

# DEVOPS On AWS CI/CD Projects

**Experience the correct way of Professional Learning!!** 

### FIRST TIME IN INDUSTRY

## ADVANCED PROJECT BASED PROGRAM IN



- 22 Hours of Instructor Led Training
- 6 Real Time Projects
- Get 2 Years Experience
- Job Ready Course
- Beginner to Advanced



## WHY BECOME A DEVOPS ENGINEER?



### **Tech Boom**

The IT and Tech industry in India has grown exponentially in the last few years and this industry will be worth around 350 billion by 2025.



### No Dearth of Jobs

Currently more than 80% of the companies have adopted DevOps and rest are in the process of adopting it. This makes DevOps one of the most demanding jobs today and in the coming years.



### **High Salary**

A DevOps Engineers earns in the range \$120,000 to \$200,000 which is 25-35% more than a Software Developer with same experience.



### **Plenty of Job Roles**

DevOps Expert, DevOps Engineer, DevOps Developer, DevOps Lead, Platform Engineer, System Engineer, Site Reliability Engineer, Solution Architect

### **COURSE CURRICULUM**

### <u>Major CICD Project</u>: - CI/CD with Git, Jenkins, Ansible, Kubernetes

#### <u>Introduction to Pre-Requisite concepts</u>

- 1. SDLC Software Development Life Cycle
- 2. What is DevOps?
- 3. Role of a DevOps Engineer
- 4. What is CI and CD?
- 5. Resources to setup DevOps CI/CD pipeline
- 6. Using AWS EC2
- 7. What is GIT?
- 8. Using GitBash
- 9. Using Github
- 10. Quick tips to learn fast
- 11. Resources before starting

### Project 1 - CI/CD pipeline using Git, Jenkins and Maven

- 1. Introduction
- 2. Setting up of a Jenkins server
- 3. Running Jenkins jobs
- 4. Integration of Git with Jenkins
- 5. Running Jenkins job to pull code from GitHub
- 6. Integration of Maven with Jenkins
- 7. Building a java project using Jenkins
- 8. Build is failing, troubleshooting

#### **Project 2** - Integrating Tomcat server in CI/CD pipeline

- 1. Introduction
- 2. Setting up Tomcat application server
- 3. Integration of Tomcat with Jenkins
- 4. Deploying artifacts on a Tomcat server
- 5. Automating builds and deployment using Poll SCM in Jenkins

### **Project 3** - Integrating Docker in CI/CD Pipeline

- 1. Setting up a Docker environment
- 2. Creating a Tomcat container
- 3. Troubleshooting Tomcat container issues
- 4. Create and use a Docker file
- 5. Implementing customized Dockerfile for Tomcat server
- 6. Integration of Docker with Jenkins
- 7. Jenkins jobs to build and copy artifacts on to a dockerhost
- 8. Updating a Tomcat dockerfile for automation of deployment process
- 9. Automation of a build and deployment on Docker container
- 10. Jenkins job to automate CI/CD for deploying application on docker container

### Project 4 - Integrating Ansible in CI/CD Pipeline

- 1. Requirement for Ansible IT Polytechnic School
- 2. Installing Ansible
- 3. Integration of Docker with Ansible
- 4. Integration of Ansible with Jenkins
- 5. Building an image and creating containers on Ansible
- 6. Ansible book for creating image and container
- 7. Copying images to dockerhub
- 8. Jenkins jobs for building an image in Ansible
- 9. Creating containers on dockerhost using ansible book
- 10. How to do Continuous deployment of docker container using ansible book
- 11. Using Jenkins CI/CD to deploy on container using Ansible

#### **Project 5** - Kubernetes on AWS

- 1. Why Kubernetes is required?
- 2. Kubernetes installation
- 3. EKS installation method
- 4. Setting up a bootstrap server for eksctl
- 5. Setting up Kubernetes using eksctl
- 6. Running Kubernetes basic commands
- 7. Creating a manifest file
- 8. Creating a service manifest file
- 9. How to use labels and selector?

### <u>Project 6</u> - Integrating Kubernetes in CI/CD pipeline

- 1. Writing a deployment file
- 2. Using deployment and service files to create and access pod
- 3. Integrating Kubernetes bootstrap server with Ansible
- 4. Creating ansible books for deployment and service files
- 5. Creating Jenkins deployment jobs for Kubernetes
- 6. CI Job for creating Image in Kubernetes
- 7. How to enable rolling update to create pod from latest docker image?
- 8. End to end CI/CD job to build and deploy code on Kubernetes
- 9. Cleaning up Kubernetes setup

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### **Program Details**

**Start Date:** Reach out to us for batch start dates

**Duration: One Month** 

**Program Fee: Contact Us** 

**Program Hours: 22 Hours** 



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Today

