AWS Questions

Load Balancer

- What is load bancer
  2 points
  1. Traffic ko manage karta hay
  2. Instances ka health status check karta hay
     Because to ensure that traffice should route towards the healthy target
- What is targets, client
  EC2 instances ko target kahare hay.
  Client actually me endpoint ke users hotey hey jo services ka use kartea hay

- How to get preconfigured linux machine (prepare our server)
  We go to configure instance details > Additional details > User data > We type Bootstrap Script

- What is classic load balancer
  Classic load balancer are generally used to manage the traffic among web Servers

- What is response time, ping request, interval
  In ping request load balancer target se uski health poochta hay
  Response means target ping request ko respond karta hay
  Response time generally means target kitni deer mei ping request ka response deta hay
  Interval generally means ki kitni frequently load balancer target se ping request karta hay.

- What is unhealthy threshold
  Unhealthy threshold generally means ki no of attempts to check the health of target before declaring the target as unhealthy. For eg if unhealthy thereshold is 2 i.e. load balancer ping request karege and found karegea ki target unhealthy hay , again load balancer ping request karegea and again second time found karegea ki target unhealthy hay. Here 2 time health status unhealthy found hone ke baad load balancer target ko hunlealthy deaclare karegea.

- What is healthy threshold
  For eg. Healthy threshold is 2 load balancer jab 2 times health status healthy found karegea then it will declare target as healthy.

- How to access an inatance from load balancer?

As a general we use the public ip address of perticular instance to access it, but in case jab multiple instances (targets) load balancer ke through connected hote hay then hum particular load balancer ka public dns copy karte hay for accessing all connected targets.

- What happens when we stop the target(instance) which is connected to perticular load balancer?
  Jab hum load balancer ke section par jayange then bottom par respected target **out of service** show karegea.

Autoscaling

- How to manage the number of instances according to purpose?
  Hum apna system is trah set up kareange ki jab more instance required ho tab more instance create ho jaye and jab instance ka use na ho tab instance automatically terminate ho jaye. So for this autoscaling comes in the picture.

- What is autoscaling?
  3points
  1. A service for availaing the correct number of instances.
  2. We can se up the maximum and minimum no of instaces.
  3. The group of instances involved is known as autoscaling group.

- What are the steps for creating autoscaling?
  1. Create a load balancer
  2. Create launch configuration
  3. Create topic in SNS (to let us know existing instances are exhausting)
  4. Create autoscaling groups
  5. Create Alarm (trigger) in Cloudwatch
  6. Add a policy (Action) in Autoscaling

- Describe launch Configuration
  Here we generally decides ki jo new machine/instances banegea, uske configurations (hardware configurations) kya honge
  Note Predefined Softwares ke liyea hum custom AMI banate hay

- What is topic?
  Topic ek managed service hay jo manage kerti hay message delivery from publisher to subscribers.

- What is Alarm?
  In Alarm, hum kuch conditions set up karte hay according to which new instances are created. SP says ki Alarm ek trigger ki tarah kaam karta hay
  Note we create two alarm i.e. for increasing and decreasing the number of instances

- What is policy in alarm?
  Policy is generally an action or response according to alarm

- What is the difference b/w horizontal and vertical scaling?
  Horizontal scaling Hum number of instances ko increase or decrease karte hay i.e. scale in or out. Isme hum generally RAM, CPU, Hard Disk, instance family change kar sakte hay.
  Vertical scaling Here hum instance ke hardware configurations ko increase or decrease kar sakte hay or we can say instance type ko change karte hay (for example: changing an instance from a m4. large to a m4. xlarge). Common term here scale up or down.

Light Topics

- What is Status Check?
  System Status Check Checks the hardware configurations of started instance. If this status check is filled then 0/2 Show karta hay (instance status check will not happen) and we just stop and start the instance jisme aws ka smart AI, instance ko new h/w configuration provide karata hay.
  Instance Status Check Checks is generally related to OS. If this status check is failed then 1/2 Show karta hay and isme (System check passed) then we just restart the instance.

- What is Scalability?
  Scalability is the ability to change the size of EC2 Machine whenever required.

- How to see the volumes and corresponding attached instance?
  We can see the volumes in navigation pane of EC2 , we select the particular volume and see the corresponding instance in attached instance column.
  One more way, in instances section we select the particular instance and see the corresponding volume in Storage tab.

- How to Scale up the root volume?
  Selecting the root volume from volume section > actions > modify volume
  Then desired change kar sakte hay.

- How to check the RAM and Processor of any instance?
  To know about instance hum particular instance ko check karange then bottom par instance type dekh sakte hay.

Volumes

- What is the name of volume which is available by default with EC2 machine?
  Root Volume
  ha

- How to add additional volume to EC2 instance?
  We select the instance and we can add the storage as we wish. That volume is always EBS Volume.

- How to save data of any volume from termination of corresponding EC2 instance?
  We can unckeck on delete on termination of respective volume.

- How to see the attached volumes of particular EC2 instance?
  We select the particular instance and go to the storage taba then hum ye dekh payange ke kitne volumes attached hay.

- How to attach the attached volume to another instance within a region and outside of regin?
  Within a region Hum particular volume ko select karke use detetch karange then particular volume available show karegea. Then hum new instance me jakar attach volume karange. Available volume list mei show karegea.

  Outside of a region Hum particular volume ko select karke uska snapshot banate hay then us snapshot ko another region par copy karte hay. Jab hum new region par jayange then dekte hay ki perticular snapshot ki copy present hay. At last hum copied snapshot ka volume banakar use EC2 instance se attach kar dete hay.

- What is snapshot?
  2points
  1. Snapshot is snap of perticular state of a volume and mostly used for backup purpose
  2. Snapshot ke thrugh hum volume ko bhi transfer karte hay jo ki light hota hay.

- How can we replicate the EC2 instance?
  EC2 instance ko prepare karne mei bohut effort lagte hay, so replicating it can become cumbersome task. Thanks to AWS, jisse hum particular instance ke Customised AMI (preserving the state of instance) bana sakete hay and us instance jaise ek aur machine bana sakte hay.

Storage

Q1. What is the name of volume which is available by default with EC2 machine

Default volume is known as root volume. Agar humey extra volume add karna hay to hum EC2 machine bante samay Add Storage par click karke add storage par click karke apni desired type ki storage volume add kar sakte hay ye generally EBS volume hoti hay.(Known as Additonal volume).

Q2. If we have important content in a volume so how can we save it.

During machine creation we can uncheck on “delete on termination”

Q3. How to know that how many volumes are there in an EC2 machine

For doing so we select the particular instance > go to storage tab then humey all associated volumes visible hogi.

Q4. How to transfer additional volume of a machine to another machine.

Firstly hum particular volume ko detach karange then voh volume available ho jayagi then hum another machine ke andar jayange, add storage se usme available volume ko attach kar denge.

Note - We can also detach the root volume by this way

Q5. How we can make an instance in a particular region.

Simple go to particular region then make the desired instance using appropriate AMI

Q6. How to transfer the volume form one region to another region.

For doing so, concept of snapshot comes in the picture. Simply we take a volume, crates its snapshot, copy the snapshot to desired region the we create new volume in the new region using copied snapshot.

Technically we select the particular volume > go to action > Crate its snapshot. When snapshot is ready we select the snapshot and copy it to another region (but humey particular region ka code use karna padhta hay.) Then we go to copied snapshot of new region and convert that snapshot into the new volume.

Q7. Ashwin Asked “What is the purpose of snapshot”?

2 Points

To transfer the volume from one region to another region

To crate the backup of the data of particular volume

Sp realisation

Snapshot is lighter than volume thus used for transfering the data of the volume

Q8. If kisi instance ko crate karne mei hardwork laga hay and we need to make one more similar instance so how can we do that?

Here Customised AMI comes in the picture which generally have OS of his parent EC2 machine, on the top of that Additional softwares also comes which have been installed in parent EC2 machine.

Note - Customized AMI also known for “Preserving the state of Machine Instances”

Q9. What you used to do after the practice ?

We should terminate the instances, deregister the created AMI’s , delete the snapshot,delete the crated VPC and logout.

Q10. What is S3 ?

S3 Stands for simple storage service which is actually an object storage , which is secure, durable and highly scalable object storage. Highly Scalable generally refers S3 does not have any limit.
Note - objects are stored inside the bucket

Q11. What is object storage ?

Object Storage is simply a file storage. During uploading a file, file size must be less than 5TB (using Console) and 5GB (using CLI)

Q12. What is Bucket ?

It is same as when we have to store the data in RDBMS hum table create karte hay, similarly jab hum files store karte hay to hum bucket create karte hay and bucket name should be universally unique.

Q13. What are the advantages of S3 bucket ?

Highly Securable , durable and Available.
High Storage, Lifecycle management, versioning, encryption,

Q14. What are the different parameters that causes the bill for S3 bucket ?

Storage, request, management pricing, class (using which family), data transfer pricing, transfer acceleration, cross region replication.

Q15. How to use S3 Bucket ?

Simply Create the bucket, upload the file

Q16. What is the special thing to be taken care when we create the buket ?

Bucket name should be unique

Q17. What is special thing about S3 dashboard ?

S3 dashboard is global as compared to EC2 dashboard (jo ki region wise differ karta hay known as region specific).

Q18. How to upload object in a bucket ?

Simply, go to bucket, click on upload button, add the file and upload it.
Note - when hum object upload karte hay to hum vahapar permission bhi set kar sakte hay.

Q19. How to access the uploaded object ?

Simply we go to bucket, then we go to object, then we copy the url then use it to access the object.

Q20. How to make any object private ?

We go to the object, we go to the permission tab then do something to make it private.