this book, you will be able to try out some of the best practices to implement DevOps using Jenkins and YAML.

WHAT YOU WILL LEARN ? Write successful YAML Pipeline codes for Continuous Integration and Continuous Delivery. ? Explore the working of CI/CD pipelines across Android, Angular, Ionic Cordova, and Flutter apps. ? Learn the importance of Continuous Code Inspection and Code Quality. ? Understand the importance of Continuous Integration and Continuous Delivery. ? Learn to publish Unit Tests and Code Coverage in Declarative Pipelines. ? Learn to deploy apps on Azure and distribute Mobile Apps to App Centers.

WHO THIS BOOK IS FOR This book is suitable for beginners, DevOps consultants, DevOps evangelists, DevOps engineers, technical specialists, technical architects, and Cloud experts. Some prior basic knowledge of application development and deployment, Cloud computing, and DevOps practices will be helpful.

TABLE OF CONTENTS

- 1.Introducing Pipelines
- 2.Basic Components of YAML Pipelines
- 3.Building CI/CD Pipelines with YAML for Flutter Applications
- 4.Building CI/CD Pipelines with YAML for Ionic Cordova Applications
- 5.Building CI/CD Pipelines with YAML for Android Apps
- 6.Building CI/CD Pipelines with YAML for Angular Applications
- 7.Pipeline Best Practices

"Jenkins is one of the most popular Continuous Integration servers on the market today. It was designed to maintain, secure, communicate, test, build, and improve the software development process. We begin by looking on different AWS services and how you can use them for Continuous Integration. We'll see how Ansible can help to deploy an entire system to AWS for an almost production-ready CI system in the cloud. We then customize and configure your Jenkins master automatically on boot-up with Groovy code in order to achieve the build process we want. This includes adding secrets to the credentials store, installing and configuring plugins, and setting some basic values within the Jenkins main configuration. Once we are able to interact with Gitlab, we will then configure a way to run Jenkins nodes on Kubernetes so that we can actually build our software. When everything looks good in our development environment, we will then see what an almost production-ready CI system in the cloud looks like, especially with regard to security aspects."--Resource description page.

Speed up the software delivery process and software productivity using the latest features of Jenkins Key Features Take advantage of a Continuous Integration and Continuous Delivery solution to speed up productivity and achieve faster

software delivery See all the new features introduced in Jenkins 2.x, such as Pipeline as code, Multibranch pipeline, Docker Plugin, and more Learn to implement Continuous Integration and Continuous Delivery by orchestrating multiple DevOps tools using Jenkins Book Description In past few years, agile software development has seen tremendous growth. There is a huge demand for software delivery solutions that are fast yet flexible to numerous amendments. As a result, Continuous Integration (CI) and Continuous Delivery (CD) methodologies are gaining popularity. This book starts off by explaining the concepts of CI and its significance in the Agile. Next, you'll learn how to configure and set up Jenkins in many different ways. The book exploits the concept of "pipeline as code" and various other features introduced in the Jenkins 2.x release to their full potential. We also talk in detail about the new Jenkins Blue Ocean interface and the features that help to quickly and easily create a CI pipeline. Then we dive into the various features offered by Jenkins one by one, exploiting them for CI and CD. Jenkins' core functionality and flexibility allows it to fit in a variety of environments and can help streamline the development process for all stakeholders. Next, you'll be introduced to CD and will learn how to achieve it using Jenkins. Through this book's wealth of best practices and real-world tips, you'll discover how easy it is to implement CI and CD using Jenkins. What you will learn Get to know some of the most popular ways to set up Jenkins See all the new features introduced in the latest Jenkins, such as pipeline as code, Multibranch pipeline, and more Manage users, projects, and permissions in Jenkins to ensure better security Leverage the power of plugins in Jenkins Learn how to create a CI pipeline using Jenkins Blue Ocean Create a distributed build farm using Docker and use it with Jenkins Implement CI and CD using Jenkins See the difference between CD and Continuous Deployment Understand the concepts of CI Who this book is for The book is for those with little or no previous experience with Agile or CI and CD. It's a good starting point for anyone new to this field who wants to leverage the benefits of CI and CD to increase productivity and reduce delivery time. It's ideal for Build and Release engineers, DevOps engineers, SCM (Software Configuration Management) engineers, developers, testers, and project managers. If you're already using Jenkins for CI, you can take your project to the next level—CD.

Understand various tools and practices for building a continuous integration and delivery pipeline effectively Key Features Get up and running with the patterns of continuous integration Learn Jenkins UI for developing plugins and build an effective Jenkins pipeline Automate CI/CD with command-line tools and scripts Book Description Hands-On Continuous Integration and Delivery starts with the fundamentals of continuous integration (CI) and continuous delivery (CD) and where it fits in the DevOps ecosystem. You will explore the importance of stakeholder collaboration as part of CI/CD. As you make your way through the chapters, you will get to grips with Jenkins UI, and learn to install Jenkins on different platforms, add plugins, and write freestyle scripts. Next, you will gain hands-on experience of developing plugins

with Jenkins UI, building the Jenkins 2.0 pipeline, and performing Docker integration. In the concluding chapters, you will install Travis CI and Circle CI and carry out scripting, logging, and debugging, helping you to acquire a broad knowledge of CI/CD with Travis CI and CircleCI. By the end of this book, you will have a detailed understanding of best practices for CI/CD systems and be able to implement them with confidence. What you will learn

- Install Jenkins on multiple operating systems
- Work with Jenkins freestyle scripts, pipeline syntax, and methodology
- Explore Travis CI build life cycle events and multiple build languages
- Master the Travis CI CLI (command-line interface) and automate tasks with the CLI
- Use CircleCI CLI jobs and work with pipelines
- Automate tasks using CircleCI CLI and learn to debug and troubleshoot
- Learn open source tooling such as Git and GitHub
- Install Docker and learn concepts in shell scripting

Who this book is for
Hands-On Continuous Integration and Delivery is for system administrators, DevOps engineers, and build and release engineers who want to understand the concept of CI and gain hands-on experience working with prominent tools in the CI ecosystem. Basic knowledge of software delivery is an added advantage.

Some companies think that adopting devops means bringing in specialists or a host of new tools. With this practical guide, you'll learn why devops is a professional and cultural movement that calls for change from inside your organization. Authors Ryn Daniels and Jennifer Davis provide several approaches for improving collaboration within teams, creating affinity among teams, promoting efficient tool usage in your company, and scaling up what works throughout your organization's inflection points. Devops stresses iterative efforts to break down information silos, monitor relationships, and repair misunderstandings that arise between and within teams in your organization. By applying the actionable strategies in this book, you can make sustainable changes in your environment regardless of your level within your organization. Explore the foundations of devops and learn the four pillars of effective devops

- Encourage collaboration to help individuals work together and build durable and long-lasting relationships
- Create affinity among teams while balancing differing goals or metrics
- Accelerate cultural direction by selecting tools and workflows that complement your organization
- Troubleshoot common problems and misunderstandings that can arise throughout the organizational lifecycle

Learn from case studies from organizations and individuals to help inform your own devops journey

Understand the benefits of DevOps and continuous delivery and see how they support the agile software development process

- Key Features
- Learn how DevOps can accelerate your entire software development life cycle
- Improve your organization's performance to ensure the smooth production of software and services
- Get hands-on experience in using efficient DevOps tools to better effect

Book Description DevOps is a practical field that focuses on delivering business value as efficiently as possible. DevOps encompasses all code workflows from testing environments to production

environments. It stresses cooperation between different roles, and how they can work together more closely, as the roots of the word imply—Development and Operations. Practical DevOps begins with a quick refresher on DevOps and continuous delivery and quickly moves on to show you how DevOps affects software architectures. You'll create a sample enterprise Java application that you'll continue to work with through the remaining chapters. Following this, you will explore various code storage and build server options. You will then learn how to test your code with a few tools and deploy your test successfully. In addition to this, you will also see how to monitor code for any anomalies and make sure that it runs as expected. Finally, you will discover how to handle logs and keep track of the issues that affect different processes. By the end of the book, you will be familiar with all the tools needed to deploy, integrate, and deliver efficiently with DevOps. What you will learn

- Understand how all deployment systems fit together to form a larger system
- Set up and familiarize yourself with all the tools you need to be efficient with DevOps
- Design an application suitable for continuous deployment systems with DevOps in mind
- Store and manage your code effectively using Git, Gerrit, Gitlab, and more
- Configure a job to build a sample CRUD application
- Test your code using automated regression testing with Jenkins Selenium
- Deploy your code using tools such as Puppet, Ansible, Palletops, Chef, and Vagrant

Who this book is for

If you're a developer or system administrator looking to take on larger responsibilities and understand how the infrastructure that builds today's enterprises works, this is the book for you. This book will also help you greatly if you're an operations worker who would like to better support developers. You do not need any previous knowledge of DevOps to understand the concepts in this book.

DevOps for Developers delivers a practical, thorough introduction to approaches, processes and tools to foster collaboration between software development and operations. Efforts of Agile software development often end at the transition phase from development to operations. This book covers the delivery of software, this means “the last mile”, with lean practices for shipping the software to production and making it available to the end users, together with the integration of operations with earlier project phases (elaboration, construction, transition). DevOps for Developers describes how to streamline the software delivery process and improve the cycle time (that is the time from inception to delivery). It will enable you to deliver software faster, in better quality and more aligned with individual requirements and basic conditions. And above all, work that is aligned with the “DevOps” approach makes even more fun! Provides patterns and toolchains to integrate software development and operations

Delivers an one-stop shop for kick-starting with DevOps

Provides guidance how to streamline the software delivery process

A step-by-step guide to understand Agile, Scrum, DevOps and Cloud Computing using Azure DevOps and Microsoft Azure Cloud Key featuresa- Learn how to do Continuous Planning in Azure DevOpsa- Learn the basics of Continuous Code Inspection and importance of

Code Quality- Learn how continuous integration can make a difference in the application life cycle- Learn how to create and configure Cloud resources using Platform as a Service Model- Learn how to perform continuous integration using the YAML script and continuous delivery pipeline using a release pipeline- Learn how to configure monitoring for Platform as a Service resources Description Agile development and implementation of Scrum methodologies require quick delivery of applications. Manual activities to manage application lifecycle management are no longer sufficient. This book will cover the DevOps practices implementation that helps to achieve speed for faster time to market using transformation in culture using people, processes, and tools. This book discusses the definition of Cloud computing and the benefits of Cloud Service Models. You will understand how Agile, DevOps practices implementation and Cloud computing can be utilized effectively to transform the culture of an organization. The main objective of this book is to demonstrate continuous practices of the DevOps culture using Microsoft Azure DevOps and Microsoft Azure Cloud. You will learn how to track features, user stories, backlogs, dashboards, and burndown charts. You will also learn how to create and manage repositories. This book gives an overview of Microsoft Azure Cloud and Azure App Services and a brief description of virtual machines and App Services. It summarizes Build and Release definitions available in Microsoft Azure DevOps and explains how to configure Pipelines and create end-to-end automation pipelines. What will you learn By the end of the book, you will get an overview of Agile, Scrum, DevOps and Continuous Practices such as Continuous Integration, Continuous Delivery, Cloud Computing, and Continuous Code Inspection. You will learn how all these practices can be utilized in real-life scenarios with the sample applications. This book will provide detailed insights into Microsoft Azure Cloud, especially Platform as a Service Model. A step-by-step implementation guide of continuous practices of DevOps will help beginners to get started with. Who this book is for DevOps Evangelists, DevOps Engineers, Technical Specialists, Technical Architects, and Cloud Experts Basic knowledge of application development and deployment, Cloud computing, and DevOps practices Beginners Table of contents 1. Overview of Agile and Scrum Framework 2. DevOps Culture and Continuous Practices 3. Overview of Cloud Computing and Containers 4. Azure Boards 5. Azure Repos 6. Microsoft Azure Cloud 7. Microsoft Azure Cloud-IaaS and PaaS 8. Azure Pipelines - Continuous Integration 9. Azure Pipelines - Continuous Delivery 10. Multi-stage Pipelines in Azure DevOps About the author Mitesh Soni is an avid learner with 10 years of experience in the IT industry. He is an SCJP, SCWCD, and VCP. He is IBM UrbanCode- and IBM Bluemix-certified and is also a Certified Jenkins Engineer. He loves DevOps and cloud computing, and he also has an interest in programming in Java. He finds design patterns fascinating and believes that a picture is worth a thousand words. He occasionally contributes to clean-clouds and tutorials world websites. He loves to play with his kids, fiddle with his camera, and take photographs at Indroda Park.

Over a half-million sold! The sequel, The Unicorn Project, is coming Nov 26 “Every person involved in a failed IT project should be forced to read this book.”—TIM O’REILLY, Founder & CEO of O’Reilly Media “The Phoenix Project is a must read for business and IT executives who are struggling with the growing complexity of IT.”—JIM WHITEHURST, President and CEO, Red Hat, Inc. Five years after this sleeper hit took on the world of IT and flipped it on its head, the 5th Anniversary Edition of The Phoenix Project continues to guide IT in the DevOps revolution. In this newly updated and expanded edition of the bestselling The Phoenix Project, co-author Gene Kim includes a new afterword and a deeper delve into the Three Ways as described in The DevOps Handbook. Bill, an IT manager at Parts Unlimited, has been tasked with taking on a project critical to the future of the business, code named Phoenix Project. But the project is massively over budget and behind schedule. The CEO demands Bill must fix the mess in ninety days or else Bill's entire department will be outsourced. With the help of a prospective board member and his mysterious philosophy of The Three Ways, Bill starts to see that IT work has more in common

with a manufacturing plant work than he ever imagined. With the clock ticking, Bill must organize work flow streamline interdepartmental communications, and effectively serve the other business functions at Parts Unlimited. In a fast-paced and entertaining style, three luminaries of the DevOps movement deliver a story that anyone who works in IT will recognize. Readers will not only learn how to improve their own IT organizations, they'll never view IT the same way again. "This book is a gripping read that captures brilliantly the dilemmas that face companies which depend on IT, and offers real-world solutions."—JEZ HUMBLE, Co-author of Continuous Delivery, Lean Enterprise, Accelerate, and The DevOps Handbook ———— "I'm delighted at how The Phoenix Project has reshaped so many conversations in technology. My goal in writing The Unicorn Project was to explore and reveal the necessary but invisible structures required to make developers (and all engineers) productive, and reveal the devastating effects of technical debt and complexity. I hope this book can create common ground for technology and business leaders to leave the past behind, and co-create a better future together."—Gene Kim, November 2019

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.

Simplify your DevOps roles with DevOps tools and techniques Key Features Learn to utilize business resources effectively to increase productivity and collaboration Leverage the ultimate open source DevOps tools to achieve continuous integration and continuous delivery (CI/CD) Ensure faster time-to-market by reducing overall lead time and deployment downtime Book Description The implementation of DevOps processes requires the efficient use of various tools, and the choice of these tools is crucial for the sustainability of projects and collaboration between development (Dev) and operations (Ops). This book presents the different patterns and tools that you can use to provision and configure an infrastructure in the cloud. You'll begin by understanding DevOps culture, the application of DevOps in cloud infrastructure, provisioning with Terraform, configuration with Ansible, and image building with Packer. You'll then be taken through source code versioning with Git and the construction of a DevOps CI/CD pipeline using Jenkins, GitLab CI, and Azure Pipelines. This DevOps handbook will also guide you in containerizing and deploying your applications with Docker and Kubernetes. You'll learn how to reduce deployment downtime with blue-green deployment and the feature flags technique, and study DevOps practices for open source projects. Finally, you'll grasp some best practices for reducing the overall application lead time to ensure faster time to market. By the end of this book, you'll have built a solid foundation in DevOps, and developed the skills necessary to enhance a traditional software delivery process using modern software delivery tools and techniques What you will learn Become well versed with DevOps culture and its practices Use Terraform and Packer for cloud infrastructure provisioning Implement Ansible for infrastructure configuration Use basic Git commands and understand the Git flow process Build a DevOps pipeline with Jenkins, Azure Pipelines, and GitLab CI Containerize your applications with Docker and Kubernetes Check application quality with SonarQube and Postman Protect DevOps processes and applications using DevSecOps tools Who this book is for If you are a developer or a system administrator interested in understanding continuous integration, continuous delivery, and containerization with DevOps tools and techniques, this book is for you.

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Help your organization join the DevOps revolution About This Book Helps you skill up your DevOps knowledge without a strong set of prerequisites Deliver continuously improved software by showcasing the most advanced tools and techniques Acquire a deeper insight into implementing DevOps in your organization and deliver results from day 1 Who This Book Is For This book is written for engineers and companies that want to learn the minimum set of required technologies and processes to be successful in the DevOps world. This book also targets system administrators, developers, and IT professionals who would like to employ DevOps techniques and best practices to manage IT infrastructures or would like to acquire the necessary skills needed to work in DevOps teams. What You Will Learn Master development best practices. Understand how the Agile Delivery Methodology helps you ensure accuracy and quality. Analyze branching strategies such as branch creation, merging, and synchronization. Learn to automate builds to deploy and deliver code faster and more often Explore testing frameworks and how to automate testing Learn to put specific metrics in place to measure ROI of DevOps and monitor logs and events in a system In Detail This book follows a unique approach to modern DevOps using cutting-edge tools and technologies such as Ansible, Kubernetes, and Google Cloud Platform. This book starts by explaining the organizational alignment that has to happen in every company that wants to implement DevOps in order to be effective, and the use of cloud datacenters in combination with the most advanced DevOps tools to get the best out of a small team of skilled engineers. It also delves into how to use Kubernetes to run your applications in Google Cloud Platform, minimizing the friction and hassle of maintaining a cluster but ensuring its high availability. By the end of this book, you will be able to realign teams in your company and create a Continuous Delivery pipeline with Kubernetes and Docker. With strong monitoring in place, you will also be able to react to adverse events in your system, minimizing downtime and improving the overall up-time and stability of your system. Style and approach This book takes a step-by-step practical approach to the implementation of DevOps. This book will teach you how to enable IT organizations to deliver faster and smarter through a unique approach using Code-Build-Test-Release-Configure-Monitor (CBTRCM).

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.

"This online DevOps course will teach you how to build sophisticated continuous integration and continuous delivery pipelines using Jenkins and many of its plugins. Especially the pipeline plugins. This course is designed to teach you the ins and outs of Jenkins and setting up DevOps pipelines, even if you have little to no experience with it, to help implement these DevOps practices which will streamline your development processes. Master Jenkins and pipeline plugins. Get familiar with advanced DevOps techniques and take your DevOps career

to the next level. While there are plenty of DevOps courses that focus on generic continuous integration and continuous delivery practices - it's hard to find a comprehensive course like this one, which focuses on using some of the most useful plugins in the Jenkins ecosystem. This course is designed for all levels of DevOps practitioners who want to improve their skills, implement automation in their environments, and continue to be in great demand as DevOps engineers. "--Resource description page.

Scale and maintain outstanding performance in your AWS-based infrastructure using DevOps principles Key Features Implement continuous integration and continuous deployment pipelines on AWS Gain insight from an expert who has worked with Silicon Valley's most high-profile companies Implement DevOps principles to take full advantage of the AWS stack and services Book Description The DevOps movement has transformed the way modern tech companies work. Amazon Web Services (AWS), which has been at the forefront of the cloud computing revolution, has also been a key contributor to the DevOps movement, creating a huge range of managed services that help you implement DevOps principles. Effective DevOps with AWS, Second Edition will help you to understand how the most successful tech start-ups launch and scale their services on AWS, and will teach you how you can do the same. This book explains how to treat infrastructure as code, meaning you can bring resources online and offline as easily as you control your software. You will also build a continuous integration and continuous deployment pipeline to keep your app up to date. Once you have gotten to grips with all this, we'll move on to how to scale your applications to offer maximum performance to users even when traffic spikes, by using the latest technologies, such as containers. In addition to this, you'll get insights into monitoring and alerting, so you can make sure your users have the best experience when using your service. In the concluding chapters, we'll cover inbuilt AWS tools such as CodeDeploy and CloudFormation, which are used by many AWS administrators to perform DevOps. By the end of this book, you'll have learned how to ensure the security of your platform and data, using the latest and most prominent AWS tools. What you will learn Implement automatic AWS instance provisioning using CloudFormation Deploy your application on a provisioned infrastructure with Ansible Manage infrastructure using Terraform Build and deploy a CI/CD pipeline with Automated Testing on AWS Understand the container journey for a CI/CD pipeline using AWS ECS Monitor and secure your AWS environment Who this book is for Effective DevOps with AWS is for you if you are a developer, DevOps engineer, or you work in a team which wants to build and use AWS for software infrastructure. Basic computer science knowledge 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.

This book is all about the introduction to the CI/CD pipeline using Jenkins. I have seen many developers and small IT firms who still rely on manual deployments and code merging which many times turns into a disaster. You have to be careful with environment variables, database connections, etc while doing deployments and especially mission-critical production deployments. I wrote this book with my experience to convert a Laravel project manual deployment to completely automatized via Jenkins. After reading this book you will be able to do all your future Laravel deployments via the power of CI/CD.

DevOpsCI/CD with Jenkins Pipelines, Maven Gradle

Unleash the combination of Docker and Jenkins in order to enhance the DevOps workflow About This Book Build reliable and secure applications using Docker containers. Create a complete Continuous Delivery pipeline using Docker, Jenkins, and Ansible. Deliver your applications directly on the Docker Swarm cluster. Create more complex solutions using multi-containers and database migrations. Who This Book Is For This book is intended to provide a full overview of deep learning. From the beginner in deep learning and artificial intelligence to the data scientist who wants to become familiar with Theano and its supporting libraries, or have an extended understanding of deep neural nets. Some basic skills in Python programming and computer science will help, as well as skills in elementary algebra and calculus. What You Will Learn Get to grips with docker fundamentals and how to dockerize an application for the Continuous Delivery process Configure Jenkins and scale it using Docker-based agents Understand the principles and the technical aspects of a successful Continuous Delivery pipeline Create a complete Continuous Delivery process using modern tools: Docker, Jenkins, and Ansible Write acceptance tests using Cucumber and run them in the Docker ecosystem using Jenkins Create multi-container applications using Docker Compose Managing database changes inside the Continuous Delivery process and understand effective frameworks such as Cucumber and Flyweight Build clustering applications with Jenkins using Docker Swarm Publish a built Docker image to a Docker Registry and deploy cycles of Jenkins pipelines using community best practices In Detail The combination of Docker and Jenkins improves your Continuous Delivery pipeline using fewer resources. It also helps you scale up your builds, automate tasks and speed up Jenkins performance with the benefits of Docker containerization. This book will explain the advantages of combining Jenkins and Docker to improve the continuous integration and delivery process of app development. It will start with setting up a Docker server and configuring Jenkins on it. It will then provide steps to build

applications on Docker files and integrate them with Jenkins using continuous delivery processes such as continuous integration, automated acceptance testing, and configuration management. Moving on you will learn how to ensure quick application deployment with Docker containers along with scaling Jenkins using Docker Swarm. Next, you will get to know how to deploy applications using Docker images and testing them with Jenkins. By the end of the book, you will be enhancing the DevOps workflow by integrating the functionalities of Docker and Jenkins. Style and approach The book is aimed at DevOps Engineers, developers and IT Operations who want to enhance the DevOps culture using Docker and Jenkins.

Harness the power of DevOps to boost your skill set and make your IT organization perform better 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 Improve your organization's performance to ensure smooth production of software and services Deploy top-quality software and ensure software maintenance and release management with this practical guide Who This Book Is For This book is aimed at developers and system administrators who wish to take on larger responsibilities and understand how the infrastructure that builds today's enterprises works. This book is also great for operations personnel who would like to better support developers. You do not need to have any previous knowledge of DevOps. What You Will Learn Appreciate the merits of DevOps and continuous delivery and see how DevOps supports the agile process Understand how all the systems fit together to form a larger whole 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 Store and manage your code effectively using different options such as Git, Gerrit, and Gitlab Configure a job to build a sample CRUD application Test the code using automated regression testing with Jenkins Selenium Deploy your code using tools such as Puppet, Ansible, Palletops, Chef, and Vagrant Monitor the health of your code with Nagios, Munin, and Graphite Explore the workings of Trac—a tool used for issue tracking In Detail DevOps is a practical field that focuses on delivering business value as efficiently as possible. DevOps encompasses all the flows from code through testing environments to production environments. It stresses the cooperation between different roles, and how they can work together more closely, as the roots of the word imply—Development and Operations. After a quick refresher to DevOps and continuous delivery, we quickly move on to looking at how DevOps affects architecture. You'll create a sample enterprise Java application that you'll continue to work with through the remaining chapters. Following this, we explore various code storage and build server options. You will then learn how to perform code testing with a few tools and deploy your test successfully. Next, you will learn how to monitor code for any anomalies and make sure it's running properly. Finally, you will discover how to handle logs and keep track of the issues that affect processes Style and approach This book is primarily a technical guide to DevOps with practical examples suitable for people who like to learn by implementing concrete working code. It starts out with background information and gradually delves deeper into technical subjects. 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

An exploration of continuous deployment to a Kubernetes cluster, using a wide range of Kubernetes platforms with instructions on how to develop a pipeline on a few of the most commonly used CI/CD platforms. Key Features The fifth book of DevOps expert Viktor Farcic's bestselling DevOps Toolkit series, with a discussion of the difference between continuous delivery vs. continuous deployment, and which is best for the user Guides readers through the continuous deployment process using Jenkins in a Kubernetes cluster Provides an overview of the best practices for building, testing, and deploying applications through fully automated pipelines. Book Description Building on The DevOps 2.3 Toolkit: Kubernetes, Viktor Farcic brings his latest exploration of the Docker technology as he records his journey to continuously deploying applications with Jenkins into a Kubernetes cluster. The DevOps 2.4 Toolkit: Continuously Deploying Applications with Jenkins to a Kubernetes Cluster is the latest book in Viktor Farcic's series that helps you build a full DevOps Toolkit. This book guides readers through the process of building, testing, and deploying applications through fully automated pipelines. Within this book, Viktor will cover a wide-range of emerging topics, including an exploration of continuous delivery and deployment in Kubernetes using Jenkins. It also shows readers how to perform continuous integration inside these clusters, and discusses the distribution of Kubernetes applications, as well as installing and setting up Jenkins. Work with Viktor and dive into the creation of self-adaptive and self-healing systems within Docker. What you will learn Gain an understanding of continuous deployment Learn how to build, test, and deploy applications into Kubernetes Execute continuous integration inside containers Who this book is for Readers with an intermediate level understanding of Kubernetes and hands-on experience. Scale gracefully and maintain outstanding performance with your AWS-based infrastructure using DevOps principles About This Book Implement DevOps principles to take full advantage of the AWS stack and services Take expert look at solving problems faced by real

developers and operation teams and learn to overcome them Learn from expert insights of the author who has worked with Silicon Valley's most high-profile companies Who This Book Is For This book is for developers, DevOps engineers and teams who want to build and use AWS for their software infrastructure. Basic computer science knowledge is required for this book. What You Will Learn Find out what it means to practice DevOps and what its principles are Build repeatable infrastructures using templates and configuration management Deploy multiple times a day by implementing continuous integration and continuous deployment pipelines Use the latest technologies, including containers and serverless computing, to scale your infrastructure Collect metrics and logs and implement an alerting strategy Make your system robust and secure In Detail The DevOps movement has transformed the way modern tech companies work. AWS which has been on the forefront of the Cloud computing revolution has also been a key contributor of this DevOps movement creating a huge range of managed services that help you implement the DevOps principles. In this book, you'll see how the most successful tech start-ups launch and scale their services on AWS and how you can too. Written by a lead member of Medium's DevOps team, this book explains how to treat infrastructure as code, meaning you can bring resources online and offline as necessary with the code as easily as you control your software. You will also build a continuous integration and continuous deployment pipeline to keep your app up to date. You'll find out how to scale your applications to offer maximum performance to users anywhere in the world, even when traffic spikes with the latest technologies, such as containers and serverless computing. You will also take a deep dive into monitoring and alerting to make sure your users have the best experience when using your service. Finally, you'll get to grips with ensuring the security of your platform and data. Style and approach This is a practical, hands-on, comprehensive guide to AWS, helping readers understand AWS in a step by step manner.

Viktor Farcic's latest book, *The DevOps 2.1 Toolkit: Docker Swarm*, shows you how to successfully integrate Docker Swarm into your DevOps toolset. About This Book Expand your DevOps Toolkit with the DevOps thought leader, Viktor Farcic Build, test, deploy, and monitor services inside Docker Swarm clusters Translate your understanding to different hosting providers like AWS, Azure, and DigitalOcean Go beyond simple deployment to explore how to create a continuous deployment process Extend the deep understanding you gained from Viktor's *DevOps 2.0 Toolkit* book Who This Book Is For This book is for professionals interested in the full microservices life cycle combined with continuous deployment and containers. Target audience could be architects who want to know how to design their systems around microservices. It could be DevOps wanting to know how to apply modern configuration management practices and continuously deploy applications packed in containers. It is for developers who would like to take the process back into their hands as well as for managers who would like to gain a better understanding of the process used to deliver software from the beginning to the end. This book is for everyone wanting to know more about the software development life cycle starting from requirements and design, through the development and testing all the way until deployment and post-deployment phases. We'll create the processes taking into account the best practices developed by and for some of the biggest companies. What You Will Learn Learn all aspects of Docker Swarm from building, testing, deploying, and monitoring services inside Docker Swarm clusters, available since Docker 1.12. Master the deeper logic of DevOps with Viktor, so that you can successfully apply that logic across any specific set of tools you're working with. Translate a deep understanding to different hosting providers like AWS, Azure, DigitalOcean, among others. You'll go beyond simple deployment: you will explore with Viktor how to create a continuous deployment process. Accomplish zero-downtime deployments, and what to do in case of a failover. Know how to run services at scale, how to monitor the systems, and how to make it heal itself. In Detail Viktor Farcic's latest book, *The DevOps 2.1 Toolkit: Docker Swarm*, takes you deeper into one of the major subjects of his international best seller, *The DevOps 2.0 Toolkit*, and shows you how to successfully integrate

Docker Swarm into your DevOps toolset. Viktor shares with you his expert knowledge in all aspects of building, testing, deploying, and monitoring services inside Docker Swarm clusters. You'll go through all the tools required for running a cluster. You'll travel through the whole process with clusters running locally on a laptop. Once you're confident with that outcome, Viktor shows you how to translate your experience to different hosting providers like AWS, Azure, and DigitalOcean. Viktor has updated his DevOps 2.0 framework in this book to use the latest and greatest features and techniques introduced in Docker. We'll go through many practices and even more tools. While there will be a lot of theory, this is a hands-on book. You won't be able to complete it by reading it on the metro on your way to work. You'll have to read this book while in front of the computer and get your hands dirty. Style and approach We'll go through many practices and even more tools. While there will be a lot of theory, this is a hands-on book. You'll have to read this book while in front of the computer and get your hands dirty. The goal is not to master one particular set of tools, but to learn the logic behind them so that you can apply it to your job in various contexts.

Achieve the Continuous Integration and Continuous Delivery of your web applications with ease About This Book Overcome the challenges of implementing DevOps for web applications, familiarize yourself with diverse third-party modules, and learn how to integrate them with bespoke code to efficiently complete tasks Understand how to deploy web applications for a variety of Cloud platforms such as Amazon EC2, AWS Elastic Beanstalk, Microsoft Azure, Azure Web Apps, and Docker Container Understand how to monitor applications deployed in Amazon EC2, AWS Elastic Beanstalk, Microsoft Azure, Azure Web Apps using Nagios, New Relic, Microsoft Azure, and AWS default monitoring features Who This Book Is For If you are a system admin or application and web application developer with a basic knowledge of programming and want to get hands-on with tools such as Jenkins 2 and Chef, and Cloud platforms such as AWS and Microsoft Azure, Docker, New Relic, Nagios, and their modules to host, deploy, monitor, and manage their web applications, then this book is for you. What You Will Learn Grasp Continuous Integration for a JEE application—create and configure a build job for a Java application with Maven and with Jenkins 2.0 Create built-in delivery pipelines of Jenkins 2 and build a pipeline configuration for end-to-end automation to manage the lifecycle of Continuous Integration Get to know all about configuration management using Chef to create a runtime environment Perform instance provisioning in AWS and Microsoft Azure and manage virtual machines on different cloud platforms—install Knife plugins for Amazon EC2 and Microsoft Azure Deploy an application in Amazon EC2, AWS Elastic Beanstalk, Microsoft Azure Web Apps, and a Docker container Monitor infrastructure, application servers, web servers, and applications with the use of open source monitoring solutions and New Relic Orchestrate multiple build jobs to achieve application deployment automation—create parameterized build jobs for end-to-end automation In Detail The DevOps culture is growing at a massive rate, as many organizations are adopting it. However, implementing it for web applications is one of the biggest challenges experienced by many developers and admins, which this book will help you overcome using various tools, such as Chef, Docker, and Jenkins. On the basis of the functionality of these tools, the book is divided into three parts. The first part shows you how to use Jenkins 2.0 for Continuous Integration of a sample JEE application. The second part explains the Chef configuration management tool, and provides an overview of Docker containers, resource provisioning in cloud environments using Chef, and Configuration Management in a cloud environment. The third part explores Continuous Delivery and Continuous Deployment in AWS, Microsoft Azure, and Docker, all using Jenkins 2.0. This book combines the skills of both web application deployment and system configuration as each chapter contains one or more practical hands-on projects. You will be exposed to real-world project scenarios that are progressively presented from easy to complex solutions. We will teach you concepts such as hosting web applications, configuring a runtime environment, monitoring and hosting on various cloud platforms, and managing them. This book will show you how to essentially host and

manage web applications along with Continuous Integration, Cloud Computing, Configuration Management, Continuous Monitoring, Continuous Delivery, and Deployment. Style and approach This is a learning guide for those who have a basic knowledge of application deployment, configuration management tools, and Cloud computing, and are eager to leverage it to implement DevOps for web applications using end-to-end automation and orchestration.

A beginner's guide to implementing Continuous Integration and Continuous Delivery using Jenkins About This Book Speed up and increase software productivity and software delivery using Jenkins Automate your build, integration, release, and deployment processes with Jenkins—and learn how continuous integration (CI) can save you time and money Explore the power of continuous delivery using Jenkins through powerful real-life examples Who This Book Is For This book is for anyone who wants to exploit the power of Jenkins. This book serves a great starting point for those who are in the field DevOps and would like to leverage the benefits of CI and continuous delivery in order to increase productivity and reduce delivery time. What You Will Learn Take advantage of a continuous delivery solution to achieve faster software delivery Speed up productivity using a continuous Integration solution through Jenkins Understand the concepts of CI and continuous delivery Orchestrate many DevOps tools using Jenkins to automate builds, releases, deployment, and testing Explore the various features of Jenkins that make DevOps activities a piece of cake Configure multiple build machines in Jenkins to maintain load balancing Manage users, projects, and permissions in Jenkins to ensure better security Leverage the power of plugins in Jenkins In Detail In past few years, Agile software development has seen tremendous growth across the world. There is huge demand for software delivery solutions that are fast yet flexible to frequent amendments. As a result, CI and continuous delivery methodologies are gaining popularity. Jenkins' core functionality and flexibility allows it to fit in a variety of environments and can help streamline the development process for all stakeholders. This book starts off by explaining the concepts of CI and its significance in the Agile world with a whole chapter dedicated to it. Next, you'll learn to configure and set up Jenkins. You'll gain a foothold in implementing CI and continuous delivery methods. We dive into the various features offered by Jenkins one by one exploiting them for CI. After that, you'll find out how to use the built-in pipeline feature of Jenkins. You'll see how to integrate Jenkins with code analysis tools and test automation tools in order to achieve continuous delivery. Next, you'll be introduced to continuous deployment and learn to achieve it using Jenkins. Through this book's wealth of best practices and real-world tips, you'll discover how easy it is to implement a CI service with Jenkins. Style and approach This is a step-by-step guide to setting up a CI and continuous delivery system loaded with hands-on examples

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.

Get hands-on recipes to automate and manage Linux containers with the Docker 1.6 environment and jump-start your Puppet development About This Book Successfully deploy DevOps with proven solutions and recipes Automate your infrastructure with Puppet and combine powerful DevOps methods Deploy and manage highly scalable applications using Kubernetes streamline the way you manage your applications Who This Book Is For This Learning Path is for developers, system administrators, and DevOps engineers who want to use Puppet, Docker, and Kubernetes in their development, QA, or production environments. This Learning Path assumes experience with Linux administration and requires some experience with command-line usage and basic text file editing. What You Will Learn Discover how to build high availability Kubernetes clusters Deal with inherent issues with container virtualization and container concepts Create services with Docker to enable the swift development and deployment of applications Make optimum use of Docker in a testing environment Create efficient manifests to streamline your deployments Automate Puppet master deployment using Git hooks, r10k, and PuppetDB In Detail With so many IT management and DevOps tools on the market, both open source and commercial, it's difficult to know where to start. DevOps is incredibly powerful when implemented correctly, and here's how to get it done. This Learning Path covers three broad areas: Puppet, Docker, and Kubernetes. This Learning Path is a large resource of recipes to ease your daily DevOps tasks. We begin with recipes that help you develop a complete and expert understanding of Puppet's latest and most advanced features. Then we provide recipes that help you efficiently work with the Docker environment. Finally, we show you how to better manage containers in different scenarios in production using Kubernetes. This course is based on these books: Puppet Cookbook, Third Edition Docker Cookbook Kubernetes Cookbook Style and approach This easy-to-follow tutorial-style guide teaches you precisely how to configure complex systems in Puppet and manage your containers using Kubernetes.

Automating the Continuous Deployment Pipeline with Containerized Microservices About This Book* First principles of devops, Ansible, Docker, Kubernetes, microservices* Architect your software in a better and more efficient way with microservices packed as immutable containers* Practical guide describing an extremely modern and advanced devops toolchain that can be improved continuously Who This Book Is For If you are an intermediate-level developer who wants to master the whole microservices development and deployment lifecycle using some of the latest and greatest practices and tools, this is the book for you. Familiarity with the basics of Devops and Continuous Deployment will be useful. What You Will Learn * Get to grips with the fundamentals of Devops* Architect efficient software in a better and

more efficient way with the help of microservices* Use Docker, Kubernetes, Ansible, Ubuntu, Docker Swarm and more* Implement fast, reliable and continuous deployments with zero-downtime and ability to roll-back* Learn about centralized logging and monitoring of your cluster* Design self-healing systems capable of recovery from both hardware and software failures
In Detail Building a complete modern devops toolchain requires not only the whole microservices development and a complete deployment lifecycle, but also the latest and greatest practices and tools. Victor Farcic argues from first principles how to build a devops toolchain. This book shows you how to chain together Docker, Kubernetes, Ansible, Ubuntu, and other tools to build the complete devops toolkit.
Style and approach This book follows a unique, hands-on approach familiarizing you to the Devops 2.0 toolkit in a very practical manner. Although there will be a lot of theory, you won't be able to complete this book by reading it in a metro on a way to work. You'll need to be in front of your computer and get your hands dirty.

Kubernetes is one of the most popular, sophisticated, and fast-evolving container orchestrators. In this book, you'll learn the essentials and find out about the advanced administration and orchestration techniques in Kubernetes. Readers will also learn to manage containers using the latest version of Kubernetes with a recipe-based approach.

Streamline software development with Jenkins, the popular Java-based open source tool that has revolutionized the way teams think about Continuous Integration (CI). This complete guide shows you how to automate your build, integration, release, and deployment processes with Jenkins—and demonstrates how CI can save you time, money, and many headaches. Ideal for developers, software architects, and project managers, Jenkins: The Definitive Guide is both a CI tutorial and a comprehensive Jenkins reference. Through its wealth of best practices and real-world tips, you'll discover how easy it is to set up a CI service with Jenkins. Learn how to install, configure, and secure your Jenkins server
Organize and monitor general-purpose build jobs
Integrate automated tests to verify builds, and set up code quality reporting
Establish effective team notification strategies and techniques
Configure build pipelines, parameterized jobs, matrix builds, and other advanced jobs
Manage a farm of Jenkins servers to run distributed builds
Implement automated deployment and continuous delivery

Operations Anti-Patterns, DevOps Solutions shows how to implement DevOps techniques in the kind of imperfect environments most developers work in. Part technology tutorial, part reference manual, and part psychology handbook, this practical guide shows you realistic ways to bring DevOps to your team when you don't have the flexibility to make sweeping changes in organizational structure. Summary
Operations Anti-Patterns, DevOps Solutions shows how to implement DevOps techniques in the kind of imperfect environments most developers work in. Part technology tutorial, part reference manual, and part psychology handbook, this practical guide shows you realistic ways to bring DevOps to your team when you don't have the flexibility to make sweeping changes in organizational structure. Purchase of the print book includes a free eBook in PDF, Kindle, and ePub formats from Manning Publications. About the technology To some extent, all organizations—even yours—suffer from poor development practices, garbled communications, and outdated legacy systems. The good news is DevOps can help you improve your processes. First, however, you'll need to recognize the core issues holding you back. This book empowers you to deliver DevOps with limited resources while navigating the office politics and entrenched mindsets that are all too common in actual workplaces. About the book Operations Anti-Patterns, DevOps Solutions offers clear steps for transforming development and communication. Using jargon-free language, this book describes incremental techniques that pay off immediately. Streamline your workflow, manage unplanned time, and build operational metrics. Whatever your issues, this book holds the keys to organizational success. What's inside Turn failure into opportunity Drive change through culture Break down knowledge silos Settle middle management turf wars About the

reader For team leaders and managers. About the author Jeffery D. Smith has been in the technology industry for over 15 years. He has managed DevOps transformations at the ad-tech firm Centro and the online ordering platform Grubhub. Table of Contents 1 The DevOps ingredients 2 The paternalist syndrome 3 Operational blindness 4 Data instead of information 5 Quality as a condiment 6 Alert fatigue 7 The empty toolbox 8 Off-hour deployments 9 Wasting a perfectly good incident 10 Information hoarding: Only Brent knows 11 Culture by decree 12 Too many yardsticks

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

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

Bring the best out of DevOps and build, deploy, and maintain applications on AWS About This Book Work through practical examples and gain DevOps best practices to successfully deploy applications on AWS Successfully provision and operate distributed application systems and your AWS infrastructure using DevOps Perform Continuous Integration and deployment and fine-tune the way you deliver on AWS Who This Book Is For This book is for system administrators and developers who manage AWS infrastructure and environments and are planning to implement DevOps in their organizations. Those aiming for the AWS Certified DevOps Engineer certification will also find this book useful. Prior experience of operating and managing AWS environments is expected. What You Will Learn Design and deploy infrastructure as code within your AWS Virtual Private Cloud Implement Continuous Integration using AWS Services Configure EC2 instances using SaltStack

Implement Continuous Deployment using Jenkins and the AWS CLI Collect important metrics and log data to gain more insight into infrastructure and applications Troubleshooting popular issues with some less known techniques using the AWS platform In Detail Knowing how to adopt DevOps in your organization is becoming an increasingly important skill for developers, whether you work for a start-up, an SMB, or an enterprise. This book will help you to drastically reduce the amount of time spent on development and increase the reliability of your software deployments on AWS using popular DevOps methods of automation. To start, you will get familiar with the concept of IaC and will learn to design, deploy, and maintain AWS infrastructure. Further on, you'll see how to design and deploy a Continuous Integration platform on AWS using either open source or AWS provided tools/services. Following on from the delivery part of the process, you will learn how to deploy a newly created, tested, and verified artefact to the AWS infrastructure without manual intervention. You will then find out what to consider in order to make the implementation of Configuration Management easier and more effective. Toward the end of the book, you will learn some tricks and tips to optimize and secure your AWS environment. By the end of the book, you will have mastered the art of implementing DevOps practices onto AWS. Style and approach This book is packed full of real-world examples demonstrating use cases that help you deploy DevOps best practices on AWS.

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

Learn how to get the most out of JMeter, improve the productivity of your apps, and integrate JMeter with your Agile and DevOps processes. Key Features Gain insights into preparing test environments and selecting the correct use cases to load test Learn to analyze a load test with Backend Listener, HTML Report Dashboard, and View Results Tree Explore how to integrate JMeter in the software factory Book Description Load tests help identify the maximum number of requests a software system can handle. One popular open source tool for load testing is JMeter. By leveraging the features and capabilities of JMeter, you can perform extensive load testing and fix issues in your application before they become problematic. This book is written by JMeter developers and begins by discussing the whole process, including recording a script, setting it up, and launching it, enabling you to almost immediately start load testing. You'll learn the best practices that you must follow while designing test cases. You'll also explore the different protocols offered by JMeter through various real-world examples. Finally, you'll see how to integrate JMeter into the DevOps approach and create professional reports. You'll discover ways to use the eco-system of JMeter to integrate new protocols, enrich its monitoring, and leverage its power through the use of the cloud. By the end of this book, you'll know all that's needed to perform comprehensive load testing on your applications by using all the best practices and features of JMeter. What you will learn Explore various JMeter concepts, including Timers scope and Assertions scope Discover the types of test protocols and load tests that JMeter supports Design a realistic test scenario using various tips and best practices Prepare your test environment with injectors and the system under test Learn and apply good practices when recording a script Integrate JMeter with Jenkins using Maven Who this book is for This book contains all the valuable information you need in one place and is a must for everybody who is seriously working with JMeter. It might be a little condensed for absolute beginners, but this book is the best you can find if you already have some performance testing experience and want to get further. In particular, it would be invaluable to developers who want to expand their JMeter knowledge into advanced topics or switch to JMeter from other load testing tools.

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.

In the world of DevOps automation and Auto Devops, Big Data Analytics, and Enterprise Cloud Applications, developing and managing enterprise grade applications has become a challenge! Jenkins continuous integration and continuous delivery capabilities along with robust Amazon AWS platform is a powerful combination and provides a seamless solution to implementing a Devops lifecycle. Welcome to Mastering Jenkins CI with Amazon AWS: Build DevOps Pipeline course, bringing you the latest technologies with up-to-date knowledge. If you or your company are facing challenges with enterprise app deployment or would like to learn how to automate software delivery using Jenkins Continuous Integration with Amazon AWS Beanstalk and Github as source repository? Look no further - The Mastering Jenkins CI with Amazon AWS: Build DevOps Pipeline course will help you gain solid understanding of all these concepts along with hand-on application in a flipped classroom manner! It is not only a comprehensive hands-on course with detailed concepts and their application, you are will not find a course similar to this. The flipped classroom model with hand-on learning will help you experience direct into the course as your begin your learning journey. In this course, you'll learn and practice: 1) Setting up Amazon AWS Environment from scratch 2) Installing Java JDK, NGINX, Elastic beanstalk CLI 3) Configuring AWS instances with security groups and roles 4) Install Jenkins using AWS Shell and implement a build server for Continuous Integration 5) Connect GitHub as source repository for Python and PHP applications 6) Deploy an AWS Elastic Beanstalk with Jenkins CI, complete Devops pipeline, and much more.... What you'll learn - Learn complete Jenkins CI/CD pipeline implementation an Amazon AWS Elastic Beanstalk - Learn Github integration with Jenkins and Amazon AWS - Deploy Python and PHP applications using Github using Jenkins CI/CD build automation on AWS Beanstalk - Gain solid understanding of DevOps concepts along with software development lifecycle - Be able to fully master and integrate your application with Github, Jenkins CI, and Amazon AWS Beanstalk - Learn to use SSH Shell and basic Linux commands Requirements - AWS account is required. You need a credit card, then choose FREE Tier AWS account. - Knowledge of basic programming concepts such a object oriented programming is diserable - Understanding of basic HTML and CSS is also desireable - B...

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