Answer Sheet

Q1) Which type of record is commonly used to route traffic to an IPv6 address?

- An MX record
- ✅ An AAAA record

Explanation:-An AAAA record is used to route traffic to an IPv6 address, whereas an A record is used to route traffic to an IPv4 address.

- A CNAME
- An A record

Q2) Where do you register a domain name?

- With InterNIC directly
- ✅ With a domain registrar

Explanation:-Domain names are registered with a domain registrar, which then registers the name to InterNIC.

- With your local government authority
- With the Internet Assigned Numbers Authority (IANA)

Q3)

You have an application that for legal reasons must be hosted in the United States when U.S. citizens access it. The application must be hosted in the European Union when citizens of the EU access it. For all other citizens of the world, the application must be hosted in Sydney.

Which routing policy should you choose in order to achieve this?

- Simple routing
- ✅ Geolocation routing

Explanation:-You should route your traffic based on where your end users are located. The best routing policy to achieve this is geolocation routing.

- Latency-based routing
- Failover routing

Q4) Which type of DNS record should you use to resolve an IP address to a domain name?

- ✅ A PTR record

Explanation:-A PTR record is used to resolve an IP address to a domain name, and it is commonly referred to as “reverse DNS.”

- An SPF record
- A C Name
- An A record

Q5)

You host a web application across multiple AWS regions in the world, and you need to configure your DNS so that your end users will get the fastest network performance possible.

Which routing policy should you apply?

- Simple routing
- ✅ Latency-based routing

Explanation:-You want your users to have the fastest network access possible. To do this, you would use latency-based routing. Geolocation routing would not achieve this as well as latency- based routing, which is specifically geared toward measuring the latency and thus would direct you to the AWS region in which you would have the lowest latency.

- Geolocation routing
- Weighted routing

Q6) Which DNS record should you use to configure the transmission of email to your intended mail server?

- SOA record
- ✅ MX records

Explanation:-You would use Mail eXchange (MX) records to define which inbound destination mail server should be used.

- A records
- SPF records

Q7) 7. Which DNS records are commonly used to stop email spoofing and spam?

- A records
- ✅ SPF records

Explanation:-SPF records are used to verify authorized senders of mail from your domain.

- MX records
- C names

Q8)

You are rolling out A and B test versions of a web application to see which version results in the most sales. You need 10 percent of your traffic to go to version A, 10 percent to go to version B, and the rest to go to your current production version.

Which routing policy should you choose to achieve this?

- Geolocation routing
- ✅ Weighted routing

Explanation:-Weighted routing would best achieve this objective because it allows you to specify which percentage of traffic is directed to each endpoint.

- Simple routing
- Failover routing

Q9) Which DNS record must all zones have by default?

- ✅ SOA

Explanation:-The start of a zone is defined by the SOA; therefore, all zones must have an SOA record by default.

- MX
- TXT
- SPF

Q10)

Your company has its primary production site in Western Europe and its DR site in the Asia Pacific. You need to configure DNS so that if your primary site becomes unavailable, you can fail DNS over to the secondary site.

Which DNS routing policy would best achieve this?

- ✅ Failover routing

Explanation:-Failover-based routing would best achieve this objective.

- Simple routing
- Geolocation routing
- Weighted routing

Q11) Which type of DNS record should you use to resolve a domain name to another domain name?

- An SPF record
- ✅ A CNAME record

Explanation:-The CNAME record maps a name to another name. It should be used only when there are no other records on that name.

- An A record
- A PTR record

Q12) Which is a function that Amazon Route 53 does not perform?

- DNS service
- ✅ Load balancing

Explanation:-Amazon Route 53 performs three main functions: domain registration, DNS service, and health checking.

- Domain registration
- Health checks

Q13) Which DNS record can be used to store human-readable information about a server, network, and other accounting data with a host?

- An MX record
- ✅ A TXT record

Explanation:-A TXT record is used to store arbitrary and unformatted text with a host.

- An SPF record
- A PTR record

Q14) Which resource record set would not be allowed for the hosted zone example.com ?

- ✅ www.example.ca

Explanation:-The resource record sets contained in a hosted zone must share the same suffix.

- www.aws.example.com
- www.example.com
- www.beta.example.com

Q15) What is the longest time available for an Amazon Simple Queue Service (Amazon SQS) visibility timeout?

- ✅ 12 hours

Explanation:-The maximum time for an Amazon SQS visibility timeout is 12 hours

- 1 hour
- 60 seconds
- 30 seconds

Q16) Can an Amazon Simple Notification Service (Amazon SNS) message be deleted after being published to a topic?

- ✅ No. After a message has been successfully published to a topic, it cannot be recalled.

Explanation:-No. After a message has been successfully published to a topic, it cannot be recalled.

- Only if the Amazon SNS recall message parameter has been set
- Only if a subscriber(s) has/have not read the message yet
- Yes. However it can be deleted only if the subscribers are Amazon SQS queues.

Q17) Can an Amazon Simple Notification Service (Amazon SNS) topic be recreated with a previously used topic name?

- ✅ Yes. The topic name should typically be available after 30–60 seconds after the previous topic with the same name has been deleted.

Explanation:-Topic names should typically be available for reuse approximately 30–60 seconds after the previous topic with the same name has been deleted. The exact time will depend on the number of subscriptions active on the topic; topics with a few subscribers will be available instantly for reuse, while topics with larger subscriber lists may take longer.

- Yes. The topic name should typically be available after 1–3 hours after the previous topic with the same name has been deleted.
- Yes. The topic name should typically be available after 24 hours after the previous topic with the same name has been deleted.
- At this time, this feature is not supported.

Q18) What should you do in order to grant a different AWS account permission to your Amazon Simple Queue Service (Amazon SQS) queue?

- ✅ Create an Amazon SQS policy that grants the other account access.

Explanation:-The main difference between Amazon SQS policies and IAM policies is that an Amazon SQS policy enables you to grant a different AWS account permission to your Amazon SQS queues, but an IAM policy does not.

- Create a user for that account in AWS Identity and Access Management (IAM) and establish an IAM policy that grants access to the queue.
- Share credentials to your AWS account and have the other account's applications use your account's credentials to access the Amazon SQS queue.
- Amazon Virtual Private Cloud (Amazon VPC) peering must be used to achieve this.

Q19) What is the longest time available for an Amazon Simple Queue Service (Amazon SQS) long polling timeout?

- 30 seconds
- ✅ 20 seconds

Explanation:-The maximum time for an Amazon SQS long polling timeout is 20 seconds

- 10 seconds
- 1 hour

Q20) What is the longest configurable message retention period for Amazon Simple Queue Service (Amazon SQS)?

- 30 seconds
- ✅ 14 days

Explanation:-The longest configurable message retention period for Amazon SQS is 14 days.

- 4 days
- 30 minutes

Q21) What is the default message retention period for Amazon Simple Queue Service (Amazon SQS)?

- 30 seconds
- ✅ 4 days

Explanation:-The default message retention period that can be set in Amazon SQS is four days.

- 30 minutes
- 14 days

Q22)

Amazon Simple Notification Service (Amazon SNS) is a push notification service that lets you send individual or multiple messages to large numbers of recipients.

What types of clients are supported?

- Mobile and AMQP support for publisher and subscriber client types
- ✅ Publisher and subscriber client types

Explanation:-With Amazon SNS, you send individual or multiple messages to large numbers of recipients using publisher and subscriber client types.

- Producers and consumers supported by C and C++ clients
- Java and JavaScript clients that support publisher and subscriber types

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Q23) In Amazon Simple Workflow Service (Amazon SWF), a decider is responsible for what?

- Executing your workflow
- ✅ Defining work coordination logic by specifying work sequencing, timing, and failure conditions

Explanation:-The decider schedules the activity tasks and provides input data to the activity workers. The decider also processes events that arrive while the workflow is in progress and closes the workflow when the objective has been completed.

- Executing each step of the work
- Registering activities and workflow with Amazon SWF

Q24) Which port number is used to serve requests by DNS?

- 161
- ✅ 53

Explanation:-DNS uses port number 53 to serve requests.

- 22
- 389

Q25) Which protocol is primarily used by DNS to serve requests?

- ✅ User Datagram Protocol (UDP)

Explanation:-DNS primarily uses UDP to serve requests.

- File Transfer Protocol (FTP)
- Hyper Text Transfer Protocol (HTTP)
- Transmission Control Protocol (TCP)

Q26) Which protocol is used by DNS when response data size exceeds 512 bytes?

- File Transfer Protocol (FTP)
- Hyper Text Transfer Protocol (HTTP)
- ✅ Transmission Control Protocol (TCP)

Explanation:-The TCP protocol is used by DNS server when the response data size exceeds 512 bytes or for tasks such as zone transfers.

- User Datagram Protocol (UDP)

Q27) What are the different hosted zones that can be created in Amazon Route 53?
1. Public hosted zone
2. Global hosted zone
3. Private hosted zone

- 2 and 3
- ✅ 1 and 3

Explanation:-Using Amazon Route 53, you can create two types of hosted zones: public hosted zones and private hosted zones.

- 1 and 2
- 1, 2, and 3

Q28)

Your e-commerce application provides daily and ad hoc reporting to various business units on customer purchases. This is resulting in an extremely high level of read traffic to your MySQL Amazon Relational Database Service (Amazon RDS) instance.

What can you do to scale up read traffic without impacting your database's performance?

- ✅ Create a read replica for an Amazon RDS instance.

Explanation:-Amazon RDS read replicas provide enhanced performance and durability for Amazon RDS instances. This replication feature makes it easy to scale out elastically beyond the capacity constraints of a single Amazon RDS instance for read-heavy database workloads. You can create one or more replicas of a given source Amazon RDS instance and serve high-volume application read traffic from multiple copies of your data, thereby increasing aggregate read throughput.

- Modify the Amazon RDS instance to be a Multi-AZ deployment.
- Increase the allocated storage for the Amazon RDS instance.
- Change the Amazon RDS instance DB engine version.

Q29)

Your website is hosted on a fleet of web servers that are load balanced across multiple Availability Zones using an Elastic Load Balancer (ELB).

What type of record set in Amazon Route 53 can be used to point myawesomeapp.com to your website?

- MX record set
- ✅ Type A Alias resource record set

Explanation:-An alias resource record set can point to an ELB. You cannot create a CNAME record at the top node of a Domain Name Service (DNS) namespace, also known as the zone apex, as the case in this example. Alias resource record sets can save you time because Amazon Route 53 automatically recognizes changes in the resource record sets to which the alias resource record set refers.

- TXT record set
- CNAME record set

Q30)

You need a secure way to distribute your AWS credentials to an application running on Amazon Elastic Compute Cloud (Amazon EC2) instances in order to access supplementary AWS Cloud services.

What approach provides your application access to use short-term credentials for signing requests while protecting those credentials from other users?

- Add your credentials to the UserData parameter of each Amazon EC2 instance.
- Use a configuration file to store your access and secret keys on the Amazon EC2 instances.
- Specify your access and secret keys directly in your application.
- ✅ Provision the Amazon EC2 instances with an instance profile that has the appropriate privileges.

Explanation:-An instance profile is a container for an AWS Identity and Access Management (IAM) role that you can use to pass role information to an Amazon EC2 instance when the instance starts. The IAM role should have a policy attached that only allows access to the AWS Cloud services

necessary to perform its function.

Q31)

You are running a suite of microservices on AWS Lambda that provide the business logic and access to data stored in Amazon DynamoDB for your task management system. You need to create well-defined RESTful Application Program Interfaces (APIs) for these microservices that will scale with traffic to support a new mobile application.

What AWS Cloud service can you use to create the necessary RESTful APIs?

- Amazon Cognito
- Amazon Kinesis
- ✅ Amazon API Gateway

Explanation:-Amazon API Gateway is a fully managed service that makes it easy for developers to publish, maintain, monitor, and secure APIs at any scale. You can create an API that acts as a “front door” for applications to access data, business logic, or functionality from your code running on AWS Lambda. Amazon API Gateway handles all of the tasks involved in accepting and processing up to hundreds of thousands of concurrent API calls, including traffic management, authorization and access control, monitor

- Amazon Elastic Compute Cloud (Amazon EC2) Container Registry

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Q32) When designing a loosely coupled system, which AWS services provide an intermediate durable storage layer between components? (Choose 2 answers)

- Amazon Route 53
- AWS CloudFormation
- ✅ Amazon Simple Queue Service (Amazon SQS)

Explanation:-Amazon Kinesis is a platform for streaming data on AWS, offering powerful services to make it easy to load and analyze streaming data. Amazon SQS is a fast, reliable, scalable, and fully managed message queuing service. Amazon SQS makes it simple and cost-effective to decouple the components of a cloud application.

- Amazon CloudFront
- ✅ Amazon Kinesis

Explanation:-Amazon Kinesis is a platform for streaming data on AWS, offering powerful services to make it easy to load and analyze streaming data. Amazon SQS is a fast, reliable, scalable, and fully managed message queuing service. Amazon SQS makes it simple and cost-effective to decouple the components of a cloud application.

Q33) Which of the following options will help increase the availability of a web server farm? (Choose 2 answers)

- Deploy the instances in an Amazon Virtual Private Cloud (Amazon VPC).
- ✅ Leverage Auto Scaling to recover from failed instances.

Explanation:-Launching instances across multiple Availability Zones helps ensure the application is isolated from failures in a single Availability Zone, allowing the application to achieve higher availability. Whether you are running one Amazon EC2 instance or thousands, you can use Auto Scaling to detect impaired Amazon EC2 instances and unhealthy applications and replace the instances without your intervention. This ensures that your application is getting the compute capacity that you expect.

- ✅ Launch the web server instances across multiple Availability Zones.

Explanation:-Launching instances across multiple Availability Zones helps ensure the application is isolated from failures in a single Availability Zone, allowing the application to achieve higher availability. Whether you are running one Amazon EC2 instance or thousands, you can use Auto Scaling to detect impaired Amazon EC2 instances and unhealthy applications and replace the instances without your intervention. This ensures that your application is getting the compute capacity that you expect.

- Use Amazon CloudFront to deliver content to the end users with low latency and high data transfer speeds.
- Add more CPU and RAM to each instance.

Q34) Which of the following AWS Cloud services are designed according to the Multi-AZ principle? (Choose 2 answers)

- Amazon Virtual Private Cloud (Amazon VPC)
- ✅ Amazon Simple Storage Service (Amazon S3)

Explanation:-Amazon DynamoDB runs across AWS proven, high-availability data centers. The service replicates data across three facilities in an AWS region to provide fault tolerance in the event of a server failure or Availability Zone outage. Amazon S3 provides durable infrastructure to store important data and is designed for durability of 99.999999999% of objects. Your data is redundantly stored across multiple facilities and multiple devices in each facility.

- Elastic Load Balancing
- Amazon ElastiCache
- ✅ Amazon DynamoDB

Explanation:-Amazon DynamoDB runs across AWS proven, high-availability data centers. The service replicates data across three facilities in an AWS region to provide fault tolerance in the event of a server failure or Availability Zone outage. Amazon S3 provides durable infrastructure to store important data and is designed for durability of 99.999999999% of objects. Your data is redundantly stored across multiple facilities and multiple devices in each facility.

Q35)

Your e-commerce site was designed to be stateless and currently runs on a fleet of Amazon Elastic Compute Cloud (Amazon EC2) instances. In an effort to control cost and increase availability, you have a requirement to scale the fleet based on CPU and network utilization to match the demand curve for your site.

What services do you need to meet this requirement? (Choose 2 answers)

- Amazon Simple Storage Service (Amazon S3)
- ✅ Auto Scaling

Explanation:-Auto Scaling enables you to follow the demand curve for your applications closely, reducing the need to provision Amazon EC2 capacity manually in advance. For example, you can set a condition to add new Amazon EC2 instances in increments to the Auto Scaling group

when the average CPU and network utilization of your Amazon EC2 fleet monitored in Amazon CloudWatch is high; similarly, you can set a condition to remove instances in the same increments when CPU and network utilization are low.

- Elastic Load Balancing
- Amazon DynamoDB
- ✅ Amazon CloudWatch

Explanation:-Auto Scaling enables you to follow the demand curve for your applications closely, reducing the need to provision Amazon EC2 capacity manually in advance. For example, you can set a condition to add new Amazon EC2 instances in increments to the Auto Scaling group when the average CPU and network utilization of your Amazon EC2 fleet monitored in Amazon CloudWatch is high; similarly, you can set a condition to remove instances in the same increments when CPU and network utilization are low.

Q36) Your compliance department has mandated a new requirement that all data on Amazon Elastic Block Storage (Amazon EBS) volumes must be encrypted. Which of the following steps would you follow for your existing Amazon EBS volumes to comply with the new requirement? (Choose 3 answers)

- ✅ Copy the data from the unencrypted Amazon EBS volume to the Amazon EBS volume with encryption enabled.

Explanation:-There is no direct way to encrypt an existing unencrypted volume. However, you can migrate data between encrypted and unencrypted volumes.

- Modify the existing Amazon EBS volume properties to enable encryption.
- ✅ Attach an Amazon EBS volume with encryption enabled to the instance that hosts the data, then migrate the data to the encryption-enabled Amazon EBS volume.

Explanation:-There is no direct way to encrypt an existing unencrypted volume. However, you can migrate data between encrypted and unencrypted volumes.

- Move the existing Amazon EBS volume into an Amazon Virtual Private Cloud (Amazon VPC).
- ✅ Create a new Amazon EBS volume with encryption enabled.

Explanation:-There is no direct way to encrypt an existing unencrypted volume. However, you can migrate data between encrypted and unencrypted volumes.

Q37) When building a Distributed Denial of Service (DDoS)-resilient architecture, how does Amazon Virtual Private Cloud (Amazon VPC) help minimize the attack surface area? (Choose 3 answers)

- ✅ Adds non-critical Internet entry points to the architecture

Explanation:-The attack surface is composed of the different Internet entry points that allow access to your application. The strategy to minimize the attack surface area is to (a) reduce the number of necessary Internet entry points, (b) eliminate non-critical Internet entry points, (c) separate end user traffic from management traffic, (d) obfuscate necessary Internet entry points to the level that untrusted end users cannot access them, and (e) decouple Internet entry points to minimize the effects

- ✅ Obfuscates necessary Internet entry points to the level that untrusted end users

Explanation:-The attack surface is composed of the different Internet entry points that allow access to your application. The strategy to minimize the attack surface area is to (a) reduce the number of necessary Internet entry points, (b) eliminate non-critical Internet entry points, (c) separate end user traffic from management traffic, (d) obfuscate necessary Internet entry points to the level that untrusted end users cannot access them, and (e) decouple Internet entry points to minimize the effects

- Combines end user traffic with management traffic
- ✅ Reduces the number of necessary Internet entry points

Explanation:-The attack surface is composed of the different Internet entry points that allow access to your application. The strategy to minimize the attack surface area is to (a) reduce the number of necessary Internet entry points, (b) eliminate non-critical Internet entry points, (c) separate end user traffic from management traffic, (d) obfuscate necessary Internet entry points to the level that untrusted end users cannot access them, and (e) decouple Internet entry points to minimize the effects

- Scales the network to absorb DDoS attacks

Q38)

Your application polls an Amazon Simple Queue Service (Amazon SQS) queue frequently and returns immediately, often with empty ReceiveMessageResponses.

What is one thing that can be done to reduce Amazon SQS costs?

- Pricing on Amazon SQS does not include a cost for service requests; therefore, there is no concern.
- Increase the timeout value for short polling to wait for messages longer before returning a response.
- Change the message visibility value to a higher number.
- ✅ Use long polling by supplying a WaitTimeSeconds of greater than 0 seconds when calling ReceiveMessage.

Explanation:-Long polling allows your application to poll the queue, and, if nothing is there, Amazon Elastic Compute Cloud (Amazon EC2) waits for an amount of time you specify (between 1 and 20 seconds). If a message arrives in that time, it is delivered to your application as soon as possible. If a message does not arrive in that time, you need to execute the ReceiveMessage function again.

Q39) 19. Amazon Route 53 cannot route queries to which AWS resource?

- Amazon CloudFront distribution
- Elastic Load Balancing load balancer
- Amazon EC2
- ✅ AWS OpsWorks

Explanation:-Amazon Route 53 can route queries to a variety of AWS resources such as an Amazon CloudFront distribution, an Elastic Load Balancing load balancer, an Amazon EC2 instance, a website hosted in an Amazon S3 bucket, and an Amazon Relational Database (Amazon RDS).

Q40) When configuring Amazon Route 53 as your DNS service for an existing domain, which is the first step that needs to be performed?

- Create hosted zones.
- Create resource record sets.
- Register a domain with Amazon Route 53.

Transfer domain registration from current registrar to Amazon Route 53.

Explanation:-You must first transfer the existing domain registration from another registrar to Amazon Route 53 to configure it as your DNS service.