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# Jenkins Continuous Integration Cookbook

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Jenkins Continuous Integration Cookbook

AWS Automation Cookbook

Python Continuous Integration and Delivery

A Practical Guide to Continuous Delivery

Jenkins

Pro Continuous Delivery

Jenkins: The Definitive Guide

Continuous Integration, Delivery, and Deployment

Kubernetes - A Complete DevOps Cookbook

Learning Continuous Integration with Jenkins

Extending Jenkins

DevOps: Continuous Delivery, Integration, and Deployment with DevOps

Jenkins Continuous Integration Cookbook

Mastering Jenkins

Jenkins Administrator's Guide

Jenkins 2.x Continuous Integration Cookbook  
Jenkins Essentials - Second Edition  
Jenkins: The Definitive Guide  
Learning Continuous Integration with Jenkins  
Continuous Delivery  
IOS 11 Swift Programming Cookbook  
Jenkins  
Hands-on Pipeline as YAML with Jenkins  
Learning Continuous Integration with Jenkins  
Hands-On Continuous Integration and Delivery  
Learning Continuous Integration with Jenkins  
Continuous Delivery with Docker and Jenkins  
Jenkins Continuous Integration Cookbook - Second Edition  
Hands-on Pipeline as Code with Jenkins  
Jenkins Fundamentals  
Continuous Delivery with Docker and Jenkins  
Learning Continuous Integration with TeamCity  
CI/CD Pipeline Using Jenkins Unleashed  
Integrating PHP Projects with Jenkins  
Jenkins Bootcamp

Learning Continuous Integration with Jenkins 2.X- Second Edition  
DevOps — Achieve CI / CD via Jenkins in 15 mins  
Pipeline as Code  
Terraform Cookbook  
Jenkins 2: Up and Running

*Jenkins Continuous  
Integration Cookbook*

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**NOEMI MALLORY**

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## **Jenkins Continuous Integration**

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

Deployment solutions in Jenkins A step-  
by-step guide to help you get the most  
out of the powerful automation  
orchestration platform that is Jenkins  
Who This Book Is For If you are a novice  
or intermediate-level Jenkins user who  
has used Jenkins before but are not  
familiar with architecting solutions and  
implementing it in your organization,  
then this is the book for you. A basic  
understanding of the core elements of  
Jenkins is required to make the best use  
of this book. What You Will Learn Create  
and manage various types of build jobs,

and implement automation tasks to support a software project of any kind Get to grips with the automated testing architecture, and scalable automated testing techniques Facilitate the delivery of software across the SDLC by creating scalable automated deployment solutions Manage scalable automation pipelines in Jenkins using the latest build, test, and deployment strategies Implement a scalable master / slave build automation platform, which can support Windows, Mac OSX, and Linux software solutions Cover troubleshooting and advanced configuration techniques for Jenkins slave nodes Support a robust build and delivery system by implementing basic infrastructure as code solutions in configuration management tools such as Ansible In

Detail With the software industry becoming more and more competitive, organizations are now integrating delivery automation and automated quality assurance practices into their business model. Jenkins represents a complete automation orchestration system, and can help converge once segregated groups into a cohesive product development and delivery team. By mastering the Jenkins platform and learning to architect and implement Continuous Integration, Continuous Delivery, and Continuous Deployment solutions, your organization can learn to outmanoeuvre and outpace the competition. This book will equip you with the best practices to implement advanced continuous delivery and deployment systems in Jenkins. The

book begins with giving you high-level architectural fundamentals surrounding Jenkins and Continuous Integration. You will cover the different installation scenarios for Jenkins, and see how to install it as a service, as well as the advanced XML configurations. Then, you will proceed to learn more about the architecture and implementation of the Jenkins Master/Slave node system, followed by creating and managing Jenkins build jobs effectively. Furthermore, you'll explore Jenkins as an automation orchestration system, followed by implementing advanced automated testing techniques. The final chapters describe in depth the common integrations to Jenkins from third-party tools such as Jira, Artifactory, Amazon EC2, and getting the most out of the

Jenkins REST-based API. By the end of this book, you will have all the knowledge necessary to be the definitive resource for managing and implementing advanced Jenkins automation solutions for your organization. Style and approach This book is a step-by-step guide to architecting and implementing automated build solutions, automated testing practices, and automated delivery methodologies. The topics covered are based on industry-proven techniques, and are explained in a simple and easy to understand manner. *AWS Automation Cookbook* Addison-Wesley Professional  
If you are a developer, tester, or a person in operations or Devops who wants to start practising CI, start using

TeamCity or both, then this book is for you. Moreover, if you have thought about bringing CI into your team, if you are already using a CI tool and want to move to TeamCity, or if you are looking for ideal practises and techniques while implementing CI with TeamCity, this book will be useful.

*Python Continuous Integration and Delivery* Packt Pub Limited

Integrate Jenkins, Kubernetes, and more on cloud into a robust, GitOps-driven CI/CD system, leveraging JCasC, IaC, and AI for a streamlined software delivery process

**Key Features** Follow the construction of a Jenkins CI/CD pipeline start to finish through a real-world example Construct a continuous deployment (CD) pipeline in Jenkins using GitOps principles and integration

with Argo CD Craft and optimize your CI pipeline code with ChatGPT and GitHub Copilot Purchase of the print or Kindle book includes a free PDF eBook

**Book Description**This updated edition of Learning Continuous Integration with Jenkins is your one-stop guide to implementing CI/CD with Jenkins, addressing crucial technologies such as cloud computing, containerization, Infrastructure as Code, and GitOps. Tailored to both beginners and seasoned developers, the book provides a practical path to mastering a production-grade, secure, resilient, and cost-effective CI/CD setup. Starting with a detailed introduction to the fundamental principles of CI, this book systematically takes you through setting up a CI environment using Jenkins and other

pivotal DevOps tools within the CI/CD ecosystem. You'll learn to write pipeline code with AI assistance and craft your own CI pipeline. With the help of hands-on tutorials, you'll gain a profound understanding of the CI process and Jenkins' robust capabilities. Additionally, the book teaches you how to expand your CI pipeline with automated testing and deployment, setting the stage for continuous deployment. To help you through the complete software delivery process, this book also covers methods to ensure that your CI/CD setup is maintainable across teams, secure, and performs optimally. By the end of the book, you'll have become an expert in implementing and optimizing CI/CD setups across diverse teams. What you will learn Understand CI with the Golden

Circle theory Deploy Jenkins on the cloud using Helm charts and Jenkins Configuration as Code (JCasC) Implement optimal security practices to ensure Jenkins operates securely Extend Jenkins for CI by integrating with SonarQube, GitHub, and Artifactory Scale Jenkins using containers and the cloud for optimal performance Master Jenkins declarative syntax to enrich your pipeline coding vocabulary Enhance security and improve pipeline code within your CI/CD process using best practices Who this book is for This book is for a diverse audience, from university students studying Agile software development to seasoned developers, testers, release engineers, and project managers. If you're already using Jenkins for CI, this book will assist you in

elevating your projects to CD. Whether you're new to the concepts of Agile, CI, and CD, or a DevOps engineer seeking advanced insights into JCasC, IaC, and Azure, this book will equip you with the tools to harness Jenkins for improved productivity and streamlined deliveries in the cloud.

*A Practical Guide to Continuous Delivery*  
Apress

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.

*Jenkins* Packt Publishing Ltd

If you are a Java developer, a software architect, a technical project manager, a build manager, or a development or QA engineer, then this book is ideal for you. A basic understanding of the software development life cycle and Java development is needed, as well as a rudimentary understanding of Jenkins.

Pro Continuous Delivery Packt Publishing Ltd

Create a complete Continuous Delivery process using modern DevOps tools such as Docker, Kubernetes, Jenkins, Docker Hub, Ansible, GitHub and many more. Key Features Build reliable and secure applications using Docker containers. Create a highly available environment to scale a Docker servers using Kubernetes Implement advance continuous delivery process by parallelizing the pipeline tasks Book Description Continuous Delivery with Docker and Jenkins, Second Edition will explain the advantages of combining Jenkins and Docker to improve the continuous integration and delivery process of an 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 Kubernetes. Next, you will get to know how to deploy applications using Docker images and testing them with Jenkins. Towards the end, the book will touch base with missing parts of the CD pipeline, which are the environments and infrastructure, application versioning, and nonfunctional testing. By the end of the book, you will be enhancing the DevOps workflow by

integrating the functionalities of Docker and Jenkins. What you will learnGet to grips with docker fundamentals and how to dockerize an application for the CD processLearn how to use Jenkins on the Cloud environmentsScale a pool of Docker servers using KubernetesCreate multi-container applications using Docker ComposeWrite acceptance tests using Cucumber and run them in the Docker ecosystem using JenkinsPublish a built Docker image to a Docker Registry and deploy cycles of Jenkins pipelines using community best practicesWho this book is for The book targets DevOps engineers, system administrators, docker professionals or any stakeholders who would like to explore the power of working with Docker and Jenkins together. No prior knowledge of DevOps

is required for this book.

**Jenkins: The Definitive Guide** Packt Publishing Ltd

Getting started with the processes and the tools to continuously deliver high-quality software About This Book Incorporate popular development practices to prevent messy code Automate your build, integration, release, and deployment processes with Jenkins, Git, and Gulp?and learn how continuous integration (CI) can save you time and money Gain an end-to-end overview of Continuous Integration using different languages (JavaScript and C#) and tools (Gulp and Jenkins) Who This Book Is For This book is for developers who want to understand and implement Continuous Integration and Delivery in their daily work. A basic knowledge of at

least JavaScript and HTML/CSS is required. Knowing C# and SQL will come in handy. Most programmers who have programmed in a (compiled) C-like language will be able to follow along. What You Will Learn Get to know all the aspects of Continuous Integration, Deployment, and Delivery Find out how Git can be used in a CI environment Set up browser tests using Karma and Selenium and unit tests using Jasmine Use Node.js, npm, and Gulp to automate tasks such as linting, testing, and minification Explore different Jenkins jobs to integrate with Node.js and C# projects Perform Continuous Delivery and Deployment using Jenkins Test and deliver a web API In Detail The challenge faced by many teams while implementing Continuous Deployment is

that it requires the use of many tools and processes that all work together. Learning and implementing all these tools (correctly) takes a lot of time and effort, leading people to wonder whether it's really worth it. This book sets up a project to show you the different steps, processes, and tools in Continuous Deployment and the actual problems they solve. We start by introducing Continuous Integration (CI), deployment, and delivery as well as providing an overview of the tools used in CI. You'll then create a web app and see how Git can be used in a CI environment. Moving on, you'll explore unit testing using Jasmine and browser testing using Karma and Selenium for your app. You'll also find out how to automate tasks using Gulp and Jenkins. Next, you'll get

acquainted with database integration for different platforms, such as MongoDB and PostgreSQL. Finally, you'll set up different Jenkins jobs to integrate with Node.js and C# projects, and Jenkins pipelines to make branching easier. By the end of the book, you'll have implemented Continuous Delivery and deployment from scratch. Style and approach This practical book takes a step-by-step approach to explaining all the concepts of Continuous Integration and delivery, and how it can help you deliver a high-quality product.

Continuous Integration, Delivery, and Deployment Packt Publishing Ltd

Explore the high-in demand core DevOps strategies with powerful DevOps tools such as Ansible, Jenkins, and Chef Key Features ●Get acquainted with

methodologies and tools of the DevOps framework

- Perform continuous integration, delivery, deployment, and monitoring using DevOps tools
- Explore popular tools such as Git, Jenkins, Maven, Gerrit, Nexus, Selenium, and so on
- Embedded with assessments that will help you revise the concepts you have learned in this book

**Book Description** DevOps is the most widely used software engineering culture and practice that aim at software development and operation. Continuous integration is a cornerstone technique of DevOps that merges software code updates from developers into a shared central mainline. This book takes a practical approach and covers the tools and strategies of DevOps. It starts with familiarizing you with DevOps framework

and then shows how to perform continuous delivery, integration, and deployment with DevOps. You will explore DevOps process maturity frameworks and progression models with checklist templates for each phase of DevOps. You will also be familiar with agile terminology, methodology, and the benefits accrued by an organization by adopting it. You will also get acquainted with popular tools such as Git, Jenkins, Maven, Gerrit, Nexus, Selenium, and so on. You will learn configuration, automation, and the implementation of infrastructure automation (Infrastructure as Code) with tools such as Chef and Ansible. This book is ideal for engineers, architects, and developers, who wish to learn the core strategies of DevOps.

**What you will learn**

- Get familiar with

life cycle models, maturity states, progression and best practices of DevOps frameworks ● Learn to set up Jenkins and integrate it with Git ● Know how to build jobs and perform testing with Jenkins ● Implement infrastructure automation (Infrastructure as Code) with tools such as Chef and Ansible ● Understand continuous monitoring process with tools such as Splunk and Nagios ● Learn how Splunk improves the code quality Who this book is for This book is for engineers, architects, and developers, who wish to learn the core strategies of DevOps.

*Kubernetes - A Complete DevOps Cookbook* EduBubs Publishing House Continuous integration with Jenkins speeds up your projects and saves you time and money Key Features Get a

perfect balance of theories and hands-on activities Apply continuous integration and delivery to your workflow Explore concepts such as the plugin ecosystem and adaptive build parameters, among others Book Description Jenkins Fundamentals teaches you everything you need to know about installing, setting up, configuring, and integrating a Jenkins server with your project to speed up the product development life cycle. You will learn how to deploy via Docker and integrate with Git. Next you will move on to understanding bespoke plugins and services to further customize your workflow, and dynamically adjust your build requirements when pushing to production. Once you have grasped the basics, you will explore user and plugin management along with updating and

upgrading Jenkins. You will set up freestyle projects and views to manage your projects, followed by configuring parameters for your projects and creating upstream and downstream projects with views to visualize the projects. In addition to this, you will create a secure connection from your master to your build slaves and configure your build tasks to run on the slave. By the end of this book, you will be able to successfully set up a Jenkins server that checks your source code repositories for changes, triggering new builds and unit tests while informing all of the key stakeholders in your organization. What you will learn Set up and deploy a Jenkins server across different platforms via Docker Design development workflows that enable

continuous integration and then easily integrate with Jenkins Explore community plugins and use them to extend core Jenkins functionality Set up a freestyle project as well as a view to manage your projects Understand source control and pipelines, and build parameters in the context of Git and Jenkins Configure general-purpose freestyle projects, or use more formal pipeline-driven implementation Explore concepts such as the plugin ecosystem and adaptive build parameters, among others Apply continuous integration and delivery to your workflow Who this book is for Jenkins Fundamentals is for you if you are a software developer, with prior experience in application development, looking to build and transition to a more centrally managed deployment process.



This book is ideal if you need a real-world introduction to continuous delivery, with a view to setting up and using Jenkins as a tool for your own software development life cycle.

### **Learning Continuous Integration with Jenkins** BPB Publications

Leverage Kubernetes and container architecture to successfully run production-ready workloads  
Key Features  
Implement Kubernetes to orchestrate and scale applications proficiently  
Leverage the latest features of Kubernetes to resolve common as well as complex problems in a cloud-native environment  
Gain hands-on experience in securing, monitoring, and troubleshooting your application  
Book Description  
Kubernetes is a popular open source orchestration platform for

managing containers in a cluster environment. With this Kubernetes cookbook, you'll learn how to implement Kubernetes using a recipe-based approach. The book will prepare you to create highly available Kubernetes clusters on multiple clouds such as Amazon Web Services (AWS), Google Cloud Platform (GCP), Azure, Alibaba, and on-premises data centers. Starting with recipes for installing and configuring Kubernetes instances, you'll discover how to work with Kubernetes clients, services, and key metadata. You'll then learn how to build continuous integration/continuous delivery (CI/CD) pipelines for your applications, and understand various methods to manage containers. As you advance, you'll delve into Kubernetes' integration with Docker

and Jenkins, and even perform a batch process and configure data volumes. You'll get to grips with methods for scaling, security, monitoring, logging, and troubleshooting. Additionally, this book will take you through the latest updates in Kubernetes, including volume snapshots, creating high availability clusters with kops, running workload operators, new inclusions around kubectl and more. By the end of this book, you'll have developed the skills required to implement Kubernetes in production and manage containers proficiently. What you will learn

- Deploy cloud-native applications on Kubernetes
- Automate testing in the DevOps workflow
- Discover and troubleshoot common storage issues
- Dynamically scale containerized services to manage fluctuating traffic

needs

- Understand how to monitor your containerized DevOps environment
- Build DevSecOps into CI/CD pipelines

Who this book is for

This Kubernetes book is for developers, IT professionals, and DevOps engineers and teams who want to use Kubernetes to manage, scale, and orchestrate applications in their organization. Basic understanding of Kubernetes and containerization is necessary.

*Extending Jenkins* "O'Reilly Media, Inc."

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.

*DevOps: Continuous Delivery, Integration, and Deployment with DevOps* "O'Reilly Media, Inc."

Today's web applications require frequent updates, not just by adding or upgrading features, but by maintaining and improving the software's existing code base as well. This concise book shows PHP developers how to use Jenkins, the popular continuous integration server, to monitor various aspects of software quality throughout a project's lifecycle. You'll learn how to implement continuous integration to automate processes for building and

deploying regular software releases. The book also shows you how to use Jenkins to monitor and improve your application through continuous inspection. You'll come to understand why reducing complexity and eliminating duplicate code is just as important as introducing new functionality. Learn how to use Apache Ant to automate your software builds Create a job for your PHP project in Jenkins and set up a continuous integration environment Add static code analysis tools to your build for continuous inspection Use specialized PHP and Jenkins tools to simplify the automated build and continuous integration of your project Explore additional processes and techniques, such as adding automated integration tests

*Jenkins Continuous Integration Cookbook*  
"O'Reilly Media, Inc."

"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"--Page 4 of cover.

*Mastering Jenkins* BPB Publications  
Follow this step-by-step guide for creating a continuous delivery pipeline using all of the new features in Jenkins 2.0 such as Pipeline as a Code, multi-branch pipeline, and more. You will learn three crucial elements for achieving a

faster software delivery pipeline: a fungible build/test environment, manageable and reproducible pipelines, and a scalable build/test infrastructure. Pro Continuous Delivery demonstrates how to create a highly available, active/passive Jenkins server using some niche technologies. What You'll Learn Create a highly available, active/passive Jenkins server using CoreOS and Docker, and using Pacemaker and Corosync Use a Jenkins multi-branch pipeline to automatically perform continuous integration whenever there is a new branch in your source control system Describe your continuous delivery pipeline with Jenkinsfile Host Jenkins server on a cloud solution Run Jenkins inside a container using Docker Discover how the distributed nature of Git and the

“merge before build” feature of Jenkins can be used to implement gated check-in Implement a scalable build farm using Docker and Kubernetes Who This Book Is For You have experience implementing continuous integration and continuous delivery using Jenkins freestyle Jobs and wish to use the new Pipeline as a Code feature introduced in Jenkins 2.0 Your source code is on a Git-like version control system (Git, GitHub, GitLab, etc.) and you wish to leverage the advantages of a multi-branch pipeline in Jenkins Your infrastructure is on a Unix-like platform and you wish to create a scalable, distributed build/test farm using Docker or Kubernetes You are in need of a highly available system for your Jenkins Server using open source tools and technologies

**Jenkins Administrator's Guide** Packt Publishing Ltd

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.

### **Jenkins 2.x Continuous Integration Cookbook** Packt Publishing Ltd

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 automated via Jenkins. After reading this book you will be able to do all your future Laravel deployments via the power of CI/CD.

[Jenkins Essentials - Second Edition](#) Packt Publishing Ltd

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 Jenkins: The Definitive Guide Apress "Jenkins is an award-winning open source toolset which enables us to build very sophisticated automated build pipelines very quickly. It has extensive community support which has augmented the core functionality of Jenkins by building and sharing hundreds of very useful plugins. Implementing continuous integration with Jenkins can help us immensely in reducing the risk within our software development lifecycle. It catches us bugs early and increases the quality of our software products. This, in turn, reduces the overall cost to develop innovative software in any environment - startups

and enterprise alike. Today the technology sector is experiencing a boom throughout the world. There are hundreds of startups launching every day. In order to move fast, these startups need people who are skilled at automating as much as possible. Mostly, progressive startups favor implementing completely automated DevOps pipelines from the get go. They realize that these practices of continuous integration (CI) and DevOps will yield tremendous benefits regarding speed and agility. The demand for these skills has been steadily rising over the last few years. The demand for professionals who have experience with these tools has been growing steadily over the last few years. The salaries and consulting rates for these skills have also been rising and are

only bound to go up as the demand for these skills remains steady or increases."--Resource description page. *Learning Continuous Integration with Jenkins* Packt Publishing Ltd 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

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manage and monitor Jenkins 2.x. You will also explore the ways to enhance the overall security of Jenkins 2.x. You will then explore the steps involved in improving the code quality using SonarQube. Then, you will learn the ways to improve quality, followed by how to run performance and functional tests against a web application and web

services. Finally, you will see what the available plugins are, concluding with best practices to improve quality. Style and approach This book provides a problem-solution approach to some common tasks and some uncommon tasks using Jenkins 2.x and is well-illustrated with practical code examples.

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