



**CLOUD BINARY**

Learn by Doing

**COURSE NAME : AWS DEVOPS**

## **COURSE CURRICULUM**

**Mode : Classroom & Online**

**Duration : 2.5 Months**

**Schedule: Monday - Friday**

### **Key Features Of Cloud Binary :**

- Real Time Use Case Based Teaching
- Daily 1 Hr Trainer Session
- LMS Access:
  - Daily Notes &
  - Session Recorded Video
- 9 Real Time Sample Projects
- Resume Grooming Session
- Naukri & LinkedIn Account Creation & Optimisation.
- Placement Assistance
- Recruitment and Hiring details.



**Real Time Instructor Training**



**Resume Preparation**

### **Getting Started with Operating Systems :**

- Unix & Linux History & Distributions
- Basic & Advanced Commands
- Run Levels
- Boot Process
- File System
- File & Directory Management
- Text Editors
- Permissions
- User & Group Management
- Package Management
- Controlling Services & Daemons
- Process Management
- Log Management
- WebServer - Windows IIS, Apache2, Nginx & Httpd
- Application Server - Apache Tomcat
- Database - RDBMS (MySQL)



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**9 Real Time Projects**

## Software Development Life Cycle : Agile - Scrum

- Getting Started with SDLC
- What is Agile?
- Agile Manifesto(4 Values & 12 Principles)
- What is Scrum?
- Agile Scrum Roles
- Agile Scrum Ceremonies:
  - Sprint Planning
  - Daily Standup
  - Sprint Backlog Refinement
  - Sprint Review
  - Sprint Retrospective
- Product Backlog Grooming
- Agile Scrum Artefacts
- Agile Scrum Board
- Create a Sprint using Jira/Azure Boards:
  - Create Epic
  - Create Story
  - Create a Task
- Summary

## Continuous Integration : Jenkins

- Overview of Continuous Integration
- Getting Started with Jenkins
- Jenkins Architecture
- Download, Installing and Configuring Jenkins
- Jenkins Management
- Installing Jenkins Plugins
- Creating Jenkins Jobs
- Creating Jenkins Declarative & Scripted Pipelines
- End To End Java Project CI/CD Pipeline
- Summary

## Version Control System / Source Code Management : Git

- Getting Started with VCS//SCM
- What is Git, AWS CodeCommit and GitHub?
- About Version Control System and types
- Git Workflow
- Installing on Windows & Linux
- Getting Started with Git Commands
- Working with Branches
- Merging Branches
- Creating and Committing a Pull Request
- Working with Stash
- Summary

## Continuous Static Code Analysis : SonarQube

- Getting Started with SonarQube
- Integrate SonarQube with Pipeline Jenkins & CodeBuild/CodePipeline
- Integrate SonarQube with GitHub
- Execute Code Quality using SonarQube:
  - Reliability
  - Security
  - Maintainability
  - Security Review
  - Coverage & Duplications
- Summary

## Continuous Binary Code Repository using JFrog

- Getting Started with Continuous Binary Code Repository i.e. JFrog
- JFrog Architecture
- Download, Installing and Configuring JFrog
- Integrate JFrog with VCS/SCM i.e. POM.xml
- Integrate JFrog with Maven
- Creating Jenkins Jobs & Publish artifact to JFrog repository
- Creating Jenkins Pipeline Jobs & Publish artifact to JFrog repository
- Summary

## Continuous Configuration Management: Ansible

- What is Configuration Management?
- Different Types Of Configuration Management Tools?
- What is Ansible?
- History of Ansible
- Important terms used in Ansible
- Ansible Installation in Linux
- Ansible ad-hoc commands
- Ansible Playbooks
- Ansible Roles
- Summary

## Containerisation: Docker

- Getting Started with Containers
- What is container
- List of Container Vendors
- Getting Started with Docker
- Docker Product
- Docker Architecture
- Docker Installation
- Docker Hub
- Docker Images
- Docker Networking
- Docker Compose
- Summary

## Continuous Monitoring : New Relic

- Getting Started with Observability
- What is Observability/Monitoring?
- Types of Continuous Monitoring: ( Application, Infrastructure, Kubernetes, Log Management, Browser, Mobile, Synthetics & Network Monitoring
- List of Continuous Monitoring Tools
- Configure Jobs:
  - Ping Monitoring in NewRelic
  - Simple Browser Monitoring in NewRelic
  - Scripted Monitoring in NewRelic
  - Getting Started with APM in NewRelic
  - Configure APM in NewRelic
- Configure Infrastructure in NewRelic
- Creating Dashboard in NewRelic
- Summary

## Container Orchestration : Kubernetes

- Getting Started with Cluster Orchestration
- What is Cluster Orchestration or Container Orchestration?
- Different Types of Container Orchestration vendors
- What is Kubernetes?
- Kubernetes Cluster Orchestration Architecture
- Kubernetes Components (Pods, Nodes, Service, Volume & Namespace)
- Create 3 Node Cluster & Deploy a Simple WebServer(Nginx):
- Creating Cluster, Adding Nodes to Cluster, Create Nginx Deployment, Create Nginx Service, Describe Nginx Deployment
- Validate Nginx Deployment
- Access WebSite using Cluster IP and NodeIP
- Summary

## Continuous Infrastructure As A Code:Terraform

- Getting Started with IaC
- Different Vendors Of IaC tools?
- What is Terraform?
- Core Concepts of Terraform
- Variables
- Modules
- State Files
- Create Virtual Machines using Terraform
- Create Create 3 Tier Architecture using Terraform
- Summary

## AWS Services - Compute

- Amazon EC2 :
  - Images
  - EBS
  - Security Groups
  - Snapshots
  - Creating Golden Images

## AWS Services - Storage

- Amazon Elastic Block Store (Amazon EBS)
- Amazon Elastic File System (Amazon EFS)
- Amazon S3

## AWS Services - Security, Identity, and Compliance

- AWS Certificate Manager (ACM)
- AWS Identity and Access Management (IAM)
- AWS IAM Identity Center (AWS Single Sign-On)

## AWS Services - Management & Governance

- AWS Auto Scaling
- AWS CloudTrail
- Amazon CloudWatch
- AWS Compute Optimiser
- AWS Health Dashboard
- AWS Management Console
- AWS Organisations
- AWS Systems Manager
- AWS Trusted Advisor
- AWS Well-Architected Tool



## AWS Services - Migration and Transfer

- AWS Database Migration Service (AWS DMS)

## AWS Services - Database

- Amazon RDS
- Amazon DynamoDB

## AWS Services - Networking and Content Delivery

- Amazon CloudFront
- Amazon Route 53
- Amazon VPC
- Amazon VPC Peering

## AWS Services - Serverless

- API Gateway
- AWS Lambda
- SES & SNS

## AWS Services - Developer Tools

- AWS CLI
- AWS Cloud Development Kit (AWS CDK)
- AWS CloudShell
- AWS CodeArtifact
- AWS CodeBuild
- AWS CodeCommit
- AWS CodeDeploy
- AWS CodePipeline
- AWS CodeStar
- End To End Java Project CI/CD Pipeline