

AWS

By: Neelam Singh

Introduction

- Amazon Web Services offers a broad set of global cloud-based products including compute, storage, databases, analytics, networking, mobile, developer tools, management tools, IoT, security, and enterprise applications: on-demand, available in seconds, with pay-as-you-go pricing. From data warehousing to deployment tools, directories to content delivery, over 140 AWS services are available.
- In 2006, Amazon Web Services (AWS) began offering IT infrastructure services to businesses as web services—now commonly known as cloud computing. One of the key benefits of cloud computing is the opportunity to replace upfront capital infrastructure expenses with low variable costs that scale with your business.
- Today, AWS provides a highly reliable, scalable, low-cost infrastructure platform in the cloud that powers hundreds of thousands of businesses in 190 countries around the world.

Services provided by AWS

- Each type of service is categorized under a domain, the few domains which are widely used are:
 - Compute
 - Storage
 - Database
 - Migration
 - Network and Content Delivery
 - Management Tools
 - Security & Identity Compliance
 - Messaging

Compute Services

- The **Compute** domain includes services related to compute workloads, it includes the following services:
 - EC2 (Elastic Compute Cloud)
 - Lambda
 - Elastic Beanstalk
 - Amazon LightSail

Messaging Services

- The **Messaging** domain consists of services which are used for queuing, notifying or emailing messages. It consists of the following domains:
 - Amazon SQS
 - Amazon SNS
 - Amazon SES
 - Amazon Pinpoint

Storage Services

- The **Storage** domain includes services related data storage, it includes the following services:
 - S3 (Simple Storage Service)
 - Elastic Block Store
 - Amazon Glacier
 - AWS Snowball

Database Services

- The **Database** domain is used for database related workloads, it includes the following services:
 - Amazon Aurora
 - Amazon RDS
 - Amazon DynamoDB
 - Amazon RedShift

Migration Services

- The **Migration** domain is used for transferring data to or from the AWS Infrastructure, it includes the following services:
 - AWS Database Migration Service
 - AWS SnowBall

Networking and Content Delivery Services

- The **Networking and Content Delivery** domain is used for isolating your network infrastructure, and content delivery is used for faster delivery of content. It includes the following services:
 - Amazon Route 53
 - AWS CloudFront

Management Tools

- The **Management Tools** domain consists of services which are used to manage other services in AWS, it includes the following services:
 - AWS CloudWatch
 - AWS CloudFormation
 - AWS CloudTrail

Security & Identity, Compliance Services

- The **Security & Identity, Compliance** domain consist of services which are used to manage to authenticate and provide security to your AWS resources. It consists of the following services:
 - AWS IAM
 - AWS KMS
 - AWS Shield

Why is AWS Successful?

- Companies report a key set of reasons for not only selecting Amazon Web Services but relying on it for crucial parts of their IT infrastructure:
 - **Security and durability** - AWS encrypt the data, offering end-to-end privacy and storage.
 - **Experience** - Developers can rely on Amazon's established processes. Their tools, techniques and suggested best practices are built upon years of experience.
 - **Flexibility** - There is great flexibility in AWS, allowing developers to select the OS language and database.
 - **Ease of Use** - AWS is easy to use. Developers can swiftly deploy and host applications, build new applications or migrate existing applications.
 - **Scalability** - Applications can be easily scaled up or down depending on user requirements.
 - **Cost savings** - Companies only pay for the computing power, storage and resources used, with no long-term commitments.