

Learn Jenkins to Automate Containers

Learn to automate container builds and deployments with Jenkins, Git, Docker and Kubernetes, with logging, monitoring and email alerts.

3 Days

DURATION

7

MODULES

23

TOPICS

COURSE OVERVIEW

This course covers Jenkins installation and setup alongside version control fundamentals and common Git commands for managing repositories, branches and tags. It then covers building a Docker image for a web application and pushing it to Docker Hub, followed by integrating Jenkins with Docker and Kubernetes to automatically build, push and deploy images whenever application code changes. The course also covers configuring Jenkins to send email reports through the Mailer plugin and Gmail, and integrating Jenkins with ELK for log storage and with Prometheus and Grafana for monitoring.

WHO THIS COURSE IS FOR

DevOps Engineers

Build and Release Engineers

Software Developers

System Administrators

CI/CD Engineers

PREREQUISITES

- Basic Linux Knowledge
- Knowledge of Docker and Kubernetes is required

LEARNING OBJECTIVES

- Install and configure Jenkins for continuous integration
- Explain version control concepts and core Git commands
- Apply Git branching, tagging and remote repository workflows
- Build a Docker image for a web application using a Dockerfile
- Push Docker images to Docker Hub manually and automatically
- Configure Jenkins to connect with a Docker registry
- Integrate Jenkins with Kubernetes to automate deployments
- Configure email reports and monitor Jenkins with ELK and Grafana

How the Course Is Taught

This hands-on class is approximately 80/20 lab to lecture ratio, combining engaging lecture, demos, group activities and discussions with comprehensive machine-based practical programming labs and project work.

COURSE SYLLABUS

7 Modules, 23 Topics

01

Introduction to Jenkins

TOPICS

Introduction to Jenkins · Jenkins Installation

02

Git

TOPICS

- Introduction to Version Control System
- History of Git
- Git Basics
- States in Git
- Installing Git
- Configuration of Git
- Working with Repositories
- Basic Git Commands
- Working with Remotes
- Tagging
- Git Branching

03

Building a Web Application Docker Image

TOPICS

Use Docker file to build docker build image · Push Image to Docker Hub Manually

04

Integrate Jenkins with Docker

TOPICS

- Connect Registry with Jenkins
- Automatically Build and Push Image to Docker Hub Whenever Developer Changes Application Code

05

Integrate Jenkins with Kubernetes

TOPICS

- Connect Jenkins with Kubernetes
- Configure CI/CD to automatically build, push image then deploy to Kubernetes

06

Email Integration

TOPICS

- Install Mailer Plugin in Jenkins
- Integrate Gmail with Jenkins to Send Report Email

07

Jenkins Logging and Monitoring

TOPICS

- Integrate ELK with Jenkins to Store Logs
- Integrate Prometheus and Grafana to Monitor Jenkins

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

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Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

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