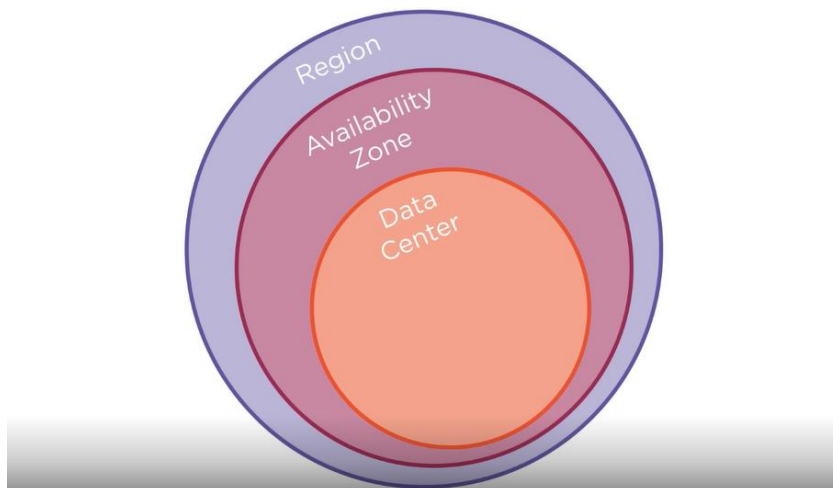


AWS Developer: Big Picture


1. What is AWS?
 - Collection of cloud computing services
 - Can work together or independently
 - Runs or supports a computer program
 - AWS is provider for all cloud services
 - SQS was the first service launched by AWS in 2004
 - With AWS, there are no upfront costs
 - AWS has the most data centers
2. Why deploy your application globally?
 - Reduced Latency
 - Increased redundancy

AWS Geographic Organization



Scaling across regions and AZs increases redundancy.

AWS vs Rest:

 Microsoft Azure	
Robust service offerings	Robust service offerings
Strong global reach	Strong global reach
Best place to run Microsoft products	Better web console



Specializations in Big Data, Kubernetes, and AI

Strong global reach



Strong global reach

12x more market share

Better web console

Understanding the core services of AWS:

1. Elastic Compute Cloud (EC2)
 - run applications
 - virtual desktop
 - computing
 - 3rd party software

Large Instance Type Comparison

	vCPU	Memory	Network
General Purpose t3.large	2	8	Up to 5Gbps
Memory Optimized r5.large	2	16	Up to 10Gbps
Compute Optimized c5.large	2	4	Up to 10Gbps

- Auto scaling group: Rules for automatically scaling ec2 instances up and down
- Use EC2 for scaling AMIs
- Use EB for scaling applications
- Use EBS for EC2 file systems
- Use s3 for file storage

- Security group: IP-based communication rules for a single or group of EC2 instances
- Examples for SG scenario:
 1. Allow access between EC2 instances
 2. Allow access to databases
 3. Access HTTP requests
 4. Control who can SSH into EC2 instance
- EC2 instances are charged by the hour
- Price charges are based on Instance type and AMI type

2. Simple storage service(s3):

- Storage service provided by AWS
- Maximum size for is 5TB
- Buckets can configure to add objects.

S3 pricing structure:

Amount of data stored

Number of requests

Amount of data transferred

3. Relational database service(RDS):

Database on EC2 vs. RDS

Database backups

Redundancy

Software patches

AWS handles it all

+

Easy configuration

Read replicas

RDS db options:

1. MySQL
2. Postgresql
3. Oracle
4. MariaDB
5. Aurora
6. SQLServer

RDS pricing structure:

1. Type of database
2. Region
3. EC2 instance type