

MODULE 3: AWS Global Infrastructure

1. AWS Global Infrastructure
 2. AWS Services and Service category
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1. AWS Global Infrastructure

- AWS global infrastructure is designed and built to deliver a flexible, reliable, scalable and secure cloud computing environment with high quality global network performance.

AWS Regions

- Geographical area.
- Data replications across regions are controlled by you.
- Communication between regions uses AWS backbone network infrastructure.
- Each region provides full redundancy and connectivity to the network.
- A region typically consists of two or more Availability Zones (AZ).

Factors while selecting regions

- Data governance and legal requirements
- Proximity to customers
- Services available within the region
- Costs which varies by regions

Availability Zones

- Each region has multiple AZs.
- Each AZ is fully isolated partitioned of the AWS infrastructure.
- AZ consists of discrete data centres, they are designed for fault isolation.
- They are connected with other AZ.
- AWS recommends replicating data and resources across AZ for resiliency.

AWS Data Centres

- They are designed for security
- Has typically 50k to 80k physical servers

Features of AWS infrastructures

- Elasticity
- Scalability
- Fault tolerance
- High availability

2. AWS Services and Service Category

AWS foundational services

- Compute
- Networking
- Storage

AWS Storage Services Category

- S3
- EBS

- EFS
- S3 Glacier

AWS Compute Services Category

- EC2
- AutoScaling
- Elastic Container Service
- EC2 Container Registry
- Elastic Beanstalk
- Lambda
- Elastic Kubernetes Services
- Fargate

AWS Databases Services Category

- RDS
- Aurora
- Redshift
- DynamoDB

AWS Networking and Content Delivering Services Category

- VPC
- Elastic Load balancing
- CloudFront
- AWS Transit Gateway
- Route 53
- AWS Direct Connect
- AWS VPN

AWS Security, Identity and Compliance Services Category

- IAM
- AWS Organisation
- AMAZON Cognito
- AWS Artefact
- AMAZON KMS
- AWS Shield

AWS Cost Management Services Category

- AWS Cost Usage Report
- AWS Budget
- AWS Cost Explorer

AWS Management and Governance Services Category

- AWS Management Console
- AWS Config
- Amazon CloudWatch
- AWS AutoScaling
- AWS CLI
- AWS Trusted Advisor
- AWS CloudTrail
- AWS Well Architected Tool