

Basic DevOps

Duration: 5days (8hrs/day)

Prerequisites: Introduction to Linux environment.

Course Objective: This course aim to equip learners with the knowledge and basic practical skills needed to proficiently utilize Git, Docker, 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: Working with Repositories

Lab: Basic Git Commands

Lab: Working with Remotes

Lab: Tagging

Lab: Git Branching

Module 2 – Docker

Introduction to Containers

Introduction to Docker

Docker Engine

Lab: Downloading and Installing Docker

Lab: Docker Essential Commands

Lab: Running your First Container

Lab: Docker Image with Docker Commit

Lab: Build Image with Dockerfile

Lab: Private Registry

Lab: Storing and Retrieving Docker Images from Docker Hub

Lab: Networking Docker Containers – Bridge, Host and None

Lab: Data Persistence with Volumes – Temporary (Default), Volumes and BindMounts

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

Lab: Managing Loops

Lab: Ansible Vault

Lab: Jinja2 Templates

Lab: Managing Roles

Module 4 - Jenkins

Introduction to CI and CD

Introduction to Jenkins

Jenkins Process

Lab: Jenkins Installation

Jenkins User Interface

Lab: Build First Job: Deploy Web Server Automatically on Jenkins Machine

Lab: Add Remote Machines and Credentials

Lab: Deploy Web Server Automatically on Remote Machine

Lab: Add Parameters in Jenkins

Lab: Integrate Jenkins with Ansible