**A W S(Amazon Web services)**

cloud providers are

gcp Google cloud provider

Azure from Microsoft

Amazon Web services

IBM cloud

why cloud ?

we do not have to maintain the servers or physical servers and it is cost effective easy to access

**three types of services by a w s**

PASS platform-as-a-service

IASS Infrastructure-as-a-service

SASS software-as-a-service

**AWS global infrastructure**

**REGION :** each region is a separate geographical area where AWS has set its resources, each region is independent of other region.

**availability zone:** each region has multiple isolated locations known as availability zones, these AZs are connected through low-latency links, each region will have at least more than one availability zones for fault-tolerance.

**Edge location:** it is like a cache memory where end-users frequently accessed data resides to reduce the latency.

I A M : identity and access management

it is one of the AWS service and it is a global service  
I AM is a global service, region independent which is mainly used to create and handle users, groups, roles and policies.

ROLE: role mainly comes between two services with the specified restrictions for example an ec2 instance wants to access and s3 bucket role needs to be created and attached between two services.

**Policies:** policy is a different entity which is used to add restrictions on users’ roles and groups.

types of policies

1. there are predefined policies by a w s called a w s managed policies
2. custom managed policies

which is in the JSON language

groups: it is a set of users to attach.

Custom policy:

version of the policy

statement: it has all the policies

affect: it shows the effect of a policy allowed/deny

action: type of the resource action to be performed like ec2 instance S3 resources on which resource it is applicable, can give the particular ARN

ARN: Amazon resource name

{

"Version": "2012-10-17",

"Statement": [

{

"Effect": "Allow",

"Action": ["iam:ChangePassword"],

"Resource": "\*"

}