



#### **DevOps** Course

#### Who we are

Techeduxon has been a platform for global online technology education since 2015. We are now taking it up a notch higher by introducing ways of advanced learning to up-skill and cross-skill your profession with cutting-edge, customized programs. With our Top Tier IT & Enterprise training Courses, We enable you to the forefront & become 'Industry Ready' in this Advancing & Unforeseen Digital World with your upskill Innovations.

Course Outline Introduction to DevOps Cloud Computing for DevOps Continuous Delivery & Integration - Jenkins Linux Essentials Version Control System - GIT Code Analysis - SonarQube Orchestration - Kubernetes Build Management Maven Configuration Management - Puppet Configuration Management - CHEF Configuration Management & IAAC - Ansible Monitoring - Nagious Containerization - Docker

**Course Content** 

## Introduction to DevOps

Introduction

What is DevOps?





Waterfall vs Agile vs DevOps DevOps Tools SDLC Models

# **Cloud Computing for DevOps**

Introduction Benefits of Cloud Computing Google Cloud AWS

## **Continuous Delivery & Integration – Jenkins**

- Introduction
- Jenkins Setup
- Jenkins Security
- **DevOps Foundations**
- Learning Jenkins
- Architecture Jenkins
- CI/CD Pipeline
- End to End automated CI/CD Pipeline





Automated Builds using Webhooks Code Quality Integrations Linux Essentials Introduction to Linux OS

File & Directory Management File Permissions Vi Text Editor Utility Commands Archives Package & Service Management

## **Version Control System - GIT**

Introduction to Version Control System Centralization & Distributed Version Control System Introduction to GIT Workflow of GIT Branching GIT Ignore Stashing & Undoing Changes Detached Head Github Remote Tagging **Code Analysis – SonarQube** 

Introduction





SonarQube Installation & Setup Analyzing Source Code Integration with Maven

## **Orchestration – Kubernetes**

Introduction to Kubernetes Architecture of Kubernetes Installation & Setup of Kubernetes Pods Services Replication Controllers Labels Networking Load Balancers Updates of Kubernetes Auto Scaling Deployments Storage and Running Stateful Applications Monitoring and Logging Build Management

Introduction to Build Management History of Build Tools





What is Ant?

# How Ant Works in Build Projects

#### Maven

- Introduction to Maven
- Objectives of Maven
- Central of Maven
- Maven Lifecycle
- Maven Project Setup
- Build Project using Maven

### **Configuration Management – Puppet**

Introduction to Configuration Management Configuration Management Tools Introduction to Puppet What is Puppet? Why Puppet? Architecture of Puppet Master Slave Setup Using Puppet Manifests of Puppet Modules of Puppet Apply Configuration Using Puppet Puppet File Server

## **Configuration Management – CHEF**

Introduction to Configuration Management Benefits of Configuration Management





Comparison Push Based & Pull Based

Infrastructure AS Code

Architecture of CHEF

Server & Work Station Setup of CHEF

Distribution Kit, Resources, Cookbooks, Attributes, Roles

Environment of CHEF

Supermarket & Data bags of CHEF

#### **Configuration Management & IAAC – Ansible**

Introduction What is Ansible? Comparison with Other Tools Ansible Setup Ad-hoc Commands in Ansible Modules Playbooks Templates Facts Variables Roles & Vault

## Monitoring – Nagious

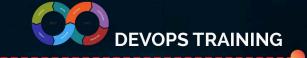
Introduction to Monitoring

Nagious Core & Plugins

Nagious Remote Plugin Executor (NRPE)

### **Containerization – Docker**





- Introduction to Docker
- Micro services Architecture
- Monolithic Architecture
- Comparison b/w Virtualization & Containerization
- Docker Architecture
- **Docker Registry**
- Docker Image
- **Docker Container**
- Managing Containers Life Cycle
- **Docker Volumes**
- Networking with Docker
- Setup 3 Tire Application using Docker
- Custom Image Building

#### **Projects & Assignments**

Our Expert trainers will provide the real time Projects & Assignments.





