

# DevOps with AWS

## Course Overview

- This is 100% hands-on course.
- Hands on practice sessions and guidance by Industry experts.
- Content customization and collaboration platform matching the diverse training needs.
- Placement assistance with placement team.
- Certification Oriented Training

## Target Participants

- Freshers, Working people, Students, IT Professionals

## Learning Formats

- Online interactive and video based training

## Our Trainer (s)

This course is delivered by **Expert Trainer having real time experience**. Having 10+ years hands on working experience.

## Introduction to DevOps

- SDLC
- Agile Method
- Waterfall Method
- What is Devops?
- It's use cases
- Devops Advantages
- Prerequisites

## Linux

- Linux Installation
- Unix Command Line
- Distribution List
- Directory structure
- File System and File Management
- User Administration
- VI editor
- Configure and monitor system logs
- Service and process management
- Package Management
- Searching tool grep, find, locate
- Text processing tools awk, cut, sort, uniq

## Shell Scripting

- Variables and it's types
- If conditions
- For loops
- While loops
- Use cases
- Real time Scenarios with examples

## AWS

- Overview of Virtualization
- Cloud Computing
- AWS services EC2, VPC, Security Group, Subnet
- Ec2 instance Backup and Restore process
- Static IP using Elastic IPs
- Elastic Load Balancer
- Cloud Watch
- Simple Notification Services

- Auto-Scaling
- Simple Storage Service S3 and its types
- User management using IAM
- Route53
- Elastic Container Registry

## GIT

- GIT basics
- Difference between versioning control tools and GIT
- Git installation
- Getting and creating projects: initialize a directory as Git repository and copy a Git repository
- Adding file contents to staging area
- View status of your files in the working directory and the staging area
- Show diff at various stages
- Record snapshot of staging area
- Undo changes and commits
- Remove files from staging area
- Branching and merging strategies
- Sharing and updating projects

## Maven

- Maven basics
- Installation and Setup of Maven
- Maven lifecycles
- Maven integration with Jenkins

## Jenkins

- Introduction of CI/CD
- Fresh instance of Jenkins installation and configuration
- How to create a job and configure it
- A walk-through of different features of Jenkins
- Jenkins Pluggins installation and configuration
- Different types of Jenkins jobs configuration such as Freestyle/Maven/ Pipeline/ Multibranch Pipeline
- Practical Jenkins administration issues
- How to integrate different build and release tools like Ant, Maven, GIT, SVN, Tomcat etc.
- Devise a strategy for the candidate's organization build and release process
- Maven project setup
- Docker and Kubernetes deployments using CI/CD

## SONAR

- Sonar installation and Advantages
- Sonar Integration with Jenkins builds

## NEXUS Repository

- Nexus installation and Advantages
- Nexus Integration with Jenkins builds

## Docker

- Introduction to Docker
- Containers vs virtual machine
- Docker platform overview and terminologies
- Docker Engine
- DockerHost
- DockerImages
- DockerContainer
- DockerRegistry
- DockerRepositories
- Getting started with Containers
- Building customized Images in different ways
- DockerVolumes(storage)
- Configure Applications and accessing Applications on containers.
- Basic Container Networking.

## KUBERNETES (Orchestration tool)

- Why Kubernetes?
- Difference between Orchestration tools such as Docker swarm and Kubernetes
- Kubernetes Usage and advantages
- Kubernetes Architecture
- Different types of installation such as Kops, kubeadm, minikube, eks
- Creation of different kinds in Kubernetes such as deployment, pod, service, namespace in CLI.
- Creation of different kinds in Kubernetes such as deployment, pod, service, namespace by using manifest files.
- Kubernetes Load balancer
- Kubernetes Auto scaling
- Kubernetes Network
- Kubernetes Storage types.

## Ansible

- Installing Ansible
- Basic inventory file setup
- Basic Concepts
- Modules and its use cases
- Ansible Playbook and Roles
- Application Deployment
- AWS instance spin using playbooks
- AWS instance backups

## Nagios

- Installing Nagios master and slave
- How to configure different services in slave
- How to configure notification in Nagios.