**Cloud computing – AWS (SysOps)**

***Amazon Web Services***

**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
* Infrastructure as a Service
* Horizontal vs vertical scaling
* Cloud Computing Issues
* Security
* Costing Model
* Service Level Agreement (SLA)
* Cloud Interoperability Issue
* What to migrate?
* Legal and compliance

**What is virtualization?**

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

**Amazon Web Services (AWS)**

* 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 Instances**

* Understanding AMI
* Launching your first AWS instance
* On-demand Instance pricing
* Reserved Instance pricing
* Spot instance pricing
* Setting up security
* Security groups
* Choosing the AMI
* Creating a new AMI
* Public and Private IP’s
* Deploying a new instance from the created AMI
* Key Pairs
* Elastic IP’s
* ELB(Elastic Load Balancer)

**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)

**What is S3**

* RRS(Reduced Redundancy storage)
* S3 durability and redundancy
* S3 Buckets
* S3 Uploading Downloading
* S3 Permissions
* S3 Object Versioning
* S3 Lifecycle Policies

**Glacier storage
Route53**

* Creating zones
* Hosting a website
* Understanding routing policies
* Weighted simple and failover policies

**Cloud Front**

* Use of cloud front
* Creating a cloud front distribution
* Hosting a website of cloud front distribution
* Implementing restrictions
* Configuring origins and behaviours

**Identity access management (IAM)**

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

**Amazon Virtual Private Cloud (VPC)**

* What is VPC?
* VPC configuration
* VPC security
* Elastic IP’s Inbound and outbound ACL’s

**Cloud Formation**

* What is cloud formation?
* Deploying template
* Create Stack
* Delete Stack
* Monitoring the resources

**Relational Database Service (RDS)**

* Selecting the Database type
* Configuring the database
* Creating database
* Configuring backups
* Configuring the maintenance windows
* Connecting to the database

**Dynamo DB**

* Creating a dynamo db
* Configuring alarms
* Adding data manually

**Cloud Watch**

* 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 Auto scaling

**Auto scaling**

* Boot strapping
* Create a launch configuration
* Create an Auto Scaling group Create a policy for your Auto Scaling group
* Set up an auto-scaled, load-balanced Amazon EC2 application

**Simple Notification Service (SNS)**

* What is SNS
* Creating a topic
* Create subscription
* Subscribed to the subscription
* SQS
* SES

**Other AWS Services in a brief**