



CLOUD ENGINEERING AWS+DevOps

**COURSE
CONTENT**



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ABOUT US

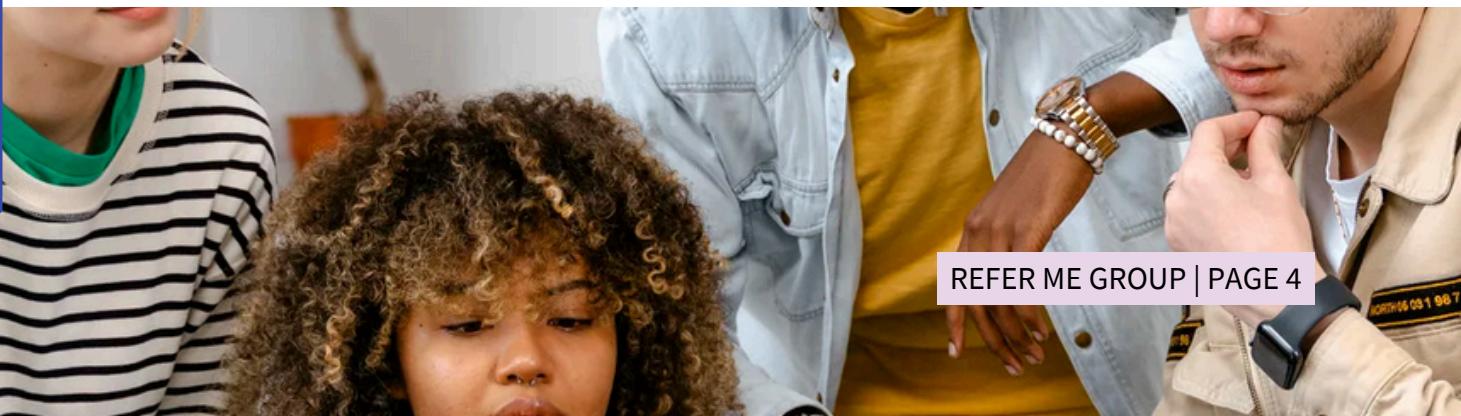
For over 10 years, we've been growing from scratch and today we are on a mission to help the community with our dedication and honesty. Our mission is to provide best knowledge at affordable fee with great quality.

We believe that everyone deserves best and money should not be barrier in learning.

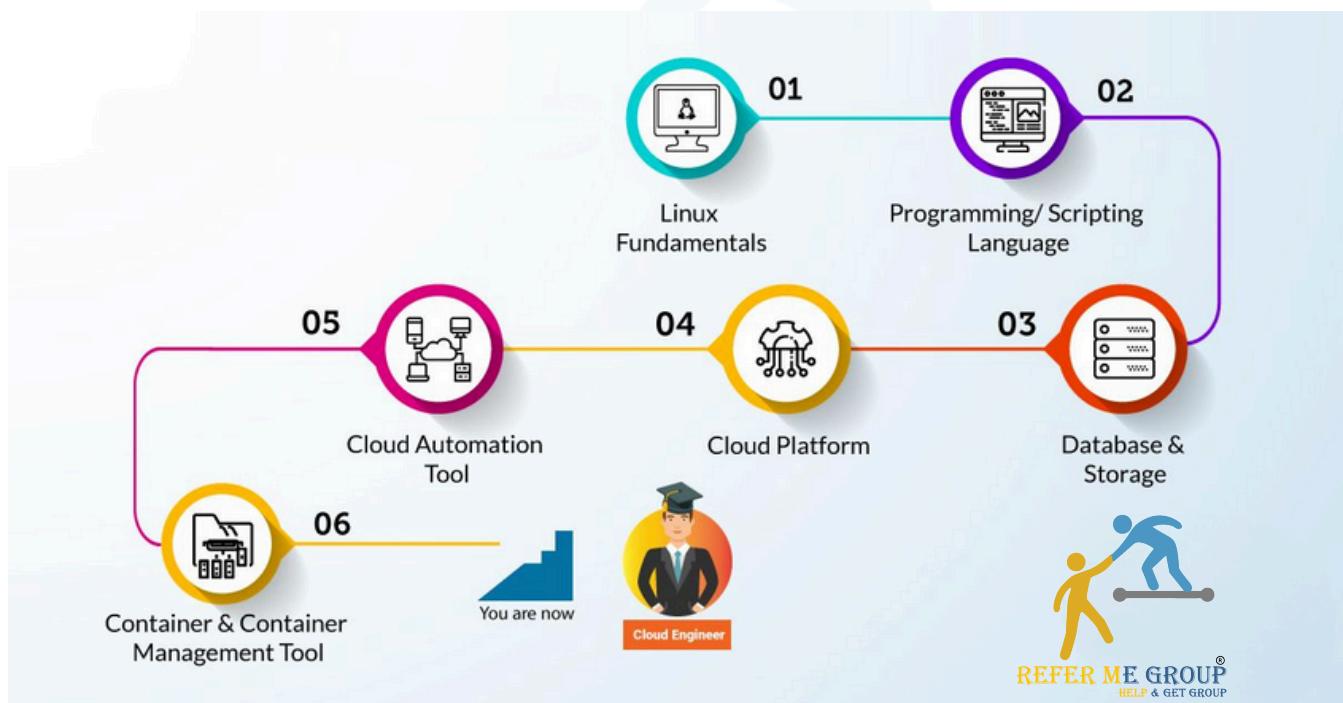


- Ø Affiliation with multiple Certification Board**
- Ø Registered (see Logo)**
- Ø 10+ Years old Edu-Tech Institution**
- Ø Served/Serving 10+ Corporates**
- Ø Trained Professionals from 20+ Countries**
- Ø 510+ Professionals Trained as Business Analysts**
- Ø 350+ Professionals Trained in AWS + DevOps**
- Ø 400+ Agile Certified Professionals**
- Ø 4.8 Rating by 740+ Professionals on Google**
- Ø 2500+ Professionals Trained in Automation**
- Ø 2,800+ (99.8%) Passed ISTQB Professionals**
- Ø 5,800+ Professionals Trained**
- Ø 11,000+ Hours of Training**
- Ø 1,80,000+ Professionals Network**

PROGRAM EXECUTION



CAREER PATH



AWS COURSE CONTENT

Session 1 Introduction to Cloud Computing

- A Short History
- Client-Server Computing Concepts
- Challenges with Distributed Computing
- Introduction to Cloud Computing Why Cloud Computing?
- Benefits of Cloud Computing
- Describe the features of AWS
- The features of AWS Marketplace
- Describe the features of Amazon Compute Services
- Describe the features of Amazon Storage Services
- Describe the features of Amazon Network Services
- Describe the features of Amazon Database services
- Describe about various services in AWS
- Global Infrastructure – Regions and Availability Zones
- Create a free tier Account in AWS and onboarding
- Introduction AWS Management Console

Session 2 Cloud Computing Deployment Models

- Private Cloud
- Public Cloud
- Hybrid Cloud

Session 3 Cloud Delivery / Services Models

- Software as a Service (SaaS)
- Platform as a Service(PaaS)
- Infrastructure as a Service (IaaS)



AWS COURSE CONTENT

Session 4 Linux Basics

- Linux Basic Commands
- Linux Basic Administration
- Vim Editor Modes
- Filesystem Hierarchy – Basic topics
- File and Directories creation
- Grep
- Filter commands (head, tail, more, less)
- Creating users and groups
- Important files related
- Modifying, deleting users and group
- Linux permissions
- Basic permissions overview
- Software management
- Yellowdog update Modifier (yum)
- Yum Commands
- Different run Levels
- Services and Daemon

Session 5 Introduction to AWS Services

- Amazon Elastic Compute Cloud (EC2)
- Amazon Simple Storage Service (S3)
- Elastic Block Storage (EBS)
- Elastic Load Balancing (ELB)
- Amazon Relational Database Service (RDS)
- Amazon Dynamo DB Auto Scaling
- Amazon ElastiCache
- Identity and Access Management (IAM)
- Virtual Private Cloud (VPC)
- Cloud Formation
- Simple Email Services (SES)
- Simple Queue Services (SQS)



AWS COURSE CONTENT

- Simple Notification Services (SNS)
- Serverless computing (Lambda)
- Import/Export (Snowball)
- Code Commit
- Cloud Trail
- Elastic Beanstalk
- Cloud Front
- Route-53
- Glacier
- Key Management Service (KMS)

Session 6 Introduction to AWS

- Subscription to AWS
- Introduction to the AWS Management Console

Session 7 Elastic Compute Cloud (EC2) Essentials

- Regions and Availability Zones –Choose the right Region
- Amazon Machine Images (AMI)
- Working with AMIs
- Choosing the right AMI
- Deciding what goes into an AMI
- Finding the right AMI
- A pricing model in EC2 instances
- On-demand, Reserved, Scheduled, Spot instances, Dedicated Hosts
- EC2 Reserved Instance Marketplace
- Importing and Exporting Instances



AWS COURSE CONTENT

Session 8 EC2 Instances

- Building an EC2 Windows instance & Linux Instance
- Bootstrapping with user-data
- Setting up Security
- Security with Key Pairs
- Working with the Security Group
- Different IPs assigned to an EC2 instance
- Assigning Elastic IPs
- Login/Access to the Instance
- Creating your own custom AMI,
- Registering & Granting access to the AMI
- Placement Groups
- EC2 Instance Protection
- Instance Roles
- Importing and Exporting Instances
- Elastic Network Interfaces (ENIs)
- Resources and Tags
- Accessing Meta-Data & Use Cases.
- Describe AMI and AWS Marketplace Templates

Session 9 Elastic Block Store (EBS)

- EBS Volume Types
- EBS Encryption
- EBS Performance
- Instance Store volumes
- Instance Stores Available on Instance Types
- Instance Store Usage Scenarios
- Adding Instance Store Volumes to an AMI
- Optimizing Disk Performance
- Creating and Deleting Volumes
- Attaching and Detaching Volumes
- Mounting and Unmounting the Attached Volume



AWS COURSE CONTENT

- Increasing the Volume Size
- Creating Snapshots
- Creating Volumes & AMIs from Snapshots Cross-Region
- Snapshot Copy & Use Cases

Session 10 Elastic Load Balancer (ELB)

- What Is Elastic Load Balancing How Elastic Load Balancing Works Classic & App ELB types.
- Creating Load Balancer
- Internal & External Load Balancers
- Load Balancing Protocols
- Listener Configurations
- SSL Negotiation Configurations
- Attach & Detach Subnets
- Security Groups for the Load Balancer
- Configure Health Check for the Load Balancer
- Connection Draining
- ELB Traffic Logging
- Adding multiple instances to the Load Balancer
- Custom Domain Names
- Cross-Zone Load Balancing
- DNS Failover
- Sticky Sessions
- Monitoring and Logging
- DNS Failover
- Sticky Sessions
- Monitoring and Logging
- Cross-Zone Load Balancing
- Migrating Classic Load Balancer to New Load Balancer
- Components and types of Load Balancing



AWS COURSE CONTENT

Session 11 Auto Scaling

- What is Auto-Scaling
- Auto-Scaling Components
- Benefits of Auto-Scaling
- Creating Launch Configuration and its Prerequisites.
- Creating Auto Scaling Groups (ASG)
- Attach & Detach EC2 Instances in ASG
- Configuration of Auto-Scaling Policies based on the Load on EC2 instances.
- Using Auto-Scaling with Elastic Load Balancer (ELB).
- Temporarily Removing Instances
- Suspend and Resume Process
- Shut Down Your Auto Scaling Process
- Monitoring Your Auto Scaling Instances
- Health Checks
- Getting Notifications when your Auto Scaling Group Changes
- The lifecycle of Autoscaling
- Policies of Autoscaling

Session 12 Simple Storage Service (SSS)

- Creating and Deleting Buckets
- Adding Objects to Buckets
- Getting Objects
- Deleting Objects
- Notifications
- Uses of S3 Storage
- Working with Permissions of S3, Access Control, Bucket Policy
- S3 Data Encryption Types
- Enable Versioning, Logging for S3 objects
- Lifecycle Rules in s3
- Accessing S3 Storage with Tools
- Hosting a Static Website



AWS COURSE CONTENT

- Cross-Origin Resource Sharing
- Cross-Region Replication
- Audit Logging with AWS Cloud Trail
- S3 Transfer Acceleration

Session 13 Glacier Storage

- Creating Vaults
- Working with Archives
- Accessing the Glacier Vault using Tools
- Using Glacier for Backups
- Job Operations
- Data Retrieval Policy Operations

Session 14 Identity and Access Management (IAM)

- Creation of User Accounts
- Setting up Multi-Factor Authentication (MFA)
- Roles in IAM
- Groups in IAM
- Delegation of Permissions for Users
- Creation of Custom Policies for Delegation
- Using Identity Providers
- Cross-Account Access
- Account Settings
- Credential Report
- Encryption – Key Management Service (KMS)



AWS COURSE CONTENT

Session 15 Virtual Private Cloud (VPC)

- Different types of Networks that can be set up in AWS
- Creating a custom VPC
- NACLs & Security Groups
- Creation of Internet Gateway (IGW)
- Connecting to instances in the Gateway
- Subnets, Route Tables & Association
- NAT Instances & NAT-Gateways
- VPC Peering
- VPN overview & components

Session 16 Route 53

- Configuring Amazon Route 53 as Your DNS Service
- Registering a Domain Name and Configuring Amazon Route 53 as the DNS Service
- Migrating DNS Service for an Existing Domain to Amazon Route 53
- Creating a Subdomain That Uses Amazon Route 53 without Migrating the Parent Domain
- Working with Public Hosted Zones
- Working with Private Hosted Zones
- Working with Resource Record Sets
- Health Checks and DNS Failover
- Creating, Updating, and Deleting Health Checks
- Transferring a Domain from a Different AWS Account or Registrar
- Using IAM to Control Access to Amazon Route 53 Resources

Session 17 Cloud Watch

- Monitoring the AWS Service Health Dashboard
- Monitoring with Cloud Watch
- Getting Statistics for a specific EC2 Instance
- Getting Aggregated Statistics
- Metrics for other AWS Services and related Namespaces Setting up Notifications



AWS COURSE CONTENT

Session 18 Simple Notification Services (SNS)

- Creation of a Topic
- Subscribing to the topic via Email Setting notification for EC2 Instance Changes

Session 19 Simple Queue Service (SQS)

- Creation of a Queue
- Sending messages to the Queue
- Sending SNS to SQS
- Retrieving messages from SQS

Session 20 Simple Email Service (SES)

- Setting up Email Domain
- Limits of SES
- Test Email Setup

Session-21: Elastic Beanstalk

- Creation of Web-App using Elastic Beanstalk
- Building a sample application using Beanstalk Modifying the properties of the deployment



AWS COURSE CONTENT

Session 22 Relational Database Service (RDS)

- DB Instances
- Selecting the DB-Engine
- Configuring the Database Server
- Creating your Database
- Setting up Automatic Backups, Snapshots & Restores
- Authorizing access to the DB with RDS Security Groups
- DB Instance Replication
- Security: Using IAM to Manage Access to Amazon RDS Resources
- RDS Limits
- Managing MySQL Database server
- DB Instance Life Cycle: Renaming a DB Instance
- Deleting or Rebooting a DB Instance
- Working with Storage Types
- Upgrading a DB Instance
- Working with Option Groups & DB Parameter Groups
- Working with Reserved DB Instances
- Monitoring
- Database Log Files

Session 23 Cloud Front

- How Cloud Front Delivers Content
- Working with Distributions
- Working with Web Distributions
- Working with Objects
- Request and Response Behavior
- Serving Private Content through Cloud Front
- Using an HTTPS Connection to Access Your Objects
- Using IAM to Control Access to CloudFront Resources
- Monitoring CloudFront Activity Using Cloud Watch



AWS COURSE CONTENT

Session 24 Elasticache

- ElastiCache Terminology and Concepts
- Backup and Restore
- Clusters Explanation (Memcached and Redis)
- Cloud Watch Metrics with ElastiCache
- Managing ElastiCache
- Managing Replication Groups DNS Names and Underlying IP

Session 25 Cloud Formation

- Building AWS infrastructure as a Code
- Utilization of Sample Templates
- Introduction to JSON

Session 26 Amazon Kinesis

- Kinesis Essentials
- Kinesis workflow, Procedures & Consumers
- Elastic Map Reduce Essentials

- Session 27 Use Cases
- Cloud Architecture Best Practices
- Cost Optimization
- Security Considerations
- Cost Calculation
- AWS CLI & use case to check Instance, ELB, EBS States
- Building a simple web application in the AWS cloud
- Certification Track & Guidance
- Session 28 AWS Troubleshooting
- Troubleshooting EC2 instance
- Troubleshooting using Cloud Watch



AWS COURSE CONTENT

- Troubleshooting using ELB
- Troubleshooting by using Cloud Front

Session 29 AWS Architecture and Design

- Backup and Disaster Recovery
- How to manage Disaster Recovery and Backups
- Best Practice for DR and Backups
- AWS High Availability Design
- Session 30 DevOps Fundamentals
- An understanding of DevOps and the modern DevOps Toolsets
- Automate all aspects of a Modern Code Delivery and Deployment Pipeline
- Build tools – Apache ant, Maven
- Source Code Management tools – CVS, Git
- Test Automation Tools – JUnit
- Continuous Integration Tools – Jenkins, Team city
- Configuration Management Tools – Chef, Puppet, Ansible

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Session 1 Python

- Introduction to Python
- Installation of Python
- Python Input and Output statements
- Python DataTypes
- List, Set, Tuple, Dictionary
- Looping and Conditional statements in python
- Functions in Python

Session 2 Python Boto3

- Installation of Boto3
- Boto3 Authentication
- Boto3 on Windows & Linux
- Boto3 Request & Response Syntax
- Working on Output
- Basic List Programs
- Boto3 Integration with Lambda
- Boto3 Integration with Jenkins
- Boto3 Report Generation
- Boto3 Email Notification

Session 3 Lambda

- Introduction to Lambda
- Working with Functions
- Lambda Use Cases
- Lambda Roles
- Lambda Time-out
- Lambda Boto
- Lambda Use cases for DR
- Lambda Disaster Recovery Configuration
- Lambda Stop/Start Instance



DEVOPS COURSE CONTENT

Session 4 Cloud Formation

- Building AWS Infrastructure as a Code
- Utilization of Sample Templates
- Introduction to JSON & YAML
- Cloud Formation Vs Terraform
- CFT Stack
- CFT Structure
- CFT code for EC2 Instance with Sec group & EIP
- CFT code for VPC Whole setup

Session 5 Ansible

- What is Ansible? Why Ansible?
- Configuration Management Tools
- What are Pull and Push Based Tool
- Ansible Installation
- Ansible Command Modules
- Working with different Modules in Ansible
- Ansible Host Entries
- Ansible Playbook
- How to Create and Work Playbook
- Ansible with AWS
- AWS automation using ansible

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DEVOPS COURSE CONTENT

Session 6 Docker

- Hypervisor Vs Docker Container
- Container Architecture
- Docker Basics
- Docker Architecture
- Docker Installation
- Docker Commands
- Docker Image Build
- Docker-hub registry
- Docker Volumes
- Docker Networking
- Docker Compose
- Deploying Web Application in a Container

Session 7 Jenkins

- Jenkins Basics
- Jenkins Installation Linux + Windows
- Jenkins Global Tool Configurations
- Jenkins Jobs Creation
- Jenkins with GitHub
- Jenkins Folders for Job
- Jenkins Pipeline
- Jenkins Job and pipeline for AWS
- Jenkins Groovy Scripting
- Pipeline with different Stage
- Plugin Management
- Master and Slave Configuration
- Jenkins Integration with Git Repo
- Jenkins Credential Management



DEVOPS COURSE CONTENT

Session 8 Git Hub

- Creating Login/Access
- Working with Public & Private Repo
- Working with Repo Settings
- Webhooks in Git Hub
- Jenkins integration with Git Repo

Session 9 Salt Stack

- Configuring and Managing the Salt Master and Minion Client Environment
- Installing Salt-Minion Agents Package to Salt-Minion Clients and establishing the Communication
- Pulling Reports from Minion Clients.
- Working with System Services, Installing the Packages and Executing the Commands which can be done Remotely

Session 10 Terraform

- Terraform Introduction
- Terraform Implementation
- Terraform Vs Cloud Formation
- Terraform working with Providers
- Terraform Code Writing
- Terraform Plugins
- Terraform Cloud Modules
- Terraform State File
- Terraform as Infrastructure as a Code
- Terraform State Files Backup
- Terraform Modules
- Terraform Variable file



DEVOPS COURSE CONTENT

Session 11 ELK Stack

- Elasticsearch, Logstash, and Kibana (formerly known as the ELK Stack, now renamed to the Elastic Stack with the addition of Beats) deliver actionable insights in real-time for almost any type of structured and unstructured data source, at any scale

Session 12 Kubernetes

- Docker vs Kubernetes
- Introduction to Kubernetes Service
- Introduction to Containers on EKS
- Build and Store Container Images with AWS ECR
- Prepare an Application for AWS EKS
- Deploy and Use AWS Container Registry
- Deploy an EKS cluster
- Run your Application
- Scale Applications
- Update an Application
- Stop and Start Pods
- Update Running Pods
- Share Data to Pods
- Upgrade Kubernetes in EKS

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RISE TO ROAR

150+ SM/PM TRANSFORMATION

200+ OTHER TOOLS/TECHNOLOGIES

350+ PROFESSIONALS TRAINED IN AWS + DEVOPS

400+ AGILE CERTIFIED PROFESSIONALS

510+ BUSINESS ANALYST TRANSFORMATION SUCCESS STORIES

2500+ AUTOMATION TRANSFORMATION SUCCESS STORIES

2800+ (99.8%) PASSED ISTQB PROFESSIONALS

You can also roar



ADD-ON BENEFITS

TRAINING WHATSAPP GROUP

PERSONAL MENTORSHIP

SUPPORT AFTER TRAINING COMPLETION

DEDICATED STAFF DURING TRAINING PROGRAM

LIFE TIME CLASSROOM RECORDED SESSIONS

RESUME PREPARATION

LINKEDIN PROFILE UPDATE

PREMIUM JOB GROUP

Add-On Benefits

OUR NETWORK

10 MILLION+ IMPRESSION ON LINKEDIN

1,20,00+ LINKEDIN CONNECTIONS

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15000+ PROFESSIONALS ON WHATSAPP JOB GROUPS

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