

DevOps Intermediate – Git, Jenkins, Kubernetes and Ansible

Duration: 5days (8hrs/day)

Prerequisites: Must attend DevOps Basic – Git, Jenkins, Kubernetes and Ansible course

Course Objective: This course aim to equip learners with the knowledge and basic practical skills needed to proficiently utilize Git, Docker & Kubernetes, Ansible, and Jenkins.

Git Version: Latest, **Docker Version:** Latest, **Ansible Version:** Latest Open Source, **Jenkins Version:** Latest

Lab Requirement: Koenig DC (CentOS 9)

Module 1 - Git

Introduction to Version Control System

History of Git

Git Basics

States in Git

Lab: Installing Git

Lab: Configuration of Git

Lab: Git Branches and HEAD

Lab: Merging Branches

Lab: Git Fetch and Git Pull

Lab: Pull Requests

Lab: Cherry-Pick Git

Module 2 – Kubernetes

Introduction to Kubernetes

Kubernetes Architecture in Detail

Lab: Running your first pod

Lab: Deployment – Blue Green and Canary Deployment strategy

Lab: DaemonSet

Lab: Manual Scheduling using NodeSelector

Lab: Manual Scheduling using Taint and Tolerations

Module 3 – Automation with Ansible

Introduction to Ansible

Ansible Architecture

Lab: Installation and Configure Ansible

Lab: AD-Hoc Commands

Lab: Managing Playbooks

Lab: Managing Variables through different methods

Lab: Ansible Vault

Lab: Register and Debug

Lab: Jinja2 Template with Looping

Lab: Managing Roles

Module 4 - Jenkins

Introduction to CI and CD

Introduction to Jenkins

Lab: Jenkins Installation

Jenkins User Interface

Lab: Integrate Jenkins with Ansible

Lab: Integrate Docker and Kubernetes with Jenkins

Lab: Managing Users and Roles