V.Imp:-  Refer AWS cloud services docs & FAQs related to use cases & functionality & replication.

* + Elastic Bean Stalk to deploy both application on ECS and DB on AWS RDS for My SQL.
  + Cloud Formation to deploy application and Database with No VPC.
  + Questions on Amazon Dynamo DB Accelerator (DAX) to improve the performance on Dynamo DB.
  + Auto scaling and its applications. Read FAQs & specially AWS services docs.
  + 3-4 direct questions on services like Cognito, S3, Throughput optimized EBS, Cloud Front OAI.
  + Remember for disaster recovery you always have to enable replication in other regions not AZs.
  + Cloud Front in front of S3 for caching static content of website.
  + 5 to 6 questions on Cloud Trail and its use cases. Refer AWS cloud trail docs.
  + 1 question from AWS ECS and code deploy.
  + Encryption keys: Remember different types of encryption mechanism  and specially managed by customer
  + One scenario was there in which Organization has to keep its frequently accessed data to one service and then move it to other as it was rarely used. Ans: Use S3 then apply lifecycle policy to move the data to STANADARD IA

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     Q1)You have to choose to store file data from Linux Ami which can span to multiple AZ & can be share?

      a)AWS S3   b)AWS gateway volume   c) AWS EFS      d)Dynamo DB

     Q2)You have been the solution architect for a company and need to store your system data generated

              and that should be encrypted at the time of data generation which solution should be used?

              a)AWS KMS     b)AWS  server side encryption   c)AWS customer managed keys    d) KMS C

      Q3)There is a 2 tier application which needs to be fault tolerant and have 2 subnets for each web &

          DB. How many subnets will you provision within a VPC which can be cost effective?

         a)2   b) 5  c)4  d)6

     Q4)You are a solution architect of a company and your company is designing a gaming app which keep

           tracks of users session data?

  a)Cloud trail    b) Dynamo DB   c)S3    d)Redshift  e)Storage Gateway

     Q5)You are a solution architect of a company and your company hosted a application which involves API

            Gateway and store the data in a DB. Which Services will you recommend?

1. API Gateway with Dynamo DB    b)AWS lambda with API   other option I didn’t remember.

    Q6)You are designing an application in which you have to convert video uploaded by user to a particular

            format so keeping this in place which service is ideal for usage?

1. AWS Config   b) AWS Transcoder   c) AWS Incognito   other option I didn’t remember.

     Q7)You have been planning to move your infra structure to AWS and you have the code and you want

            Deploy it with minimal overhead and managing the code?

1. Aws config  b) AWS elastic beanstalk    c) AWS cloud formation  d) AWS EC2   e) AWS ec2 with dynamo DB

5 question were from NAT gateway & NAT instance. Choosing among them based upon cost.

• One was of active passive failover routing policy.

• 3 question were from IAM policy.

• Scenario based question for Type of Disk (General purpose, cold Hdd, Throughput or provisioned IOPs)

• You are a solution arch of a company and you experience a heavy traffic from a specific Ip. How can u stop that Ip from accessing your n/w. Answer applying NACL.

• Application is capturing the real-time geographical data and you need to store this in data ware house. Choose two services (I chose AWS Kinesis Fire hose and Redshift)

• Fault tolerant and cost-efficient scenario: 3 AZs minimum 4 available (I chose 2 EC2 in each availability zone)

• Complex scenario based on backing up of data in disaster recovery.

• S3 versioning & implementing lifecycle policy.

• 2 question were from ECS.

• Encryption of EBS volume & Copying that encrypted volume to S3 during disaster recovery.

* You are a solution arch of a company and you experience a heavy traffic from a specific IP. How can u stop that IP from accessing your n/w.  Answer applying NACL to deny specific IP’s
* One question on failover with respect to low latency using Route53 – Answer active passive failover using latency policy.
* Fault tolerant and cost-efficient scenario: 2 AZs with minimum 4 available Ec2 instance  (I chose 4 EC2 in each availability zone)
* 3 question were from ECS. – Micro services deployment –  ECS Orchestration – Docker images
* Application is capturing the real-time geographical data and you need to store this in data ware house. Choose two services (I chose AWS Kinesis Fire hose and Redshift)
* DynamoDB – offload the administration burden. Received around 8 Questions where DynamoDB was in option and looked feasible as a solution.
* Scenario based question for Type of Disk (General purpose, cold Hdd, Throughput or provisioned IOPs) from a large volume of Dataware house the data is required to store in EBS volume which one to choose.
* On-prem is facing some challenges in message broker and MQTT and they want to go with Cloud which option will help them to migrate to AWS ( option - SQS, SNS, AWS MQ, AWS SWF) – I selected SQS
* Data needs to be stored in large volume and needs to run with aggregation and visualization Choose 2 ( Redshift , Lambda, Kineses, DynamoDB , SQS) I choose Redshifts and Lambda
* Two option has API gateway with Lambda which I choose for server less architecture with Managed AWS service.
* Application is expecting a high peaks on Monday through Friday and on Saturday it needs to run batch processes – choose (Spot, on – demand – reserved – IA or reserved storage) I choose Spot
* Auto scaling default termination policy ( oldest launch configuration, closest to next billing hour, Old instance, randomly terminate) choose 1 – I selected with oldest launch configuration
* There is a requirement to store data in S3 and after a month the data it not accessed but it should be able to achieve data whenever required – I chose AWS lifecycle policy to store data in Glacier after one month.
* Application load balancer needs to restrict traffic – use Public IPS for ALB node, use security group of deny traffic to load balancer, use private IPs to restrict traffic on ALB ) I choose first option
* There was one question for SAAS product user wants to leverage all the features and the user wants to go with server less architecture  – (options : API gateway using Lambda, Cloudformation using Lambda, API gateway with DynamoBD) I choose first option
* VPC – when to use Nat Gateway or Nat instance for private subnet to frequently communicate with internet – I choose Nat Gateway
* There is one question for fault tolerant solution which needs to span across 200 Miles for disaster recovery for RDS– Enable cross region replication , Enable multi - az deployment , cross region snapshot – I choose Enable cross region replication
* Also, there was one question on amazon RDS Aurora DB – I cannot recollect the actual content of the questions and the options as answers.

Below are few of the topics and Questions which I can recollect:

1. Active Passive Failover routing with Latency based failover
2. 3-4 Questions were based on NAT gateway, but based on different scenarios and twisted little bit.
3. Scenario based question for Type of Disk (General purpose, cold Hdd, Throughput or provisioned IOPs)
4. Cloud front with OAI
5. One question on CloudFront Geolocation
6. 2 Questions on ECS (You need to deploy the applications into microservices and Containers)
7. 2 questions were based on Amazon EFS
8. Application Load balancer: Your application is using application load balancer. You need to allow only that traffic which are allowed by Application load balancer.  (Use the application LB Security group for the EC2)
9. Basic questions on S3 for versioning and Life cycle policy
10. Cloud front Signed urls
11. Couple of questions on IAM roles
12. Amazon Redshift: Dataware house and able to do queries: So, I chose Redshift
13. Application is capturing the real-time geographical data and you need to store this in dataware house. Choose two services (I chose AWS Kinesis Firehose and Redshift)
14. Fault tolerant and cost-efficient scenario: 3 AZs minimum 4 available (I chose 2 EC2 in each availability zone)

The options highlighted in Yellow are the ones that I marked as answer.

1. An application used RDS for database. RDS had become bottleneck for performance. How it could be improved? (Choose 2)
2. Change RDS to Multi-AZ.
3. Scale up RDS
4. Redirect read queries to read replicas
5. Scale out RDS
6. Use RDS in separate region
7. An application has web tier in public subnet. Application tier in private subnet in 2 AZ and each subnet has its own Route Tables. How can the application tier connect to internet? (I don’t remember the options correctly, they were like: a. Attach NAT for private subnet in the other AZ, b. Attach NAT for private subnet in same AZ)
8. An application uses S3 – Standard to store data. It will be frequently accessed for 1 week, and after 1 week, it is used occasionally for processing batch jobs. (Among the options, I chose Store in S3 - Standard and add lifecycle policy to move data to S3 – IA after 7 days)
9. A gaming application uses ElastiCache with Redis. At some point, it fails with failure of cache node. (I chose to enable ElastiCache Multi-AZ with automatic failover)
10. An application uses DynamoDB and it has 1000 transactions every day. It should be designed that after 8 PM, it should generate and email invoices to customers. It takes 5 seconds for each transaction. (Options were like, Use Lambda to send email at every night, Use DynamoDB Stream to trigger lambda function) (Not sure which one did I choose)
11. An architecture has multiple applications in ECS. It must use metadata and route to respective services. (Options: Classic Load Balancer, Route 53, Application Load Balancer, CloudFront)
12. A 5 TB RedShift Cluster is used. It should span across 500 miles for disaster recovery. (I chose, Cross region snapshots to different region)
13. An application launches 10 EC2 instances from 1 customer AMI. These are placed behind ALB. Route 53 is used for DNS. It does not reply to the requests made. How could it be solved? (Options: Autoscaling, Multi-AZ, Add Route 53 records with health check)
14. S3 bucket is encrypted using SSE – S3 encryption. How it can be decrypted while reading objects? (Options: Using private key, automatically decrypted by AWS, using server-side key)
15. EC2 instances are launched using custom AMI. How can high availability be achieved? (Question incomplete)
16. Create Launch Configuration with the AMI ID, create Auto Scaling Group with the Launch Configuration with 2 web servers across Multi-AZ, and ALB to balance the load.
17. Create Launch Configuration with the AMI ID, create Auto Scaling Group with the Launch Configuration with 2 web servers across Multi-AZ, and Route 53 to route to instances.
18. Create Launch Configuration with the AMI ID, create Auto Scaling Group with the Launch Configuration with 2 web servers across Multi Regions, and ALB to balance the load.
19. EC2 has 100 GB EBS. Application has temporary database (less than 30 GB). But due to performance issue you need to move the database with more read write.
20. Move the data to Instance Store for performance enhancement as data is temporary
21. 50 GB EBS for temporary database
22. 50 GB EBS with 3000 IOPS for temporary database
23. Store the data in S3

(Repeated question and even the options order are same)

1. An application is running with EC2 instance and is memory intensive. Use CloudWatch to monitor. (According to options, this was feasible, Apply custom metrics to CloudWatch for memory)
2. An Organization has designed a VPC, that is to be used for all the applications further. How can this be done? (I chose, create CloudFormation template with the configured VPC components)
3. Identifying the correct JSON template for CloudFormation. (Can easily be figured out by noticing the ports, CIDR value and protocols from the question)
4. 1 question was from Cognito that uses Facebook/Twitter/Amazon for login.
5. SNS to notify users which is to be triggered from CloudWatch alarm.
6. Hash prefix to S3 objects to improve the performance.
7. SQS – Asynchronously the messages are sent.
8. One more question from S3 – to restore deleted files (Versioning).
9. Another question from S3 versioning.
10. One question from Aurora Reader Endpoint.
11. EFS with file level permission
12. CloudFront Geolocation routing
13. A website shows old content even after a refresh. (Change TTL value)
14. HTTP, HTTPS – ALB host-based routing
15. EC2 - Data loss with instance store. Use EBS
16. IAM access for My SQL server
17. One question from Aurora about short-lived
18. Encrypting EBS volumes using KMS
19. DynamoDB Accelerator (DAX) to improve performance
20. In transit encryption – HTTPS
21. An application uses own API which gets 1000 requests per day. How can it be moved to AWS? (Use API Gateway)
22. Shared file system for multiple Linux instances (EFS)
23. Security event logs to SysOps (I chose Amazon Inspector)