



with AWS



# **Best Training and Placements Institute**



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# **About LiveTech**

iveTech was founded in 2004 by IT industry professionals to impart quality training and carve a niche in the IT training industry. LiveTech has successfully skilled 100000+ professionals in Software Testing and Development Domain. LiveTech is involved in training on Software Courses for over 21+ years. LiveTech is a leader in creating not only skilled professionals but also enhance their Employability through real time project implementation Training in Software Testing and Development. The programs are designed by Industry experts and backed by certifications recognized globally in I.T Solutions.

# **DevOps with AWS**

Module 1: Cloud Computing

Module 2: AWS

**Module 3:** AWS Services

Module 4: DevOps

**Module 5:** Version Control System (Git & GitHub)

**Module 6:** Integration & Build Automation

**Module 7:** Arti Factory

# **AWS with DevOps**

# Course Introduction: DevOps with AWS

#### **Course Introduction**

# 1. Cloud Computing

- a.An introduction to Cloud Computing,
- b. Features and Advantages,
- c. Service models
- d. Deployment models

#### 2. Amazon Web Services

- a.An introduction to AWS
- b. Features and Advantages
- c. What is Region, Availability, Edge location

- d. Introduction to AWS Services
- e. How to create AWS Account

# **Practical on AWS Services:**

# 1.EC2 (ELASTIC COMPUTE CLOUD)

- i. What is EC2 and its features
- ii. How to launch Windows Instance
- iii. How to launch Linux Instance
- iv. How to install Web Server on Linux Instance
- v. How to create AMIs and Snapshots

vi. How to setup Instance settings and

Network settings

vii. Creating Templates

viii.Launching an Instance using Templates

ix. Working with EBS Volumes

#### 2. Load Balancer

i. What is Load Balancer

ii. Types of Loab Balancer

iii. How to create Target Groups

iv. Creation of different load Balancers

# 3. Auto Scaling

i. What is Auto Scaling

ii. Creation of Auto Scaling using Templates

and Launch configuration

iii. How to attach Load Balancer with AS

# 4. IAM ( IDENTITY AND ACCESS MANAGEMENT )

i. What is IAM and its features

ii. How to set MFA

iii. How to Create Users

iv. How to Create Groups

v. Assigning Policies to Users and Groups

vi.Creating Roles

vii. Setting Password policy

viii. How to create Access Keys

# **5. S3 ( SIMPLE STORAGE SERVICE )**

i. What is S3 and its features

ii. How to create bucket

iii. How to upload objects into the bucket

iv. How to set bucket level and object level permissions.

v. What is Versioning and how to use them.

vi. Static Website hosting

vii. Lifecycle management

viii. Transfer acceleration

ix. Storage class Analysis

x. Cross Region Replication (CRR)

xi. How to attach SNS with S3 using JSON script xii. How to create cloudtrail logs for S3 bucket

#### 6. VPC

i. What is Network, Advantages and Network Devices.

ii. What is IP Address, classes of IP. Subnetting

iii. What is VPC and its features

iv. How to create VPC

v. How to create Subnets

vi.Internet Gateway

vii. Routing Tables

viii.NAT Gateway

ix. Security Groups

x. Network ACLs

#### 7. Route 53

i. How to Register a DNS Domain

ii. Routing Policies

a. Simple Routing Policy

b. Latency based Routing policy

c. Failover Routing policy

d. Weighted Routing Policy

e. Geo-location Routing policy

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# 8. Elastic File System(EFS)

How to create File and System and mounting file system on to the Instances to share the files

# 9. Relational Database Service (RDS)

i. What is Database, Table, Form, Query and Report

ii. How to create Databases and connecting with Web Servers.

# 10. Simple Notification Service (SNS)

- i. What is SNS
- ii. How to create a SNS Topic
- iii. How to add a subscribers to the SNS Topic
- iv. How to send messages from SNS

#### 11. Elastic Beanstalk

- i. What is Elastic Beanstalk
- ii. How to create Application and Environment
- iii. How to deploy the applications

#### 12. CloudFormation

- i. What is CloudFrmation
- ii. How to create Stack
- iii. How to deploy the Application

#### 13.S3 Glacier

- i. How to create Vault
- ii. How to generate access keys for FastGlacier
- iii. How to install FastGlacier
- iv. How to upload, download and delete

Archives from the Vault

# 14. Lightsail

- i. What is Lightsail
- ii. How to create Lightsail Instances with application
- iii. How to create Disks, Snapshots.
- iii. How to Register a Domain.

#### 15. CloudFront

- i. What is CloudFront
- ii. How to create Distribution point
- iii. How to create orgins and attach with Distribution.

#### 16. CloudWatch

- i. What is CloudWatch
- ii. Types of Monitoring
- iii. How to create Cloudwatch Alarms
- iv. How to create Widgets using metrics

### 17. AWS Lambda

i. What is Lambda

- ii. How to create Pipeline using Lambda.
- lii. What is Codecommit, code build.

#### 18. Cloud trail

- i. What is Cloudtrail
- ii. How to create trail for different events.

#### 19.SES

- i. What is SES
- ii. How to add the identities
- iii. How to send the messages to added identities.

#### **20.SOS**

- i. What is SQS
- ii. Types of Queue
- iii. How to attach SNS with SQS

# 21. DynamoDB

- i. What is DynamoDB
- ii. How to create Database Tables
- iii. How to add attributes and data through forms
- iv. How to do Query and filter actions on Tables.
- v. How to prepare the Reports
- vi. How to export Tables to S3.
- vii. How to import Tables from S3 to DynamoDB.
- viii. How to create Backups

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#### **22. AWS CLI**

- i. Introduction to AWSCLI
- ii. How to install AWSCLI
- iii. How to configure AWSCLI with AWS using

Access Keys.

iv. Working with CLI Commands

23. ECR

**24.ECS** 

**25.EKS** 

# Theoretical Topics to be covered

1.Snowball

2.KMS

# **Introduction to DevOps:**

- What is Software Development team and IT Operations team
- Problems before DevOps
- What is DevOps and why it is developed?
- History of DevOps
- What is Software Development Life Cycle and main objectives of the DevOps
- · What is Tool chain?
- DevOps Phases and Tools
- Aim of DevOps
- Six Continuous processes in DevOps (Continuous Development, Continuous Integration, Continuous Test, Continuous Delivery, Continuous Deployment, Continuous Monitoring)

# **Version Control System: (Git and GitHub)**

- What is Version control system?
- · What is Distributed and Centralized Version Control system?
- Introduction to Git and it features?
- Introduction to Git hub and creation of repository?
- Installation of Git Server
- Working with local repositories, remote repositories
- Cloning
- Branching
- Merging
- Fetch / Pull
- Merge / Rebase
- Git conflict
- Git Stashing
- Git ignore

- Git reset / revert
- Git exclude

# **Continuous Integration; (Jenkins)**

- What is Continuous Integration?
- Workflow of Continuous Integration
- · Introduction to Jenkins, its history and features
- Installation of Open JDK and Jenkins on Linux Server
- Configuration of Jenkins Server
- Global configuration, Node configuration and Job configuration
- User Profile and Management
- Security and Plugins Management
- Installation and configuration of git in Jenkins Server.
- Installation and configuration Oracle JDK in Jenkins
- Installation and configuration of Maven.
- Creation of Nodes and configuring with Jenkins Server
- Creation of Users and setting Authorization
- Installation of Plugins for different Build tools
- Building of Freestyle projects, Maven projects and Pipeline projects

# **Build Automation; (Maven)**

- Introduction to Maven
- Maven structure and Phases
- Installation of Maven on Jenkins Server
- · Configuration of Maven on Jenkins Server
- Building Maven projects through Jenkins Server

# **Artifactory: (Jfrog Artifactory)**

- Introduction to Ansible, Chef and Puppet
- Introduction to architecture of Ansible
- Installation of Ansible Master Server and Nodes
- Configuration of Nodes with Master Server
- Creation of playbooks using YAML code
- Deployment of playbooks on to the Nodes

#### Docker:

- Introduction to Docker
- Docker Terminologies
- Installation of Docker
- Docker image creation using Dockerfile and existing containers.
- Pulling images from Docker hub
- Creation of containers using Docker images
- Deploying applications on to the containers
- Docker Networks
- Docker Volumes
- Deployment of Tomcat on the containers

#### **Terraform:**

- Introduction to Terraform
- Installation of Terraform on Linux Server
- Creation of terraform coding files (.tf files)
- Configuring Terraform with AWS
- · Converting code into infrastructure using Terraform
- Introduction to Visual Studio Code
- Converting code into infrastructure using Visual Studio Code

#### **Kubernetes:**

- Introduction to Kubernetes
- Detailed discussion of Kubernetes Architecture
- Installation of Kubernetes on Linux Server
- Configuration of Control plane and Worker Nodes
- · Creation of Pods and deployment of applications

# **System Monitoring**

- Introduction to Nagios
- · Concepts behind Nagios
- Nagios Installation
- Hands-on

Faculty	<b>:</b>
Date	<b>:</b>
Time	<b>:</b>
Duration	<b>:</b>
Fee	<b>:</b>
Comments	<b>:</b>

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Test Engineer

3-Months



4-Months



Python Developer

3-Months

# **Training Methodology**









**Resume Preparation** 



Certification



**Interview Preparation** 



**Placement Assistance** 



#### **Our Infrastructure**















