AWS Cloud Computing Training Syllabus

Linux Fundamentals

Installation and Initialization

- Installation, Package Selection
- Anatomy of a Kickstart File, Command line
- Introduction to Bash Shell
- 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
- 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
- DHCP
- DNS
- Apache
- Samba
- LVM

AWS Sysops Administrator Certification

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

What is virtualization?

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

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

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

Load Balancing

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

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

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)

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

Cloud Front

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

Route53

- Creating Zones
- Hosting a website
- Understanding routing policies
- Weighted simple and failover policies

Identity Access Management (IAM)

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

AWS Security Management

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

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

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
- Connecting to the database

Dynamo DB

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

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

Application Services

- 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 trail
- Troubleshooting by using Cloud front

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

Troubleshooting and Price Calculator

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

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