Jenkins Essentials

Course JKN101 2 Days Instructor-led, Hands on

Introduction

This intensive 2-day course is designed to provide participants with a comprehensive understanding of Jenkins, a leading automation server. It covers everything from the fundamentals to advanced integration techniques. Participants will learn how to automate tasks, manage software lifecycles, and integrate Jenkins with various tools and platforms. By the end of the course, attendees will have the skills to set up and manage robust CI/CD pipelines, scale Jenkins to meet organizational needs, and leverage AI for enhanced configuration and troubleshooting.

Who Should Attend?

- DevOps Engineers
- Software Developers
- Telecommunications Professionals
- Architects
- Quality Assurance & Site Reliability Professionals

Course Objectives

- Automate basic freestyle projects
- Jenkins Pipelines and Groovy Programming
- Software lifecycle management with Jenkins
- Popular plugins
- Scaling options
- Integrating Jenkins with Git and GitHub (as well as other Software Control Management platforms)
- Triggering Jenkins with Webhooks
- Deploying into Docker and Kubernetes
- CI / CD with Jenkins
- AI LLM prompt engineering for relevant configuration snippets and solutions

Course Outline

Module 1: Basics

- Deploying Jenkins with Docker
- Jenkins Dashboard
- Freestyle Projects and Workspaces
- Triggering Jenkins Builds with WebHooks

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- Installing Jenkins Plugins

Module 2: Scripting

- Docker Build Agents
- Python Builds
- Ansible Builds

Module 3: CI / CD

- Continuous Integration
- Creating Jenkins Scripted Pipelines
- Declarative vs Scripted Pipelines
- Jenkins REST API

Module 4: Administration

- Backing Up Jenkins
    - Security and Credential Management
    - Configuration as Code

Module 5: Deploy and Configure

- Build Agents
- Freestyle Terraform and Ansible Builds

Module 6: Certification

- Jenkins Automation Server Essentials - Alta3 Research Certification Project

Module 7: Reference

- Copy Artifact
- Installing Jenkins on Windows
- PostgreSQL and Python
- Dockerizing A Python Flask App or Creating A Container Image
- Glossary