

# **GETIN TECHNOLOGIES**

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## **COURSE NAME: AWS DEVOPS TRAINING**

Module 1

Visit our website for Course Fees and Course Duration

**Placement Eligibility:** 

Eligible: Any Bachelor Degree, Any Master Degree, MBA No Eligible: Diploma

Class Mode: Classroom | Online | Recorded Session | Al Session

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# AWS DevOps Module 1 SYLLABUS Linux Fundamentals:

## **Installation and Initialization**

- Installation, Package Selection
- Anatomy of a Kickstart File, Command line
- System Initialization, starting the Boot process: GRUB

#### Boot and package Management.

- Configuring services to run at boot
- Securing single-user mode (SU login)
- Shutting down and rebooting the system
- RPM Package Manager, Installing and Removing Software, Updating a Kernel RPM
- Yum Command set, Install packages by using yum
- Apt-get command set, Apt-cache package management.

## **User Administration**

- Understanding different types of groups and creation of groups
- Creation of users in different groups
  Creation of users in different groups
- Understanding Passwd, Shadow Files
- Understanding password aging
- Creation of quotas for users, groups and file systems
- Understanding users security files
- The different commands for Monitoring the users
- TROUBLESHOOTING

• Automation of jobs - Cron, at

#### Run levels.

- Understanding the different types of run-levels
- Understanding different types of shutdown commands
- Understanding run control scripts
- Understanding the different types

## **Overview of the Service Protocols**

- FTP
- DHCPDNS
- Apache
- Samba
- LVM

# Why Cloud?

- Why Cloud and What is Cloud Computing?
- Identify the features and benefits of cloud computing
- Different types of Cloud Computing deployment model
- Public Cloud, Private Cloud, Hybrid Cloud
- Virtualization An essential in cloud
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- Virtualization in Cloud model
- Different types of virtualization
- Hypervisor Benefits
- Different types of services and its difference in Cloud computing
- laaS, PaaS, SaaS
- Importance of scaling in cloud computing
- Different types of scaling and its applications
- Issues we overcome using cloud and applications
- Cost model that we use in cloud computing

# AWS:

#### AWS – An overview

- 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

#### Understand Identity Access Management (IAM) of AWS

- Protect your AWS by different authentication system
- Password policies set for users
- AWS User Account and Groups in detail
- Creating custom policies in AWS
- Introduction about Roles and its use
- Creating Roles and associating policies
- Creating programmatic access and management console access for users
- Associating policies to the user and groups

#### **EC2** Instance

- Describe AMI and AWS Marketplace templates
- Launch a basic EC2 instance
- Different types of Instances Reserved, On-demand, Spot, Dedicated
- Security groups and tags for EC2 instance
- Public key Private key introduction and protecting EC2 with keys
- Attaching and detaching EBS volumes

- Launch an ec2 instance from an AMI
- Create custom AMI and working with different region
- Make use of amazon EBS volume and create snapshots
- Manage the configuration of your application
- Deploying a new instance from the created AMI

## **Auto-scaling**

- Get Started with Auto Scaling Using the Console
- Creating Launch configurations and make use of it for autoscaling groups
- Maintain a Fixed Number of Running EC2 Instances
- Dynamic Scaling
- The lifecycle of autoscaling
- Policies of autoscaling

#### **Load Balancing**

- Introduction to Loadbalancer (ELB)
- Different types of Load Balancer in AWS
- Application Load balancer
- Network Load balancer
- Classic Load balancer
- Migrating classic load balancer to new load balancer
- Components and types of load balancing

# **EBS (Elastic Block Storage)**

- Create EBS volumes.
- Delete EBS Volumes
- Attach and detach EBS volumes with EC2 instance.
- Creating and deleting snapshots

# **Object Storage in Cloud**

• Understanding S3 durability and redundancy

- Introduction about S3 Buckets
- How S3 Uploading works and how to Download
- How to S3 Permissions
- How to implement S3 Object Versioning S3 Lifecycle Policies
- Storage Gateway
- Import Export
- S3 Transfer Acceleration
- Glacier storage

#### CloudFront

- Describing cloud front
- Creating a cloud front distribution
- Hosting a website of cloudnt distribution
- Implementing global restrictions
- Configuring origins and behaviors

#### Route 53

- Describe Hosted zones and Domain name understanding
- How to create hosted zones
- Hosting a website with custom domain name
- Understanding routing policies

#### **AWS Security Management**

- Describing Security Practices for Cloud Deployment
- AWS Shared Responsibilities and Securities
- Importance of Cloud Trail
- Describing Trust advisor

## **Amazon Virtual Private Cloud (VPC)**

- Introduction to Amazon Virtual Private Cloud (VPC).
- VPC Advantages and understanding IP addressing CIDR

- Default and Non-default VPC
- Different Components in VPC
- Describe, create, and manage Amazon Virtual Private Cloud
- Amazon VPC, Private Subnet, and Public Subnet
- AWS Networking, Security Groups, and Network ACLs
- Configuration and management of VPN connectivity
- Subnet and Subnet Mask

#### **Relational Database Service (RDS)**

- Introduction to RDS
- Different database services of AWS: Amazon RDS, Dynamo DB, Redshift etc.
- Create MYSQL RDS Instance, Oracle RD<mark>S Instance, MS SQL RDS Instance</mark>
- Configuring the database
- Configuring backups
- Configuring the maintenance windows
- Connecting to the database

#### **DynamoDB**

- Creating a dynamo dB
- Adding data manually
- Learn about strong and eventual consistency
- Calculating Read write consistency
- Configuring alarms

## **Monitoring Services**

- Knowledge on Cloud watch A monitoring service
- Create and Configuring Monitoring services
- How to perform Setting thresholds and Configuring actions
- Creating a cloud watch alarm
- Getting statistics for ec2 instances
- Monitoring other AWS services

- Configuring Notifications
- Integrating cloud watch with Autoscaling

## **Application Services – An Overview**

- What is SNS
- Creating a topic
- Create subscription
- Subscribed to the subscription
- SQS & SES
- Lambda and Elastic Beanstalk

# **AWS Troubleshooting**

- Troubleshooting EC2 instance
- Troubleshooting using Cloud watch
- Troubleshooting using ELB
- Troubleshooting by using Cloud front

# **AWS Architecture and Design**

- Backup and Disaster Recovery
- How to manage Disaster Recovery and Backups

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- Best Practice for DR and Backups
- AWS High Availability Design

# **DevOps:** Introduction to DevOps

- History of DevOps
- DevOps principles
- Benefits of DevOps
- DevOps tools and technologies.

#### **Source Code Management:**

- GIT
- GITHUB

#### **Continuous Integration and Continuous Deployment**

- Jenkins
  Configuration Management
- Ansible
  Containerization
- Docker
  Monitoring and Logging
  - Splunk
  - Prometheus

#### **Infrastructure Automation**

• Terraform

#### **Case studies and projects**

 Real-world use cases of DevOps principles and practices, and projects to apply what you have learned.
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