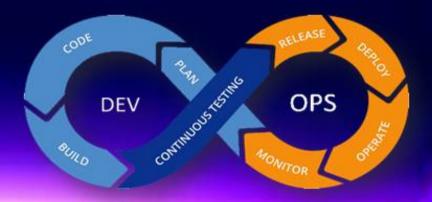# VAGILE TECHNOLOGIES

AWS DevOps Project Oriented Online Training

Features of our training

➤ Live training sessions
➤ Project Oriented Online Training
➤ Real Time Hands-on Training
➤ Certification Oriented Online Training
➤ Basics to Advance level concepts
➤ Recorded SESSIONS
➤ Resume preparation
➤ Interview preparation

Once the training is completed you can clear the interviews and certification and also can work in the real time environment

Course content

Topics

➢Cloud computing
➢Cloud development and service
➢Models AWS global infrastructure and its benefits
➢AWS regions availability zones
➢Edge locations AWS services
➢Way to access AWS services: AWS CLI, AWS SDK ,AWS Management console

Hands-on

➢Sign up for AWS free trial
➢Account Creation
➢Creation S3 bucket through
➢Console create an S3 bucket through AWS CLI launch an EC2 to instance

Security Management in AWS

Learning Objective

➢In this module, you will learn about how to securely manage your application and your AWS account using various Amazon security services.

Topics

➢User management through Identity Access
➢Management (IAM) Various access policies across AWS Services
➢AWS Security & Encryption: KMS

Hands-On

➢Create new user who can log into AWS create role for an application
➢Create policies for new user to have other admirer
➢Credential rotation for IAM uses
➢Login to AWS console via MFA
➢Create custom policies

Object storage options

Learning Objective

➢In this module, you will learn about the different Object Storage Services offered by AWS, identify when to use a specific service, how to store/transfer data using these services and optimize the storage cost.

Topics

➢S3 bucket storage classes
➢In S3 glacier deep active
➢S3 lock policies S3 performance optimization cost
➢Optimization for S3 difference between S3 EBS and EFS

Hands-on

➢ Hosting a static website on Amazon
➢ S3 versioning in AWS S3
➢ Replicating data across
➢ transfer and retrieve data from glacier through
➢ lifecycle policy upload a file to AWS S3 through a web site
➢ accessing a static website through cloud format.

Amazon EC2

Learning Objective

➤EC2 (Elastic Compute Cloud) is the backbone of AWS. In this module, you will learn about the concepts associated with an EC2 instance and its usage. This module covers different AMIs, a demo on launching an EC2 instance, ways to connect with an instance, and how to host a website on EC2 instance.

Topics

➤Start stop and terminate an ec2 instance
➤AMI ,VPC, public and private IP storage services
➤Instance
➤ Store EBS and its types
➤SSD's and provisioned
➤ IOPS hard disc drives
➤ EFS
➤EBS vs EFS
➤ Cost optimization

Hands on

➤Host your website inside
➤Ec2 create an AMI
➤Create an elastic IP attaching an EBS volume
➤Externally to create a snapshot
➤Mount EFS volumes

Load balancing auto scaling and rotate 53

Learning Objective

➤In this module, you will learn the concepts of Load Balancing, Auto-Scaling, and Route 53 to manage traffic.

Topics

➤Templates for launch configurations
➤Comparison of classic Network and application
➤Load balancer auto scaling
➤Components of auto scaling
➤Lifecycle of auto scaling auto scaling policy working of route 53 e various routing policies

Hands-on

➤ Create classic load balancer
➤Create a network load balancer
➤Work with application load balancer and
➤Auto scaling auto scaling and scaling policy
➤Point a sub domain to ec2 book in route 53

Database services and analytics

Learning Objective

➤In this module, you will learn about the different database services offered by AWS to handle structured and unstructured data. This module also gives you knowledge on how to analyze your data.

Topics

➢Amazon RDS Database
➢RD stand its benefits read replica
➢RDS and IAM authentication and dynamo DB

Networking and monitoring services

Learning Objective

➢This module introduces you to the Amazon Virtual Private Cloud. You will learn to implement networking using public and private subnets with VPC. Also, this module demonstrates how to monitor your services

Topics

➢VPC –benefit stand
➢Components CIDR notations
➢Network access control list vs security groups
➢NAT(network address transaction):NAT devices ,NAT gateway and NAT instance
➢VPC peering

Hands on

➤ Create a non default VPC and attach it to an EC2

➤ Instance accessing internet inside provide

➤ Subnet using NAT gateway connect two

➤ Instance in different VPC using VPC peering

➤ Monitoring an EC2 instance using could watch

➤ Enable trial and the store logs in S3

➤ Explore trusted advisor

➤ Connected to an app hosted in different VPC through private link

Terraform on AWS cloud

➢Why terraform

➢What are providers

➢Variables in terraform [Hands on]

➢Local blocks in terraform

➢Dynamic blocks in terraform

➢Backend states in terraform

➢Commands in terraform

➢Count, for each usages

➢Remote states in terraform

➢Map and Lists

- Terraform Functions

- Connecting local machine to Terraform cloud

- Terraform cloud

- Sentimental policies

- Terraform Provisioners

- Terraform Workspaces

- Terraform Registry

- Terraform Modules

- Modules in terraform

- Creating VPC on AWS

- Creating NAT And internet gateway

- Creating public and private subnets

- Creating EC2 instances

- Configuring S3 bucket for backend state

- Prevising lamda in terra form

- Implementing auto scaling and load balancing

- Implementing RDS
-
- Master class on IAM

- Terraform secret injection
-
- Terraform Plugins

- Implementing Kubernetes on terraform [Hands on]

GIT

1) Git stages

2) Git SSH

3) Git commands push pull

4) Git Branching Strategy

5) Git with Devops Team Management

6) Forking a Repository

7) Tagging Commits

8) About Version Control System and Types

9) GIT Features

10) Installing Git

 11) Git Essentials

12) Creating repository

13) Fetch pull and remote

14) Creating the Branches, switching the branches, merging the branches.

15) GIT Clone, Fetch, Pull

16) GIT Rebase & Merge

17) GIT Stash, Reset, Checkout

Monitoring Tools

➢Introduction to Cloud Watch
➢Monitoring EC2 instances within Cloud Watch
➢Installing Prometheus and Integrating with Grafana
➢Prometheus Architecture
➢Grafana basics
➢Monitoring EC2 Instances with Prometheus and Grafana

CICD PIPLELINE

Ansbile

➢Why Ansible [Hands on]
➢Setup Ansible on EC2 instances Rhel and Ubuntu [Hands on]
➢Ansible ad hoc commands and inventory file [Hands on]

- Ansible conditions [Hands on]

- Dynamic Inventory files [Hands on]

- Ansible play books [Hands on]

- Notify and handlers [Handson]

- Modules in Ansible [Hands on]

- Variables [Hands on]

- Vaults in Ansible [Hands on]

- Roles in Ansible [Hands on]

- Deploying web applications in Ansible[Hands on]

- Plugins in Ansible [Hands on]

Build tool – Maven

- Maven installation
- Maven build requirements
- Maven pom builds (pom.xml)
- Maven build life cycle
- Maven plugins

Jenkins

- Jenkins as CI Tool
- Tomcat server setup
- Scheduling jobs using pollscm and crontab and Webhooks
- Adding slaves and Jenkins file configuration
- Maven architecture and implementing maven as build tool
- Jenkins file
- Jenkins pipeline implementation

Docker–Containers and Virtual Development

➢What is a Docker

➢Dockers vs. Virtualization

➢Docker Architecture.

➢Installing Docker on Linux.

➢Docker commands.

➢Docker Hub - Uploading the images in Docker Registry

➢Running multiple containers with Custom images

➢Docker Networking

➢Docker Compose

kubernetes

➢Kubernetes architecture

➢Installing Kubernetes on Cloud [Hands on]

➢Replication controller [Hands on]

➢Health checks [Hands on]

➢Pod lifecycle [Hands on]

➢Creating Kubernetes Production cluster on AWS [Hands on]

Bonus add on

➢Session on: resume preparation [2 hours]
➢Session on: interview questions discussion [2 hours]