

ITBRAINY

DevOps Course Content

- ✚ Duration: 06 week
- ✚ 12 Session (3 hour each)

1. Overview of DevOps

- ✓ Why DevOps?
- ✓ What is DevOps?
- ✓ DevOps Market Trends
- ✓ DevOps Engineer Skills
- ✓ DevOps Delivery Pipeline
- ✓ DevOps Ecosystem

2. Version Control with Git

- ✓ What is version control
- ✓ What is Git
- ✓ Why Git for your organization
- ✓ Install Git
- ✓ Common commands in Git
- ✓ Working with Remote Repositories

Git, Jenkins & Maven Integration

- ✓ Branching and Merging in Git
- ✓ Git workflows
- ✓ Git cheat sheet
- ✓ What is CI
- ✓ Why CI is Required
- ✓ Introduction to Jenkins (With Architecture)
- ✓ Introduction to Maven

Continuous Integration using Jenkins

- ✓ Jenkins Management
- ✓ Adding a slave node to Jenkins
- ✓ Building Delivery Pipeline
- ✓ Pipeline as a Code
- ✓ Implementation of Jenkins in the Project

Continuous Testing with Selenium

- ✓ Introduction to Selenium
- ✓ Why Selenium?
- ✓ Selenium – Webdriver

- ✓ Creating Test Cases in Selenium WebDriver (Waits)
- ✓ What and why X-Path
- ✓ Handling different controls on Webpage
- ✓ Framework in Selenium
- ✓ Selenium Integration with Jenkins
- ✓ Implementation of Selenium in the Project

Continuous Deployment: Containerization with Docker

- ✓ Shipping Transportation Challenges
- ✓ Introducing Docker
- ✓ Understanding images and containers
- ✓ Running Hello World in Docker
- ✓ Introduction to Container
- ✓ Container Life Cycle
- ✓ Sharing and Copying
- ✓ Base Image
- ✓ Docker File
- ✓ Working with containers
- ✓ Publishing Image on Docker Hub
- ✓ Hands On:
- ✓ Create and Implement docker images and containers

Containerization with Docker: Ecosystem and Networking

- ✓ Introduction to Docker Ecosystem
- ✓ Docker Compose
- ✓ Docker Swarm
- ✓ Managing Containers
- ✓ Running Containers
- ✓ Introduction to Docker Networking
- ✓ Network Types
- ✓ Docker Container Networking
- ✓ Implementation of Docker in the Project

Continuous Deployment: Configuration Management with Puppet

- ✓ Introduction to Puppet
- ✓ Puppet Installation
- ✓ Puppet Configuration
- ✓ Puppet Master and Agent Setup
- ✓ Puppet Module
- ✓ Node Classification
- ✓ Puppet Environment
- ✓ Puppet Classes
- ✓ Automation & Reporting

Configuration Management with Ansible

- ✓ Introduction to Ansible
- ✓ Ansible Installation
- ✓ Configuring Ansible Roles
- ✓ Write Playbooks
- ✓ Executing adhoc command
- ✓ Hands On:
- ✓ Installing Ansible
- ✓ Configuring Ansible Role
- ✓ Write Playbooks
- ✓ Execute adhoc commands

Containerization using Kubernetes

- ✓ Revisiting Kubernetes Cluster Architecture
- ✓ Spinning up a Kubernetes Cluster on Ubuntu VMs
- ✓ Exploring your Cluster
- ✓ Understanding YAML
- ✓ Creating a Deployment in Kubernetes using YAML
- ✓ Creating a Service in Kubernetes
- ✓ Installing Kubernetes Dashboard
- ✓ Deploying an App using Dashboard
- ✓ Using Rolling Updates in Kubernetes
- ✓ Containers and Container Orchestration
- ✓ Introduction to Kubernetes

Continuous Monitoring with Nagios

- ✓ Introduction to Continuous Monitoring
- ✓ Introduction to Nagios
- ✓ Installing Nagios
- ✓ Nagios Plugins(NRPE) and Objects
- ✓ Nagios Commands and Notification
- ✓ Hands On:
- ✓ Installing Nagios
- ✓ Monitoring of different servers using Nagios