



Learn Linux + AWS + DevOps + Kubernetes + Terraform

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Exp: 9+ years in DevOps, AWS and Linux

Location: Hyderabad (Currently working on AWS, Dev-ops and Linux)

Course Description: AWS DevOps Training is curated by industrial experts to help you develop your skills in both AWS and DevOps which will upgrade your career.

The Fundamentals of DevOps powered by AWS is a beginner-level course that covers the basics of DevOps in the AWS runtime environment. It introduces learners to different phases of software development including the traditional approach, the DevOps approach, the need for DevOps in software development and the benefits of adopting DevOps, etc.

Throughout this online instructor-led training for AWS DevOps, you will be working on real-time industry use cases.

Clear your **AWS Certified Solution Architect** and **AWS certified SYSOPS Administrator Certifications** with this AWS DevOps course.

AWS DevOps Hands on practice and Realtime Explanation

- Day to Day Explanation on **Linux, AWS and DevOps** for each topic on live session based on the Business Requirements.
- Working with AWS services, Deployment Activities, creating Infrastructure using Terraform
- Hands On Exercises of Basic to Advanced
- **Doubts will clear on live sessions.**
- **Interview questions** on each topic will be covered on daily basis and provided to the candidate
- Daily Practice at Home
- **Complete End to End** Practical sessions.
- **Realtime Project with Explanation using** AWS account
- Realtime Project Document Explanation
- **Resume building**
- **Certification and Interview Preparation**
- **Mock Interviews**

Course Duration : 60 Hours (40+ days)
(90 mins of Live sessions daily)

Software Installation : PUTTY

Trial Accounts : AWS

Take Away : Daily notes with Sample Data Model and sample case study

Recordings : **Life-time recording access**

Class Delivery : On-Line (Interactive LIVE Web Based) – ZOOM

AWS Curriculum

Table of Contents:

AWS Overview

- Basics of RDMBS
- Fundamentals of Data center
- Fundamentals of Servers
- Fundamentals of Cloud Computing
- Cloud Providers – AWS vs AZURE vs GCP
- Use Case of Applications On Cloud
- AWS – Cloud Terminologies
- AWS – Security
- AWS – High Availability
- AWS – Fault Tolerance
- AWS – Scalability
- Walk through AWS Free Tier Account
- AWS Management Console

AWS global Infrastructure

- AWS Global Footprint
- Overview of AWS Services
- AWS Regions
- AWS Availability Zones
- AWS Edge Locations

Operating System & Linux Basics

- Introduction to Linux OS
- Linux Hierarchy
- Linux Architecture
- Understanding Command Line Interface – CLI
- Understanding Linux File System
- Using Text Editor (vi)
- File & Directory Management
- Archive Files Using tar and zip utilities
- Package Management
- User Management
- File Permissions

Application components

- Installing and Configuring Apache HTTP Server
- Deploying Frontend Application, Using Apache HTTP Server
- High Availability Concepts For Production Scenario
- Load Balancing with AWS Classic Load Balancer
- PHP Setup For Deploying Backend Tier
- Creation of RDS instances in AWS for application stack
- Understand the architecture of an application
- Integration of Web, Application and Database to work as a stack

Amazon Elastic Compute Cloud - EC2

- Launch Amazon Linux server
- Launch Windows server

- Amazon EC2 Features
- Amazon EC2 Components
- Amazon EC2 Instance Types
- Amazon Machine Images (AMI)
- EC2 IP Address Types Private vs Public vs Elastic
- Amazon EC2 User data
- Snapshots
- Custom AMI
- Horizontal scaling
- Vertical scaling
- Auto scaling
- Fault tolerance

Hands on

- Launch and Connect to an EC2 instance
- Work with SSH Key Pairs
- SSH Softwares – Putty & Terminal
- Deploying Web Applications On EC2 Instance
- Deploying Web Application Using Userdata

Cloudwatch Monitoring Tool

- Monitoring – Cloud watch
- Cloud watch Dashboards
- Cloud watch Alarms

Hands on

- Create Cloud watch Dashboard
- Create Cloud watch Alarm
- Configure Email For High CPU Usage
- Take EC2 Action Using – Cloud Watch

Simple Notification Services - SNS

- SNS Topics
- SNS Subscriptions
- SNS Publishers
- Publish Mails Using SNS

Amazon Elastic Block Storage - EBS

- Amazon EBS Features
- EBS ROOT Volume
- EBS ADDITIONAL Volume
- EBS Volume Types
- EBS Volumes Limitations
- EBS Volume Backups – SNAPSHOTS

Identity and Access Management - IAM

- IAM Overview
- Root User vs IAM User
- IAM Access Ways
- IAM Policies
- IAM Groups
- IAM Roles
- MFA
- Permission Boundaries

- Password policy setup
- AWS Managed policies
- AWS customer managed policies
- Policies Emulator

AWS Command Line Interface - CLI

- Access key and Secret key
- Graphical Interface vs Command Line Interface
- AWS CLI Features
- AWS CLI Configurations
- Installing AWS CLI on Windows OS
- Installing AWS CLI on Amazon Linux
- Configure AWS CLI
- Creating S3 buckets, IAM users, Key pairs, Security groups Using AWS CLI

Amazon Simple Storage Service - S3

- Amazon S3 Features
- Use Case – What Storage To Opt – Client Req
- Amazon S3 Buckets
- Amazon S3 Objects
- Amazon S3 Access ACL's
- Amazon S3 Access Bucket Policy
- Amazon S3 Storage Classes
- Amazon S3 Lifecycle Management rule
- Amazon S3 Versioning
- Static Website Hosting
- S3 Encryption
- Events in S3

Amazon Virtual Private Cloud - VPC

- Public IP vs Private IP
- CIDR
- IP address classes
- Amazon VPC Features & Benefits
- Amazon VPC Components Overview
- Understanding Default VPC
- Designing Custom VPC – Client Requirement
- VPC Route table
- AWS Internet Gateway
- VPC Public Subnets
- VPC Private Subnets
- Bastion / Jump server
- VPC NACL's
- VPC Security Groups
- VPC Flowlogs
- VPC Peering

Amazon Elastic File System - EFS

- Shared File Systems – NFS
- Amazon EFS Features
- EFS Use Cases
- EFS Storage Classes

- EFS Mount Points
- EBS vs EFS

Infrastructure as a Code - Cloud Formation

- Graphical vs Command Line Interface vs Code
- Infrastructure as a Code – IaC
- AWS Cloud Formation Features
- AWS Cloud Formation Templates
- AWS CloudFormation vs Terraform

Hands on

- Cloud formation Template YAML
- Creating a Custom VPC Using Cloud formation
- Configure Reusable Infrastructure Using Cloud formation

Route53

- Advantages of Route53
- Types of Routing Policies
- Domain name registration

IAAS vs PAAS vs SAAS

- Cloud Offerings – IAAS vs PAAS vs SAAS
- IAAS – Infrastructure As A Service
- PAAS – Platform As A Service
- SAAS – Software As A Service

Relational Database Service - RDS

- What is RDS
- Create an RDS instance with MySQL
- Deleting RDS instance
- Multi-AZ

Elastic Beanstalk

- Elastic Beanstalk Features
- Server Setup – PAAS
- Apache Tomcat Use Case

Hands on

- Create Beanstalk Environment – Tomcat
- Deploying Java Web Application
- Connecting Web Application to RDS Instance
- Checking High Availability & Fault Tolerance

AWS Lambda

- What is Lambda
- How to create a simple Lambda function
- Trigger Lambda using other AWS services

Cloud Trail

- What is Cloud Trail
- How to work with it

Key Management Service - KMS

- What is KMS
- How to work with it

Simple Queue Service - SQS

- What is SQS
- How to work with it

Snowball

- What is Snowball
- Types of snowball devices

CloudFront

- What is CloudFront
- How to work with it

Final Project - Hosting a Java and PHP application in AWS cloud

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Resume Preparation and Interview tips

- Resume Preparation and Interview tips

DevOps Curriculum

Table of Contents:

Difference between SDLC, Agile and DevOps

- Fundamentals of Web Applications
- Introduction to Software Development Life Cycle (Application Lifecycle Management)
- Essential Technologies of SDLC
- Execution of Software Development Life Cycle (Application Lifecycle Management)
- Introduction to Continuous Integration – CI
- Introduction to Continuous Deployment – CD

Operating Systems/Linux

- Introduction to Linux OS
- Linux Architecture
- Understanding Command Line Interface – CLI
- Understanding Linux File System
- Using Text Editor (vi)
- File & Directory Management
- Package Management
- User Management
- File Permissions
- Service Management
- Configure Firewalls to secure the application
- Understand how IP addresses, ports, and DNS works
- Load Balancers
- HTTP/HTTPS

Version Control System Management (GitHub)

- Introduction to Source code management
- Git Introduction
- Git Architecture
- Git Workflow
- Git Branching Model
- Git Merging Branches
- Git Forking
- Undoing Changes
- Git Ignore
- GitHub For Remote Repositories
- Using existing GIT Repositories with Clone
- Pull Requests

Learn Cloud Computing - (AWS)

- Fundamentals of Datacenter
- Fundamentals of Servers
- Fundamentals of Cloud Computing
- Cloud Providers – AWS vs Azure vs GCP
- Basics of AWS
- Working with AWS

Jenkins for CI/CD

- Overview of Jenkins
- Setting Up Jenkins
- Setting Up Build Jobs
- Build Parameters
- Build Triggers
- Jenkins Plugins
- Jenkins Pipelines
- Jenkins Integrations
- Creating Jenkins Users
- Upstream and Downstream Jobs
- Poll SCM
- Build periodically

Containerization with Docker

- Introduction to Containerization
- Virtualization using Virtual Machines
- Virtual Machines vs Docker
- Docker Architecture
- Components of Docker
- Setting up Docker
- Docker Registry
- Docker Images Vs Docker Containers
- Running Docker Containers
- Docker Volumes
- Containerize Applications
- Creating Docker Container from Docker Image
- Sharing images using Docker Hub
- Docker port expose
- Docker push

Build tool Maven

- Introduction to Maven
- Architecture of Maven
- Maven Goals
- Triggering Build with Maven
- Installation of Maven in Linux server

Orchestration with Kubernetes

- Introduction to Container Orchestration
- Container Orchestration Tools
- Overview of Kubernetes
- Kubernetes Architecture
- Components of Kubernetes
- Understanding and running Containers
- Running Pods of Containers
- Replica Sets, Deployments and Services

Configuration Management with Ansible

- Complexity in Infrastructure Management
- Introduction to Configuration Management Tools
- Tomcat setup using playbooks
- Introduction To Ansible
- Ansible Setup
- Ansible Inventory
- Ansible Modules
- Ansible Ad-Hoc Commands
- Introduction To YAML
- Ansible Playbooks
- Ansible Vault
- Ansible Templates

Infrastructure as a Code with Terraform

- Terraform Installation
- Understanding Terraform HCL
- Terraform with AWS
- Setup Highly Available Infrastructure Using Terraform

Monitoring with Grafana and Prometheus

- Introduction to Monitoring
- Grafana Introduction
- Grafana Overview
- Installing Grafana on a Linux Server
- Creating Grafana Dashboards
- Introduction to Prometheus
- Monitoring
- Alerting

Scripting with YAML For Ansible Playbooks

- Creating Ansible Playbooks
- HCL Scripting with Terraform

Final Project - DevOps Pipeline Project

- Integrating with Git, Maven, Docker, Aws

Resume Preparation and Interview tips

- Resume Preparation and Interview tips

By the end of this course, you will be able to:

- Creating Infrastructure in AWS cloud
- From Console/GUI, AWS CLI, CloudFormation and Terraform
- Creating CI-CD Pipelines and building jobs
- Doing automation using AWS Lambda
- Automation tasks using Ansible
- Managing source code using GitHub
- Triggering builds using Maven
- Deploying application in Containers using Docker
- Using AWS services to create the infrastructure for hosting Applications
- Apply effective cost control measures in AWS account

Certifications



Certification includes:

- ✓ eCertificate for download
- ✓ Digital badge to prove your skills
- ✓ Add silks on your LinkedIn

