



CICDOSS - Version: 1

22 September 2021

# CI/CD with Jenkins



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 **1 days Course**

## Description:

This course will teach you DevOps concepts of Continuous Integration and Continuous Delivery, with emphasis on Jenkins.

Jenkins is on the bleeding edge of technology today. Jenkins also one of the most compelling technologies of the last decade in terms of its disruption to software development and operation practices and is becoming a must tool for DevOps.

## Intended audience:

DevOps, Developers, IT administrators.

## Prerequisites:

Basic scripting knowledge

Basic Linux OS knowledge.

Basic understanding of terminal and command line usage

## Objectives:

Get familiar with Jenkins

Learn how to configure ci/cd pipelines using Jenkins

Learn CI/CD best practices

## Topics:

### Module 01 - Introduction

- DevOps Pipelines
- What is Continuous Integration?
- The Benefits of CI

- Continuous Integration Practices
- How Jenkins Fit In?
- Most Used CI Tools
- History of Jenkins

## Module 02 - Jenkins Overview

- Architecture
- Installation
- Backup and Restore
- Configuration
- Secure Jenkins
- Jenkins Slaves
- Jenkins Plugins
- System Logs
- Jenkins Views

## Module 03 - Anatomy of a Jenkins Job

- General Configuration
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps
- Post-Build steps
- Using plugins
- Lab 2: Creating the first freestyle Jenkins job

## Module 04 - Introduction to Artifactory

- What is Package Management?
- Package Management Systems
- What is JFrog Artifactory?
- Artifactory Editions
- Generic Repositories Overview
- Lab 3: Deploying build artifacts from Jenkins to Artifactory

## Module 05 - Jenkins Pipelines as Code

- Pipeline as Code
- What is Jenkins Pipeline?
- Benefits of Jenkins Pipelines?
- Meeting the Jenkinsfile
- Declarative Pipelines
- Scripted Pipelines
- Lab 4: Continuous Integration jobs with Jenkins pipelines

## Module 06 - Jenkins with Blue Ocean

- What is Jenkins Blue Ocean?
- Main Features
- Installation
- Overview
- Lab 5: Creating a Jenkins job using Blue Ocean

## module 07 - Summary

- DevOps Pipelines
- Linux Overview
- Jenkins Overview
- Jenkins Freestyle Jobs
- Package Management with Artifactory
- Jenkins Pipelines as Code
- Jenkins Blue Ocean