# **AWS Course Curriculum**

#### 1. Linux Fundamentals

#### 2. Installation and Initialization:

- Installation, Package Selection
- > Anatomy of a Kickstart File, Command line
- > Introduction to Bash Shell
- System Initialization, Starting the Boot Process: GRUB

### 3. 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

#### 4. User Administration:

- Understanding different types of groups and creation of 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

#### 5. Run levels:

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





Understanding the different types

### 6. Overview of the Service Protocols:

- ➤ FTP
- ➤ DHCP
- > DNS
- Apache
- > Samba
- > LVM

**AWS Sysops Administrator Certification** 

## 7. Cloud Computing

- Introduction to Cloud Computing
- Why Cloud Computing?
- Benefits of Cloud Computing
- > Types of Cloud Computing
- Public Cloud
- Private Cloud
- > Hybrid Cloud
- Community Cloud
- Software as a Service
- Platform as a Service
- Horizontal vs vertical scaling
- Cloud Computing Issues
- Security
- Costing Model

#### 8. What is virtualization?

- Virtualization and cloud computing
- > Types of virtualization
- Virtualization terminologies
- Hypervisor
- Benefits

Vendors

#### 9. AWS Platform

- Introduction to AWS Elastic computing
- ➤ Introduction to the AWS products
- Regions and Availability Zones
- Signing up for AWS
- ➤ AWS Free usage tier
- > Introduction AWS management console

#### 10. EC2 Instance

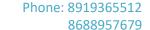
- Understanding AMI
- Launching your first AWS instance
- On-demand Instance pricing
- Reserved Instance pricing
- Spot instance pricing
- Setting up security
- Security groups
- Choosing & Creating a new AMI
- Public and Private IP's
- Deploying a new instance from the created AMI
- Key Pairs
- ➤ Elastic IP's

# 11. Load Balancing

- > Introduction to Scaling
- ELB(Elastic Load Balancer)
- Components and types of load balancing

# 12. Auto-scaling

- Get Started with Auto Scaling Using the Console
- Maintain a Fixed Number of Running EC2 Instances
- Dynamic Scaling





- > The lifecycle of autoscaling
- Policies of autoscaling

## 13. EBS (Elastic Block Storage)

- Create EBS volumes
- Delete EBS Volumes
- Attach and detach EBS volumes
- Mounting and unmounting EBS volume
- Creating and deleting snapshots
- Creating volumes from snapshots S3(Simple Storage Service)

## 14. Storage in Cloud

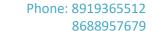
- > S3 durability and redundancy
- > S3 Buckets
- S3 Uploading Downloading
- > S3 Permissions
- S3 Object Versioning
- ➤ S3 Lifecycle Policies
- Storage Gateway
- > Import Export
- > S3 Transfer Acceleration
- Glacier storage

#### 15. Cloud Front

- Use of cloud front
- Creating a cloud front distribution
- Hosting a website of cloud front distribution
- Implementing restrictions
- Configuring origins and behaviors

#### 16. Route53

- Creating Zones
- Hosting a website





- Understanding routing policies
- Weighted simple and failover policies

## 17. Identity Access Management (IAM)

- Creating Users and Groups
- Applying policies
- Password Policy
- Roles

### 18. AWS Security Management

- Security Practices for Cloud Deployment
- > AWS Responsibilities and Securities
- Cloud Trail
- Trust advisor

### 19. Amazon Virtual Private Cloud (VPC)

- Introduction to Amazon Virtual Private Cloud (VPC)
- VPC Advantages
- Default and Non-default VPC
- Components of VPC
- Direct Connect
- 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

## 20. Relational Database Service (RDS)

- ➤ Introduction to RDS
- ➤ Different database services of AWS: Amazon RDS, Dynamo DB, Redshift etc.
- Configuring the database
- Configuring backups
- Configuring the maintenance windows

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Connecting to the database

### 21. Dynamo DB

- Creating a dynamo dB
- Configuring alarms
- > Adding data manually

## 22. Management Tools

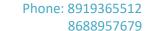
- Cloud watch dashboard
- Configuring Monitoring services
- Setting thresholds
- Configuring actions
- Creating a cloud watch alarm
- Getting statistics for ec2 instances
- Monitoring other AWS services
- Configuring Notifications
- Integrating cloud watch with Autoscaling
- Cloud Trail

## 23. Application Services

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

# 24. AWS Troubleshooting

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





Troubleshooting by using Cloud front

### AWS Architecture and Design

## 25. Backup and Disaster Recovery

- How to manage Disaster Recovery and Backups
- Best Practice for DR and Backups
- AWS High Availability Design

## 26. Troubleshooting and Price Calculator

- AWS Best Practices (Cost +Security)
- > AWS Calculator & Consolidated Billing

### 27. DevOps Fundamentals

- An understanding of DevOps and the modern DevOps toolsets
- The ability to automate all aspects of a modern code delivery and deployment pipeline using:
- Source code management tools CVS, Git
- Build tools Apache Ant, Maven
- > Test automation tools JUnit
- Continuous Integration Tools Jenkins, Team city
- Configuration management tools Chef, Puppet, Ansible
- ➤ Monitoring tools Nagios

## 28. Projects & Resume Preparation...



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