Ultimate AWS Certified Solution Architect Associate

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What's AWS?

1. AWS (Amazon Web Services) is a Cloud Provider
2. They provide you with servers and services that you can use on demand and scale easily
3. AWS has revolutionized IT over time
4. AWS powers some of biggest websites in the world
   a. Amazon.com
   b. Netflix

What we'll learn in this course (and more!)

Amazon EC2	Amazon ECR	Amazon ECS	AWS Elastic Beanstalk	AWS Lambda	Elastic Load Balancing	Amazon CloudFront	Amazon Kinesis	Amazon Route 53	Amazon S3
Amazon RDS	Amazon DynamoDB	Amazon DynamoDB Accelerator	Amazon ElastiCache	Amazon SQS	Amazon SNS	AWS Step Functions	Amazon SWF	Amazon API Gateway	Amazon SES	Amazon Cognito
IAM	Amazon CloudWatch	Amazon EC2 Systems Manager	AWS CloudFormation	AWS CloudTrail	AWS CodeCommit	AWS CodeBuild	AWS CodeDeploy	AWS CodePipeline	AWS KMS

AWS Regions

➔ AWS has regions all around the world (us-east-1)
➔ Each region has availability zones (us-east-1a, us-east-1b)
➔ Each availability zone is a physical data center in the region, but separate from the other ones (so that they are isolated from disasters)
➔ AWS Consoles are region scoped (expect IAM and S3)

IAM

- ➔ IAM (Identity and Access Management)
- ➔ Your whole AWS security is there:
  - ◆ Users
  - ◆ Groups
  - ◆ Roles
- ➔ Root account should never be used (and shared)
- ➔ Users must be created with proper permissions
- ➔ IAM is at the center of AWS
- ➔ Policies are written in JSON

IAM

Users

Usually a physical person

Groups

Functions (admins, devops)
Teams (engineering, design...)

Contains users!

Roles

Internal usage within AWS resources

Policies (JSON Documents)
Defines what each of the above can and cannot do

IAM

- ➔ IAM has a global view
- ➔ Permissions are governed by Policies (JSON)
- ➔ MFA (Multi Factor Authentication) can be setup
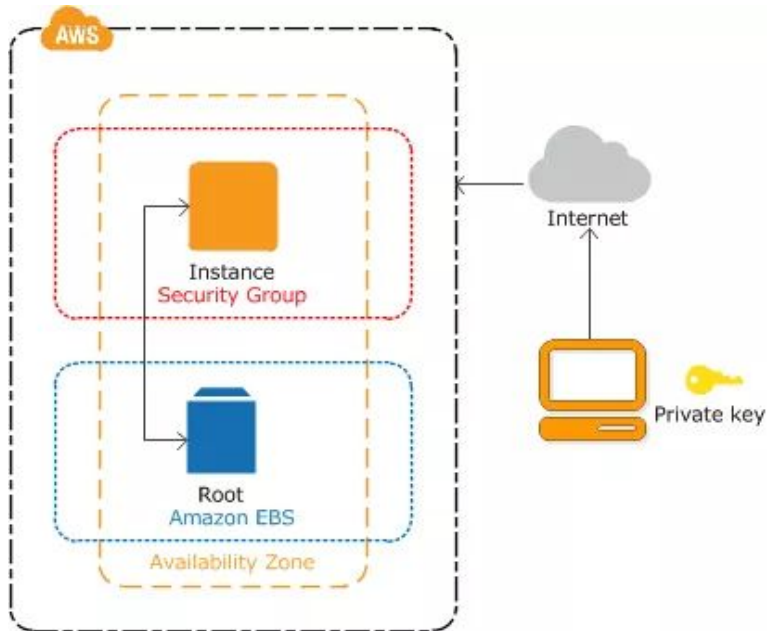- ➔ IAM has predefined "managed policies"

IAM Brain Dump

➔   One IAM User per PHYSICAL PERSON
➔   One IAM Role per Application
➔   IAM credentials should NEVER BE SHARED
➔   Never write IAM credentials in code.
➔   Never use the ROOT account expect for initial setup
➔   Never use ROOT IAM credentials

EC2 - EBS backed instance

EC2 Store backed instance