

Continuous Integration Delivery And Deployment Reliable And Faster Software Releases With Automating Builds Tests And Deployment

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.

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

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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,

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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.

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.

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

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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.

More Agile Testing

Continuous Practices: A Strategic Approach to Accelerating the Software Production System

Build and release quality software at scale with Jenkins, Travis CI, and CircleCI

Apply continuous integration models, deploy applications quicker, and scale at large by putting Docker to work

Learning Journeys for the Whole Team

Build and deploy Java microservices using Spring Cloud, Istio, and Kubernetes

The step-by-step guide to going live with new software releases faster - reducing risk and delivering more value sooner! *Fast, simple, repeatable techniques for deploying working code to production in hours or days, not months! *Crafting custom processes that get developers from idea to value faster than ever. *Best practices for everything from source code control to dependency management and in-production tracing. *Common obstacles to rapid release - and pragmatic solutions. In too many organizations, build, testing, and deployment processes can take six months or more. That's simply far too long for today's businesses. But it doesn't have to be that way. It's possible to deploy working code to production in hours or days after development work is complete - and Go Live presents comprehensive processes and techniques for doing so. Written by two of the world's most experienced software project leaders, this book demonstrates how to dramatically increase speed while

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reducing risk and improving code quality at the same time. The authors cover all facets of build, testing, and deployment, including: configuration management, source code control, release planning, auditing, compliance, integration, build automation, and more. They introduce a wide range of advanced techniques, including inproduction monitoring and tracing, dependency management, and the effective use of virtualization. For each area, they explain the issues, show how to mitigate the risks, and present best practices. Throughout, Go Live focuses on powerful opportunities for individual improvement, clearly and simply explaining skills and techniques so they can be used every day on real projects. With this book's help, any development organization can move from idea to release faster -- and deliver far more value, far more rapidly.

iOS 11, Swift 4, and Xcode 9 provide many new APIs for iOS developers. With this cookbook, you'll learn more than 170 proven solutions for tackling the latest features in iOS 11 and watchOS 4, including new ways to use Swift and Xcode to make your day-to-day app development life easier. This collection of code-rich recipes also gets you up to speed on continuous delivery and continuous integration systems. Ideal for intermediate and advanced iOS developers looking to work with the newest version of iOS, these recipes include reusable code on GitHub, so you can put them to work in your project right away. Among the topics covered in this book: New features in Swift 4 and Xcode 9 Tools for continuous delivery and continuous integration Snapshot testing and test automation Creating document-based applications Updated Map view and Core Location features iOS 11's Security and Password Autofill Data storage with Apple's Core Data Creating lively user interfaces with UI Dynamics Building iMessage applications and sticker packages Integrating Siri into your apps with Siri Kit Creating fascinating apps for Apple Watch

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 indented 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

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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.

DevOps is a cultural and professional movement that's trying to break these walls. Focused on automation, collaboration, tool sharing and knowledge sharing, DevOps has been revealing that developers and system engineers have a lot to learn from one another. In this book, Danilo Sato will show you how to implement DevOps and Continuous Delivery practices so as to raise your system's deployment frequency at the same time as increasing the production application's stability and robustness. You will learn how to automate a web application's build and deploy phases and the infrastructure management, how to monitor the system deployed to production, how to evolve and migrate an architecture to the cloud and still get to know several other tools that you can use on your company

Dive into the core DevOps strategies

Understanding Continuous Integration and Deployment in Azure DevOps

Essential Tools and Best Practices for Deploying Code to Production

Distinguishing Terms and Understanding how Their Implementation Methods and Tools Differ

Continuous Deployment to Kubernetes: Continuously deploying applications with Jenkins to a Kubernetes cluster

Reliable and automated software delivery

Continuous Delivery for Mobile with fastlane

For any software developer who has spent days in “integration hell,” cobbling together myriad software components, Continuous Integration: Improving Software Quality and Reducing Risk illustrates how to transform integration from a necessary evil into an everyday part of the development process. The key, as the authors show, is to integrate regularly and often using continuous integration (CI) practices and techniques. The authors first examine the concept of CI and its practices from the ground up and then move on to explore other effective processes performed by CI systems, such as database integration, testing, inspection, deployment, and feedback. Through more than forty CI-related practices using application examples in different languages, readers learn that CI leads to more rapid software development, produces deployable software at every step in the development lifecycle, and reduces the time between defect introduction and detection, saving time and lowering costs. With successful implementation of CI, developers reduce risks and repetitive manual processes, and teams receive better project visibility. The book covers How to make integration a “non-event” on your software development projects How to reduce the amount of repetitive processes you perform when building your software Practices and techniques for using CI effectively with your teams Reducing the risks of late defect discovery, low-quality software, lack of visibility, and lack of deployable software Assessments of different CI servers and related tools on the market The book’s companion Web site, www.integratebutton.com, provides updates and code examples.

Obtain enterprise agility and continuous delivery by implementing DevOps with Windows Server 2016 About This Book This practical learning guide will improve your application lifecycle management and help you manage environments efficiently

Showcase through a sample application ways to apply DevOps principles and practices in the real world Implement DevOps using

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latest technologies in Windows Server 2016 such as Windows Container, Docker, and Nano Servers Who This Book Is For This book is for .NET developers and system administrators who have a basic knowledge of Windows Server 2016 and are now eager to implement DevOps at work using Windows Server 2016. Knowledge of Powershell, Azure, and containers will help. What You Will Learn Take a deep dive into the fundamentals, principles, and practices of DevOps Achieve an end-to-end DevOps implementation Execute source control management using GITHUB and VSTS vNext Automate the provisioning and configuration of infrastructure Build and release pipeline Measure the success of DevOps through application instrumentation and monitoring In Detail Delivering applications swiftly is one of the major challenges faced in fast-paced business environments. Windows Server 2016 DevOps is the solution to these challenges as it helps organizations to respond faster in order to handle the competitive pressures by replacing error-prone manual tasks using automation. This book is a practical description and implementation of DevOps principles and practices using the features provided by Windows Server 2016 and VSTS vNext. It jumps straight into explaining the relevant tools and technologies needed to implement DevOps principles and practices. It implements all major DevOps practices and principles and takes readers through it from envisioning a project up to operations and further. It uses the latest and upcoming concepts and technologies from Microsoft and open source such as Docker, Windows Container, Nano Server, DSC, Pester, and VSTS vNext. By the end of this book, you will be well aware of the DevOps principles and practices and will have implemented all these principles practically for a sample application using the latest technologies on the Microsoft platform. You will be ready to start implementing DevOps within your project/engagement. Style and approach This practical, learning book is linear and progressive, and every chapters builds on the previous chapters. We focus on the practical skills required to implement DevOps, with a summary of the key concepts only where strictly necessary.

Continuous integration, continuous delivery, and continuous deployment are key software delivery processes in a DevOps environment. But what does each one do for your product development and release cycles? Brent Laster explains what these terms really boil down to, and how they work separately and together to help your team release software. This powerful set of disciplines, best practices, and technologies automates the process of integrating and delivering source code changes from inception through production. Although their implementation may vary, these processes are necessary to ensure that software is released frequently, reliably, and with high quality. You'll learn how: Continuous integration ensures that individual code changes are suitable for inclusion in the code base and merged in successfully Continuous delivery assembles your product, automatically testing the quality and functionality along the way, and produces deliverables that are proven to be deployable Continuous deployment simplifies releasing the product to customers, whether it's in the cloud, via download, or in some other format, while also allowing for limited deployments or rolling deployments back

A step-by-step guide to implementing Continuous Integration and Continuous Delivery (CI/CD) for Mobile, Hybrid, and Web applications DESCRIPTION The main objective of the book is to create Declarative Pipeline for programming languages such as Java, Android, iOS, AngularJS, NodeJS, Flutter, Ionic Cordova, and .Net. The book starts by introducing all the areas which

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encompass the field of DevOps Practices. It covers definition of DevOps, DevOps history, benefits of DevOps culture, DevOps and Value Streams, DevOps practices, different Pipeline types such as Build Pipeline, Scripted Pipeline, Declarative Pipeline, and Blue Ocean. Each chapter focuses on Pipeline that includes Static Code Analysis using SonarQube or Lint tools, Unit tests, calculating code coverage, publishing unit tests and coverage reports, verifying the threshold of code coverage, creating build/package, and distributing package to a specific environment based on the type of programming language. The book will also teach you how to use different deployment distribution environments such as Azure App Services, Docker, Azure Container Services, Azure Kubernetes Service, and App Center. By the end, you will be able to implement DevOps Practices using Jenkins effectively and efficiently.

KEY FEATURES

- Understand how and when Continuous Integration makes a difference
- Learn how to create Declarative Pipeline for Continuous Integration and Continuous Delivery
- Understand the importance of Continuous Code Inspection and Code Quality
- Learn to publish Unit Test and Code Coverage in Declarative Pipeline
- Understand the importance of Quality Gates and Build Quality

WHAT YOU WILL LEARN

- Use Multi-Stage Pipeline (Pipeline as a Code) to implement Continuous Integration and Continuous Delivery.
- Create and configure Cloud resources using Platform as a Service Model
- Deploy apps to Azure App Services, Azure Kubernetes and containers
- Understand how to distribute Mobile Apps (APK and IPA) to App Center
- Improve Code Quality and Standards using Continuous Code Inspection

WHO THIS BOOK IS FOR This book is for DevOps Consultants, DevOps Evangelists, DevOps Engineers, Technical Specialists, Technical Architects, Cloud Experts, and Beginners. Having a basics knowledge of Application development and deployment, Cloud Computing, and DevOps Practices would be an added advantage.

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7. Building CICD Pipeline NodeJS Application
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9. Building CICD Pipeline for Python Application
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11. Best Practices

The truth about DevOps by the people on the front line

Reliable and faster software releases with automating builds, tests, and deployment

Hands-On Continuous Integration and Delivery

Create secure applications by building complete CI/CD pipelines

The Science of Lean Software and DevOps: Building and Scaling High Performing Technology Organizations

Devops in Practice

Xamarin Continuous Integration and Delivery

Learn everything you need to set up a full-featured, automated pipeline for Xamarin development and deployment. Automate everything from the build step through to deployment and delivery to your customer. If you thought this level of automation could be achieved only by large companies with generous funding, think again! You as a single developer, or working in a small team or company, can automate your

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processes to punch heavier than your weight. What's more, you can achieve this level of automation completely for free! This hands-on guide takes you step-by-step from setting up your first automated build all the way to integrated unit testing, and finally through to delivering a high-quality app to your testers and end users. The automation presented in this book saves a lot of frustration and recurring work, providing you more time to focus on building the robust and compelling apps that delight your customers and keep you steps ahead of the competition. Not only does this book teach how to get a grip on consistent quality, but it covers the use of HockeyApp to track events and usage, and to report errors and anomalies back to home base for developers to investigate. Many times it's possible to detect and fix errors before a user even notices they are there. This book: Teaches the necessity of an automated development pipeline Helps you set up an automated pipeline for Xamarin development Integrates testing (on physical devices!) to ensure high-quality apps What You Will Learn Why you want an automated development pipeline Obtain and configure the automated tooling Continuously integrate your apps Run automated unit tests Push updates to your customers Monitor and detect errors without user intervention Who This Book Is For App developers looking for ways to ensure consistent quality of work and wanting to know how their apps are doing in actual use by customers

Janet Gregory and Lisa Crispin pioneered the agile testing discipline with their previous work, Agile Testing. Now, in More Agile Testing, they reflect on all they've learned since. They address crucial emerging issues, share evolved agile practices, and cover key issues agile testers have asked to learn more about. Packed with new examples from real teams, this insightful guide offers detailed information about adapting agile testing for your environment; learning from experience and continually improving your test processes; scaling agile testing across teams; and overcoming the pitfalls of automated testing. You'll find brand-new coverage of agile testing for the enterprise, distributed teams, mobile/embedded systems, regulated environments, data warehouse/BI systems, and DevOps practices. You'll come away understanding • How to clarify testing activities within the team • Ways to collaborate with business experts to identify valuable features and deliver the right capabilities • How to design automated tests for superior reliability and easier maintenance • How agile team members can improve and expand their testing skills • How to plan "just enough," balancing small increments with larger feature sets and the entire system • How to use testing to identify and mitigate risks associated with your current agile processes and to prevent defects • How to address challenges within your product or organizational context • How to perform exploratory testing using "personas" and "tours" • Exploratory testing approaches that engage the whole team, using test charters with session- and thread-based techniques • How to bring new agile testers up to speed quickly—without overwhelming them Janet Gregory is founder of DragonFire Inc., an agile quality process consultancy and training firm. Her passion is helping teams build quality systems. For almost fifteen years, she has worked as a coach and tester, introducing agile practices into companies of all sizes and helping users and testers understand their agile roles. She is a frequent speaker at agile and testing software conferences, and is a major contributor to the agile testing community. Lisa Crispin, an experienced agile testing practitioner and coach, regularly leads conference workshops on agile testing and contributes frequently to agile software publications. She enjoys collaborating as part of an awesome agile team to produce quality software. Since 1982, she has worked in a variety of roles on software teams, in a wide range of industries. She joined her first agile team in 2000 and continually learns from other teams and practitioners.

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

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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.

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Packt Publishing Ltd

Learning Continuous Integration with Jenkins

Continuous Delivery with Jenkins, Kubernetes, and Terraform

Hands-on Azure Pipelines

Accelerate

iOS 11 Swift Programming Cookbook

Continuous Integration, Delivery, and Deployment

Pipeline as Code

Continuous integration, continuous delivery, and continuous deployment are key software delivery processes in a DevOps environment. But what does each one do for your product development and release cycles? In this updated report, Brent Laster explains what these terms really boil down to and how they work separately and together to help your team release software.

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This powerful set of disciplines, best practices, and technologies automates the integration and delivery of source code changes from inception through production. Although their implementation may vary, continuous integration, continuous delivery, and continuous deployment are necessary to ensure that software is released frequently, reliably, and with high quality. You'll learn how: Continuous integration makes certain that individual code changes are suitable for inclusion in the code base and merged in successfully Continuous delivery assembles your product, automatically tests quality and functionality, and produces deliverables that are proven to be deployable Continuous deployment simplifies releasing the product to customers-whether it's in the cloud, via download, or in some other format-while also allowing for limited deployments or rolling deployments back This valuable resource for business professionals, software engineering managers, senior developers, and architects will also explore how containers and Kubernetes interact in this environment. Automate release processes, deployment, and continuous integration of your application as well as infrastructure automation with the powerful services offered by AWS About This Book Accelerate your infrastructure's productivity by implementing a continuous delivery pipeline within your environment Leverage AWS services and Jenkins 2.0 to perform complete application deployments on Linux servers This recipe-based guide that will help you minimize application deployment downtime Who This Book Is For This book is for developers and system administrators who are responsible for hosting their application and managing instances in AWS. It's also ideal for DevOps engineers looking to provide continuous integration, deployment, and delivery. A basic understanding of AWS, Jenkins, and some scripting knowledge is needed. What You Will Learn Build a sample Maven and NodeJS Application using CodeBuild Deploy the application in EC2/Auto Scaling and see how CodePipeline helps you integrate AWS services Build a highly scalable and fault tolerant CI/CD pipeline Achieve the CI/CD of a microservice architecture application in AWS ECS using CodePipeline, CodeBuild, ECR, and CloudFormation Automate the provisioning of your infrastructure using CloudFormation and Ansible Automate daily tasks and audit compliance using AWS Lambda Deploy microservices applications on Kubernetes using Jenkins Pipeline 2.0 In Detail AWS CodeDeploy, AWS CodeBuild, and CodePipeline are scalable services offered by AWS that automate an application's build and deployment pipeline. In order to deliver tremendous speed and agility, every organization is moving toward automating an entire application pipeline. This book will cover all the AWS services required to automate your deployment to your instances. You'll begin by setting up and using one of the AWS services for automation – CodeCommit. Next, you'll learn how to build a sample Maven and NodeJS Application using CodeBuild. After you've built the application, you'll see how to use CodeDeploy to deploy the application in EC2/Autoscaling. You'll also build a highly scalable and fault tolerant continuous integration (CI)/continuous deployment (CD) pipeline using some easy-to-follow recipes. Following this, you'll achieve CI/CD for Microservices application and reduce the risk within your software development lifecycle. You'll also learn to set up an infrastructure using CloudFormation Template and Ansible, and see how to automate AWS resources using AWS Lambda. Finally, you'll learn to automate instances in AWS and automate the deployment lifecycle of applications.By the end of this book, you'll be able to minimize application downtime and implement CI/CD, gaining total control over your software development lifecycle. Style and approach This book takes a "How to do it" approach, providing with easy solutions to automate common maintenance and deployment tasks. Getting started with the processes and the tools to continuously deliver high-quality softwareAbout This Book* Incorporate

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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 ForThis 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 APIIn DetailThe 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 approachThis 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.

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

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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.

DevOps Paradox

DevOps with Windows Server 2016

Reliable Software Releases Through Build, Test, and Deployment Automation

The Processes and Tools of Effective Continuous Delivery Pipelines

DevOps for Networking

DevOps For Dummies

Build, test, and deploy cloud-native applications in the cloud-native way

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.

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

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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

Learn continuous deployment and automation with code-signing, continuous testing, building, deploying, and releasing of your app. Key Features A practical guide on automating your mobile development pipeline with Fastlane, Jenkins, and Slack. Build, test, run and deploy your mobile application release with this end to end guide. Implement Continuous Integration, delivery, and deployment practices to optimize your application development workflow for faster and efficient release builds. Book Description Competitive mobile apps depend strongly on the development team's ability to deliver successful releases, consistently and often. Although continuous integration took a more mainstream priority among the development industry, companies are starting to realize the importance of continuity beyond integration and testing. This book starts off with a brief introduction to fastlane—a robust command-line tool that enables iOS and Android developers to automate their releasing workflow. The book then explores and guides you through all of its features and utilities; it provides the reader a comprehensive understanding of the tool and how to implement them. Themes include setting up and managing your certificates and provisioning and push notification profiles; automating the creation of apps and managing the app metadata on iTunes Connect and the Apple Developer Portal; and building, distributing and publishing your apps to the App Store. You will also learn how to automate the generation of localized screenshots and mesh your continuous delivery workflow into a continuous integration workflow for a more robust setup. By the end of the

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book, you will gain substantial knowledge on delivering bug free, developer-independent, and stable application release cycle. What you will learn Harness the fastlane tools for the Continuous Deployment strategy Integrate Continuous Deployment with existing Continuous Integration. Automate upload of screenshots across all device screen-sizes Manage push notifications, provisioning profiles, and code-signing certificates Orchestrate automated build and deployments of new versions of your app Regulate your TestFlight users and on-board new testers Who this book is for This book is intended for mobile developers who are keen on incorporating Continuous integration and deployment practices in their workflow.

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 Integration Vs. Continuous Delivery Vs. Continuous Deployment

Team Services, Test Cloud, and HockeyApp

DevOps for Web Development

AWS Automation Cookbook

Hands-On Microservices with Spring Boot and Spring Cloud

A Practical Guide to Continuous Delivery

Continuous Delivery in Java

Discover DevOps secrets from leading experts. Viktor Farcic interviews DevOps industry voices including Mike Kail, Greg Bledsoe, Jeff Sussna, James Turnbull, Kohsuke Kawaguchi, Liz Keogh, and more. Key Features Leading DevOps experts share their insights into modern DevOps practice Engage with the real-world challenges of putting DevOps to work Strengthen your DevOps practices now and prepare for future DevOps trends Book Description DevOps promises to break down silos, uniting organizations to deliver high quality output in a cross-functional way. In reality it often results in confusion and new silos: pockets of DevOps practitioners fight the status quo, senior decision-makers demand DevOps paint jobs without committing to true change. Even a clear definition of what DevOps is remains elusive. In DevOps Paradox, top DevOps consultants,

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industry leaders, and founders reveal their own approaches to all aspects of DevOps implementation and operation. Surround yourself with expert DevOps advisors. Viktor Farcic draws on experts from across the industry to discuss how to introduce DevOps to chaotic organizations, align incentives between teams, and make use of the latest tools and techniques. With each expert offering their own opinions on what DevOps is and how to make it work, you will be able to form your own informed view of the importance and value of DevOps as we enter a new decade. If you want to see how real DevOps experts address the challenges and resolve the paradoxes, this book is for you. What you will learn Expert opinions on: Introducing DevOps into real-world, chaotic business environments Deciding between adopting cutting edge tools or sticking with tried-and-tested methods Initiating necessary business change without positional power Managing and overcoming fear of change in DevOps implementations Anticipating future trends in DevOps and how to prepare for them Getting the most from Kubernetes, Docker, Puppet, Chef, and Ansible Creating the right incentives for DevOps success across an organization The impact of new techniques, such as Lambda, serverless, and schedulers, on DevOps practice Who this book is for Anybody interested in DevOps will gain a lot from this book. If you want to get beyond the simplistic ideals and engage with the deep challenges of putting DevOps to work in the real world, this book is for you.

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

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

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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.

Apply microservices patterns to build resilient and scalable distributed systems

Key Features

Understand the challenges of building large-scale microservice landscapes
Build cloud-native production-ready microservices with this comprehensive guide
Discover how to get the best out of Spring Cloud, Kubernetes, and Istio when used together

Book Description

Microservices architecture allows developers to build and maintain applications with ease, and enterprises are rapidly adopting it to build software using Spring Boot as their default framework. With this book, you ' ll learn how to efficiently build and deploy microservices using Spring Boot. This microservices book will take you through tried and tested approaches to building distributed systems and implementing microservices architecture in your organization. Starting with a set of simple cooperating microservices developed using Spring Boot, you ' ll learn how you can add functionalities such as persistence, make your microservices reactive, and describe their APIs using Swagger/OpenAPI. As you advance, you ' ll understand how to add different services from Spring Cloud to your microservice system. The book also demonstrates how to deploy your microservices using Kubernetes and manage them with Istio for improved security and traffic management. Finally, you ' ll explore centralized log management using the EFK stack and monitor microservices using Prometheus and Grafana. By the end of this book, you ' ll be able to build microservices that are scalable and robust using Spring Boot and Spring Cloud. What you will learn

Build reactive microservices using Spring Boot
Develop resilient and scalable microservices using Spring Cloud
Use OAuth 2.0/OIDC and Spring Security to protect public APIs
Implement Docker to bridge the gap between development, testing, and production
Deploy and manage microservices using Kubernetes
Apply Istio for improved security, observability, and traffic management

Who this book is for

This book is for Java and Spring developers and architects who want to learn how to break up their existing monoliths into microservices and deploy them either on-premises or in the cloud using Kubernetes as a container orchestrator and Istio as a service Mesh. No familiarity with microservices architecture is required to get started with this book.

Continuous Delivery

CI/CD Implementation for Mobile, Web, and Hybrid Applications Using Declarative Pipeline in Jenkins (English Edition)

Continuous Delivery Pipeline - Where Does It Choke?

Mastering Jenkins

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Deployment with Docker

The DevOps 2.4 Toolkit

Solutions and Examples for iOS Apps

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.

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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.

Build, package, and deploy software projects, developed with any language targeting any platform, using Azure pipelines. The book starts with an overview of CI/CD and the need for software delivery automation. It further delves into the basic concepts of Azure pipelines followed by a hands-on guide to setting up agents on all

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platforms enabling software development in any language. Moving forward, you will learn to set up a pipeline using the classic Visual Editor using PowerShell scripts, a REST API, building edit history, retention, and much more. You'll work with artifact feeds to store deployment packages and consume them in a build. As part of the discussion you'll see the implementation and usage of YAML (Yet Another Markup Language) build pipelines. You will then create Azure release pipelines in DevOps and develop extensions for Azure pipelines. Finally, you will learn various strategies and patterns for developing pipelines and go through some sample lessons on building and deploying pipelines. After reading Hands-on Azure Pipelines, you will be able to combine CI and CD to constantly and consistently test and build your code and ship it to any target. What You Will Learn Work with Azure build-and-release pipelines Extend the capabilities and features of Azure pipelines Understand build, package, and deployment strategies, and versioning and patterns with Azure pipelines Create infrastructure and deployment that targets commonly used Azure platform services Build and deploy mobile applications Use quick-start Azure DevOps projects Who This Book Is For Software developers and test automation engineers who are involved in the software delivery process.

A practical guide to rapidly and efficiently mastering Docker containers, along with tips and tricks learned in the field. About This Book Use Docker containers, horizontal node scaling, modern orchestration tools (Docker Swarm, Kubernetes, and Mesos) and Continuous Integration/Continuous Delivery to manage your infrastructure. Increase service density by turning often-idle machines into hosts for numerous Docker services. Learn what it takes to build a true container infrastructure that is scalable, reliable, and resilient in the face of increased complexities from using container infrastructures. Find out how to identify, debug, and mitigate most real-world, undocumented issues when deploying your own Docker infrastructure. Learn tips and tricks of the trade from existing Docker infrastructures running in production environments. Who This Book Is For This book is aimed at system administrators, developers, DevOps engineers, and software engineers who want to get concrete, hands-on experience deploying multi-tier web applications and containerized microservices using Docker. This book is also for anyone who has worked on deploying services in some fashion and wants to take their small-scale setups to the next level (or simply to learn more about the process). What You Will Learn Set up a working development environment and create a simple web service to demonstrate the basics Learn how to make your service more usable by adding a database and an app server to process logic Add resilience to your services by learning how to horizontally scale with a few containers on a single node Master layering isolation and messaging to simplify and harden the connectivity between containers Learn about numerous issues

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encountered at scale and their workarounds, from the kernel up to code versioning Automate the most important parts of your infrastructure with continuous integration In Detail Deploying Docker into production is considered to be one of the major pain points in developing large-scale infrastructures, and the documentation available online leaves a lot to be desired. With this book, you will learn everything you wanted to know to effectively scale your deployments globally and build a resilient, scalable, and containerized cloud platform for your own use. The book starts by introducing you to the containerization ecosystem with some concrete and easy-to-digest examples; after that, you will delve into examples of launching multiple instances of the same container. From there, you will cover orchestration, multi-node setups, volumes, and almost every relevant component of this new approach to deploying services. Using intertwined approaches, the book will cover battle-tested tooling, or issues likely to be encountered in real-world scenarios, in detail. You will also learn about the other supporting components required for a true PaaS deployment and discover common options to tie the whole infrastructure together. At the end of the book, you learn to build a small, but functional, PaaS (to appreciate the power of the containerized service approach) and continue to explore real-world approaches to implementing even larger global-scale services. Style and approach This in-depth learning guide shows you how to deploy your applications in production using Docker (from the basic steps to advanced concepts) and how to overcome challenges in Docker-based infrastructures. The book also covers practical use-cases in real-world examples, and provides tips and tricks on the various topics.

The DevOps 2.0 Toolkit

Continuous Integration Vs. Continuous Delivery Vs. Continuous Deployment, 2nd Edition

Continuous Delivery with Docker and Jenkins

Automating mobile application development and deployment for iOS and Android

Continuous Integration

DevOps: Continuous Delivery, Integration, and Deployment with DevOps

Improving Software Quality and Reducing Risk

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,

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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*

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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.

How well does your organization respond to changing market conditions, customer needs, and emerging technologies when building software-based products? This practical guide presents Lean and Agile principles and patterns to help you move fast at scale—and demonstrates why and how to apply these paradigms throughout your organization, rather than with just one department or team. Through case studies, you'll learn how successful enterprises have rethought everything from governance and financial management to systems architecture and organizational culture in the pursuit of radically improved performance. Discover how Lean focuses on people and teamwork at every level, in contrast to traditional management practices Approach problem-solving experimentally by exploring solutions, testing assumptions, and getting feedback from real users Lead and manage large-scale programs in a way that empowers employees, increases the speed and quality of delivery, and lowers costs Learn how to implement ideas from the DevOps and Lean Startup movements even in complex, regulated environments 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

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practice that aim sat 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.

Continuous Integration and Continuous Deployment using AWS services

Cloud-Native Continuous Integration and Delivery

Reliable Software Releases through Build, Test, and Deployment Automation (Adobe Reader)

A beginner's guide to implementing Continuous Integration and Continuous Delivery using Jenkins 2, 2nd Edition

Hands-on Pipeline as Code with Jenkins

Lean Enterprise

Develop faster with DevOps DevOps embraces a culture of unifying the creation and distribution of technology in a way that shortens release cycles and more resource-efficient product updating. DevOps For Dummies provides a guidebook for those on the development and operations side in need of a primer on this way of working. Inside, DevOps evangelist Emily Freeman provides a roadmap for managing and technology tools, as well as the culture changes, needed to dive head-first into DevOps. Identify your organization's goals and create a DevOps framework Change your organizational structure Manage projects in the DevOps world DevOps For Dummies is a must-read for developers and operations professionals in the early stages of DevOps adoption.

Create a complete continuous delivery process using modern DevOps tools such as Docker, Jenkins, Kubernetes, Ansible, Terraform, and more Key Features • Build reliable and secure applications using Docker containers • Create a highly available environment to

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and your services using Kubernetes • Automate your release process end-to-end Book Description This updated third edition Delivery with Docker and Jenkins will explain the advantages of combining Jenkins and Docker to improve the continuous integration and delivery process of app development. You'll start by setting up a Docker server and configuring Jenkins on it. Next, you'll discover how to build applications and microservices on Dockerfiles and integrating them with Jenkins using continuous delivery processes. The book also covers continuous integration, automated acceptance testing, configuration management, and Infrastructure as Code. Moving ahead, you'll learn how to ensure quick application deployment with Docker containers, along with scaling Jenkins using Kubernetes. Later, you'll explore how to deploy applications using Docker images and test them with Jenkins. Toward the concluding chapters, the book will focus on the CD pipeline, such as the environments and infrastructure, application versioning, and non-functional testing. By the end of this integration and continuous delivery book, you'll have gained the skills you need to enhance the DevOps workflow by integrating the functionalities of Docker and Jenkins. What you will learn • Grasp Docker fundamentals and dockerize applications for the Cloud • Understand how to use Jenkins on-premises and in the cloud • Scale a pool of Docker servers using Kubernetes • Write acceptance tests using Cucumber • Run tests in the Docker ecosystem using Jenkins • Provision your servers and infrastructure using Ansible and Terraform • Publish a built Docker image to a Docker registry • Deploy cycles of Jenkins pipelines using community best practices Who this book is for DevOps engineers, system administrators, Docker professionals, or anyone who wants to explore the power of Docker and Jenkins together. No prior knowledge of DevOps is required to get started.