

CI/CD With Jenkins and GitLab

Duration: 3 Days

Prerequisite: Basic Linux Knowledge

Hands-On Format: 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.

Module 1 – Git

- 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

Module 2 – Jenkins

- Introduction to Continuous Integration
- Introduction to Jenkins
- Jenkins Installation
- Jenkins Management
- Build Java Program
- Run Jobs on Remote Machines
- Jenkins-Maven Setup
- Build a Jar using Maven
- JUnit Testing
- Graphical View of Tests
- Saving Artifacts in Jenkins
- Introduction to Jenkins Pipeline
- Jenkins Pipeline with Maven

Module 3 – Gitlab

- Introduction to Gitlab
- Gitlab Architecture
- What is CI/CD
- Introduction to Gitlab Runner
- Installing and Configuring Gitlab Runner
- Building a CI-CD Pipeline Using Gitlab
- Managing Environment Variables in Gitlab