# AWS

1) what is cloud ?

cloud it refers to a network or the Internet. It is a technology that uses remote servers on the internet to store, manage and access data online rather than local drives. The data can be anything such as files, documents, audio, video etc...

2) what are different types of cloud based on service and Deployment model ?

→ Service model

① Iaas (Infrastructure As A Service)
② paas (platform As A Service)
③ Saas (Software As A Service.

Iaas - It is a self-serviced model for managing remote data centre infrastructure. It provides virtualized computing resources over the internet hosted by the third par such as AWS, Azure ---, Instead of org purchasing hardware, companies purchase Iaas based on compution model. You pay for what you use

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**Paas** – It allows an organisations to build, run and manage applications without the IT Infrastructure; this makes it easier and faster to develop, test & deploy applications. Developers can only focus on writing code and create applications without worrying about the Infrastructure activities like servers, storage & Backups ---.

**Example** :- AWS Elastic Beanstalk, windows Azure

**Saas** – It is a software that is licensed on a subscription basis. Most Saas applications can be accessed directly from the web browser without any downloads or installations required.

**Example** :- Salesforce.com ; Netflix, cisco webex.

(2) **Deployment model**

(1) private (2) public
(3) Hybrid (4) community

**private** It is operated by single organization & the cloud may be on or on the premises.

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**Public** It will be utilised by all general public & large scale industry.

**Hybrid** It is the combination of private and public model.

**Community** It is shared by several org. and supports a specific community of customers that have similar information technology requirements.

(3) What are the advantages of cloud?

(1) Easily Back-up and restore.

(2) Improved collabration.

(3) Low maintenance cost

(4) Mobility.

(5) Unlimited storage capacity

(6) Data security

(4) What is Scaling?

It monitors our applications & automatically adjusts capacity to maintain steady, preditable performance at the lowest possible cost. It is easy to setup multiple resources across multiple services in minutes.

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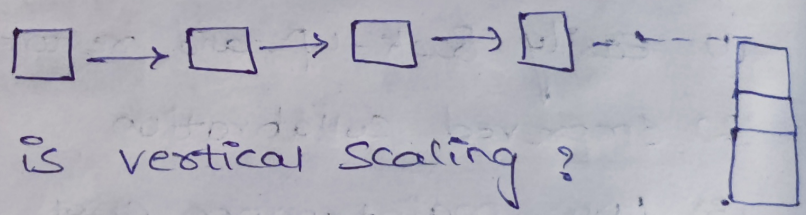
(5) what is horizontal scaling ?

Horizontal scaling means that you scale by adding more ec2 machines into your pool of resources.

(8)

suppose consider we are having one server and that is loaded fully & will add another server to resources, if it also loaded, then will add another server. So, we goes on adding one by one server to fill the resource requirement.



(6) what is vertical scaling ?

It means that you scale by adding more power (capacity) (cpu, RAM) to the existing ec2 machine.

(7) what is Aws Region ?

It is a physical location around the world where we cluster data centers. we call each group of logical data centers an Availability zone. Each Aws Region consists of multiple, isolated, & physically separated within a geographical area.

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8) History of AWS ?

In 2003 - Benjamin Black and Pinkman presented a paper that envisioned Amazon's retail computing infrastructure which was automated, standarized & relied on web services extensively for processes like storage.

2004 : the first service launched called simple Queue Service.

2006 : Amazon was offically launched

2007 : Amazon stated that 180,000 developers signed up for AWS.

2010 : All of Amazon.com retail web services transferred to AWS.

2011 : Some parts of AWS suffered major outages. A part of volume that utilizes the EBS, was stuck & unable to read & write requests.

2012 - Glacier, Dynamo DB, Redshift.

2016 - Lambda came into exist.

2021 - almost 200 products are released and it has ~~$15,000~~ covered over 39% across the globe.

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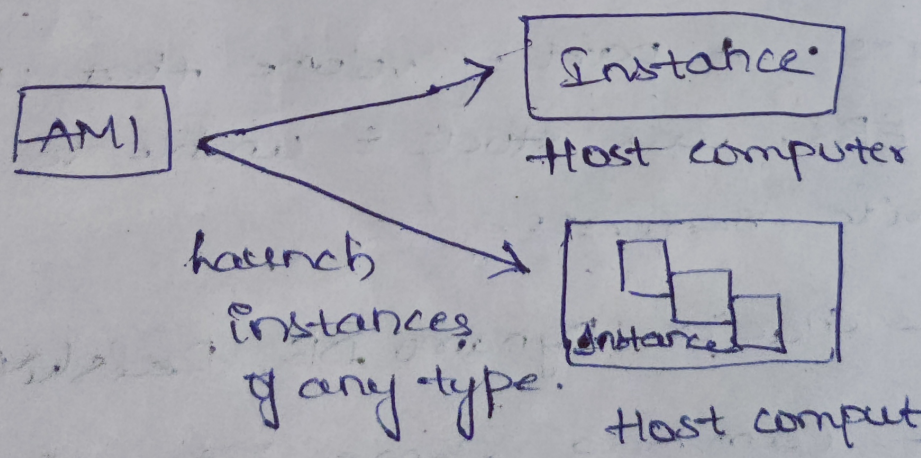
(9) what is Availability zone ?

It is one or more discrete data center with redundant power, networking and connectivity with an Aws Region.

(10) what is AMI ?

Amazon Machine Image is a template that contains a software configuration for eg:- an operating system, an application server & applications.

From an AMI, you launch an instance, which is the copy of AMI running as a virtual server in the cloud. you can launch multiple instances of an AMI.

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4) what is Data centre ?

It is a physical facility that organisation uses to house their critical applications & data, A data center's design is based on a network of computing and storage resources that enables the delivery of shared applications and data.

The key component of data centers design includes routers, switches, firewalls, storage systems, servers etc--.

(12) what is AWS ? and list cloud providers in market.

Amazon web services. It is a platform that offers flexible, reliable, scalable, easy-to-use and cost effective cloud computing solutions.

AWS is a comprehensive, easy to use computing platform offered amazon. The platform is developed with a combination of Iaas, Paas and Saas offerings.

<u>cloud providers</u>

(1) AWS

(2) Microsoft Azure

(3) Google cloud platform

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(4) Alibaba cloud
(5) sales force
(6) Service Now.

13) what is multi-tenant ?

It is a software architecture where a single software instance can serve multiple distinct user groups.

Ex :- Saas.

14) what do you mean by pay-as-you-go?

You have to pay only for the individual services you need, for as long as you use them and without requiring long term contracts & complex licensing. It is similar to you pay for utilities like water | electricity

you only pay for the services you consume & once you stop using them there is no additional costs | termination fees.

15) • what do you meant by cloud providers

cloud providers are nothing but they provide services to the organisation who are in requires and they have to pay as they consume.

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what is cloud services ?

cloud services are infrastructure, platforms & software that are hosted by third-party providers and made available to users through the internet.

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