

Amazon Web Services

Introduction to Cloud Computing

- Introduction cloud computing world
- History
- Cloud business models
- Public, Private and Hybrid cloud models
- Advantages of cloud computing

AWS Overview

- AWS Regions and Availability zones.
- Tools to access services.
- Overview of the console.

Linux Essentials

- Introduction to BASH
- Basic Commands(ls,cd,cat,touch,mkdir)
- Text Editor(vi)
- Package Management(yum)
- Installing and Removing Software
- Configuring a Apache Web server
- Creating File System and mounting
- Volume Management

AWS EC2(Elastic Compute Cloud)

- Introduction to EC2.
- Pricing models On-demand vs Reserved vs Spot instances.
- Using Amazon Machine Images (AMIs) to create the instances.
- Public vs Private Images.
- Sharing Images to other accounts.
- Logging into instances using key pairs.
- Converting PEM files to ppk.
- Assigning static IPs using Elastic IPs.
- Control access to instances using Security Groups.
- Backup and restore process of the EC2 instances.
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EBS

- Volumes and types.
- Creating Volumes and attaching to Instances.
- Using snapshots for backup.
- Increasing the size of the volumes.
- Backup and restore process of the EBS Volumes.

Elastic File System

- Introduction to Network File System.
- Creating Resources for EFS.
- Managing EFS File Systems.
- Mounting EFS File Systems.
- Troubleshooting.

Elastic Load Balancer

- Introduction to Elastic Load Balancing.
- Creating ELB from Console.
- Attaching instances to ELB.
- Configuring Ports, Protocols
- Configuring health checks.
- Enabling sticky session.
- Connection draining.
- Troubleshooting.
- Enabling SSL Certificates for https transactions.

Cloud Watch

- Introduction to Cloudwatch monitoring service.
- Setting thresholds.
- Configuring Actions.
- Monitoring CPU, Memory and network utilization of different resources.
- Creating notifications.
- Integrating with Auto-scaling.

Cloud Watch Logs

- Introduction
- Need of Cloudwatch Logs.
- Business Use Cases.
- Example Scenarios.

Simple Notification Services

- Introduction to notifications
- Creating Topics
- Subscribing to Topic
- Publishing to SNS Topic
- Testing e-mail and SMS functionality.

Relational Database Service

- Introduction to Managed database.
- Creating RDS instances using AWS console.
- Choosing an RDS engine and version.
- Public vs Private database instances.
- Multi-AZ setup.
- Backup using snapshots and point in restore.
- Parameter Group.
- Options Group.
- Control access to instances using Security Groups.

Auto-scaling

- Overview.
- Creating launch configuration.
- Creating auto-scaling group.
- Auto-scaling policies.

AWS S3(Simple Storage Service)

- Introduction to Simple Storage Server (S3).
- Storage options (default vs reduced redundancy vs Glacier).
- Creating buckets using Console.
- Uploading and downloading data tS3.
- Building static websites using S3.
- Enable version control on S3.
- S3 access policies.

Storage(Glacier)

- Introduction to Glacier.
- Moving data from S3 to Glacier.
- Setting archiving policies on S3.

Cloud Front (Content Delivery Network)

- Introduction to Content Delivery Networks.
- Overview of Amazon CDN
- Origins and Edge locations
- Configure S3 backend for CloudFront.
- Configure ELB backend from CloudFront.

Elastic BeanStlak

- Introduction to Elastic Beanstalk
- Creating Environment
- Deploying a Sample APP.

Identity Access Management (IAM)

- Introduction to IAM.
- Access controls using IAM.
- Creating users, groups and roles.
- Assigning policies.
- Inline vs. Custom vs. Managed policies.
- Multi factor Authentication (MFA).

Virtual Private Cloud (VPC)

- Introduction.
- Choosing a network design and CIDR.
- Design a simple network.
- Creating Subnets and setup routing as per the design.
- Using IGW tenable internet access.
- Access controls using Network ACLs.
- Network ACLs vs Security Groups.
- Creating Private connections from data center to AWS.
- Enabling VPC peering between VPCs.

Using CLI

- Installing AWSCLI
- Installing CLI tools using rpm or pip
- Configuring credentials
- AWS CLI syntax
- Creating and managing resource using CLI
- Examples

CloudFormation

- Introduction.
- Understanding the template format.
- CloudFormation designer.
- Create a simple CloudFormation template.
- Managing dependencies.
- Updating the existing stacks.
- Intrinsic functions.
- Pseudo parameters.
- Updating CloudFormation stacks.
- Understanding event.
- Cloudformer.

Route 53(DNS Service)

- Creating Hosted Zones
- Hosting a Website
- Understanding Routing Policies.
- Weighted, Simple and Failover Policies.

Lambda

- Introduction.
- Need of Lambda service.
- Business Use Cases.
- High Level Overview using Python(BOTO3).

Cloud Trail

- Introduction.
- Cloud Trail Workflow.
- Cloud Trail Events & Logs.
- Business Use Cases.

SnowBall

- Introduction.
- Snow Family.
- SnowBall, SnowEdge, SnowMobile.
- Business Use Cases.

Certification Pointers

- Introduction.
- How to Prepare.
- What to Read.
- Best certification track.

Best practices

- Cost optimization.
- Cloud migration Strategy.
- Other Useful Services for Migration.