



What is AWS?

Amazon Web Services (AWS) is a comprehensive, evolving cloud computing platform provided by **Amazon.com**. **Web services** are sometimes called cloud **services** or remote computing **services**. The first **AWS** offerings were launched in 2006 to provide online **services** for websites and client-side applications.

Why AWS?

Cloud computing provides a simple way to access servers, storage, databases and a broad set of application services over the Internet. A Cloud services platform such as Amazon Web Services owns and maintains the network-connected hardware required for these application services, while you provision and use what you need via a web application.

Advantages and Benefits of Cloud Computing:

❖ Trade capital expense for variable expense

Instead of having to invest heavily in data centers and servers before you know how you're going to use them, you can only pay when you consume computing resources, and only pay for how much you consume.

❖ **Benefit from massive economies of scale**

By using cloud computing, you can achieve a lower variable cost than you can get on your own. Because usage from hundreds of thousands of customers are aggregated in the cloud, providers such as Amazon Web Services can achieve higher economies of scale which translates into lower pay as you go prices.

❖ **Stop guessing capacity**

Eliminate guessing on your infrastructure capacity needs. When you make a capacity decision prior to deploying an application, you often either end up sitting on expensive idle resources or dealing with limited capacity. With cloud computing, these problems go away. You can access as much or as little as you need, and scale up and down as required with only a few minutes notice.

❖ **Increase speed and agility**

In a cloud computing environment, new IT resources are only ever a click away, which means you reduce the time it takes to make those resources available to your developers from weeks to just minutes. This results in a dramatic increase in agility for the organization, since the cost and time it takes to experiment and develop is significantly lower.

❖ **Stop spending money on running and maintaining data centers**

Focus on projects that differentiate your business, not the infrastructure. Cloud computing lets you focus on your own customers, rather than on the heavy lifting of racking, stacking and powering servers.

❖ **Go global in minutes**

Easily deploy your application in multiple regions around the world with just a few clicks. This means you can provide a lower latency and better experience for your customers simply and at minimal cost.

Learning Objectives of AWS:

+ **Compute**

- EC2 instance
- Light sail

+ **Storage**

- S3
- Glacier

+ **IDENTITY AND ACCESS MANAGEMENT**

+ **CONFIGURATION AND USING CLI**

+ **Network**

- VPC

+ **File system**

- EFS and S3FS

+ **DATA BASES (RDS)**



- ✚ ELASTIC LOAD BALANCING
- ✚ AUTOSCALLING
- ✚ ROUTE 53
- ✚ CLOUD FRONT
- ✚ CLOUD FORMATION
- ✚ CLOUD TRAIL
- ✚ DEVELOPER TOOLS
 - CODE DEPLOY
 - CODE PIPELINE
 - CODE COMMIT
 - S3 as SVN
- ✚ BOTO CONFIGURATION

Course Content:

❖ AWS Introduction

- What is AWS?
- AWS Introduction
- What is Cloud Computing
- Introduction & Overview

❖ Compute

- **EC2 computing**
 - Auto Scaling
 - Elasticloadbalancing
 - Deep dive into various classes of ec2 instances and their uses.
 - Consolidation of billing and providing view across different available options to reduce pricing.
 - Logging into the AWS ec2 servers form different OS like Linux, Windows.
 - EC2 life cycle and the concept of hooking ups.
- **AWS Lambda Services**
 - What is AWS Lambda service?
 - How to start using it
 - Creating new job tasks
- **AWS Elastic beanstalk**
 - What is elastic beanstalk?
 - Creating new environment and application in elastic beanstalk
 - Updating the new code and finding out the changes in the portal

❖ Storage S3, Glacier, EFS & EBS

- **Basics of S3**
 - Versioning
 - S3 lifecycle management
 - ACLs
 - Scripting policy
 - S3FS

- **GLACIER**
 - Creating a glacier vault.
 - Uploading files to glacier vaults.
 - Retrieving data form glacier vault.

❖ **Management tools**

- **Cloud formation**
 - Basics of cloud formation
 - Creating a VPC using cloud formation
 - Setting up various resources in VPC.
 - Concept of nested cloudformation in brief.
 - How a non-developer can use this service to reduce dependency on development teams.
- **AWS Trusted Adviser**
 - Playing around with AWS tested advisor to monitor the infrastructure on Cloud.
- **Cloud trail**
 - To monitor activities in AWS cloud.

❖ **NETWORK**

- **VPC**
 - In detailed class on VPC.
 - A deep drive into the concepts of VPC like peering, IGW & VGW
 - A detailed and dedicated class for VPN.
 - Direct link
 - Vpc peering and its use cases.
 - NAT instance and Nat gateway.
 - Discussion on how to connect Cloud VPC to on-premises.
- **ROUTE 53**
 - CNAME
 - MAPPING AND RESOLVING DNS TO DOMAIN NAME
- **CLOUD FRONT**
 - Continuous Delivery network through edge location.

❖ **DATA BASE MANAGEMENT**

- Creating an RDS and logging into it.
- Creating Snapshots.
- Upgrading Versions in RDS Vertically.
- Multiple ways to manage DB servers in aws.
- An in detailed class for understanding the uses and uses of SNS, SQS and SES involving creating of queues as it is in real time.

❖ **Miscellaneous**

- Configuration of AWS CLI,

- Configuration of BOTO,
- Managing cloud services with CLI and BOTO.
- SNS
- SQS
- Deep dive into Developer tools i.e., Code commit, Code Deploy, Using S3 as SVN.

❖ PROJECTS:

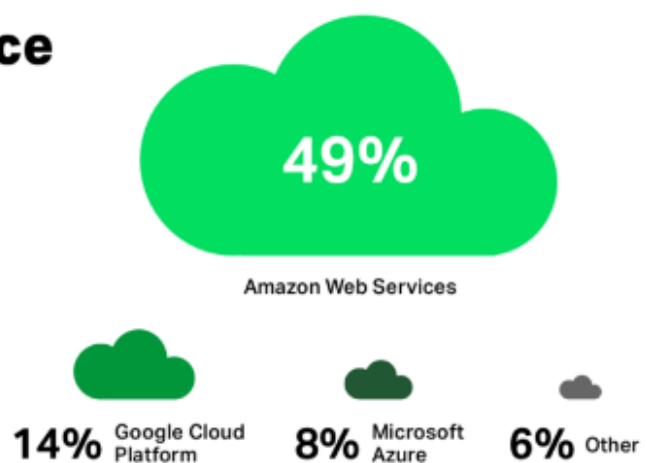
- Building up of staging environments with certain user requirements and connecting them with servers in different vpc and account within same region along with certain required instalments and with sudden changes as in real environment.
- Enabling connections between different vpc in different region in multiple accounts.
- Migration of VM template to AWS cloud.

🚦 **Course duration:** 45 hours [CORE AWS (without project)]

🚦 **Project duration:** 5-10 hours

AWS is the most popular cloud service

49% said AWS is the best cloud service – more than all other public cloud services combined





AWS Certified

Professional Level

AWS-Solution-Architect-Associate-Professional

**AWS Certified
DevOps Engineer-
Professional (Beta)**



Associate Level

**AWS-Solution-
Architect-Associate**

**AWS Certified
Developer-Associates**

**AWS Certified SysOps Administrator -
Associate**

Certifications That Pay the Biggest Salaries

AWS Certified Solutions Architect-Associate

The certification covers all things concerning Amazon Web Services—designing, selecting the appropriate services, ingress/egress of data to and from the AWS, estimating costs and identifying cost-control measures. Average pay: \$125,871.

