



**Amazon**

## **Exam Questions AWS-Solution-Architect-Associate**

Amazon AWS Certified Solutions Architect - Associate

#### NEW QUESTION 1

You are trying to launch an EC2 instance, however the instance seems to go into a terminated status immediately. What would probably not be a reason that this is happening?

- A. The AMI is missing a required part.
- B. The snapshot is corrupt.
- C. You need to create storage in EBS first.
- D. You've reached your volume limit

**Answer: C**

#### Explanation:

Amazon EC2 provides a virtual computing environments, known as an instance.

After you launch an instance, AWS recommends that you check its status to confirm that it goes from the pending status to the running status, the not terminated status.

The following are a few reasons why an Amazon EBS-backed instance might immediately terminate: You've reached your volume limit.

The AMI is missing a required part. The snapshot is corrupt. Reference:

[http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using\\_InstanceStraightToTerminated.html](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Using_InstanceStraightToTerminated.html)

#### NEW QUESTION 2

You have set up an Auto Scaling group. The cool down period for the Auto Scaling group is 7 minutes. The first instance is launched after 3 minutes, while the second instance is launched after 4 minutes. How many minutes after the first instance is launched will Auto Scaling accept another scaling activity request?

- A. 11 minutes
- B. 7 minutes
- C. 10 minutes
- D. 14 minutes

**Answer: A**

#### Explanation:

If an Auto Scaling group is launching more than one instance, the cool down period for each instance starts after that instance is launched. The group remains locked until the last instance that was launched has completed its cool down period. In this case the cool down period for the first instance starts after 3 minutes and finishes at the 10th minute (3+7 cool down), while for the second instance it starts at the 4th minute and finishes at the 11th minute (4+7 cool down). Thus, the Auto Scaling group will receive another request only after 11 minutes.

Reference: [http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS\\_Concepts.html](http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS_Concepts.html)

#### NEW QUESTION 3

After you recommend Amazon Redshift to a client as an alternative solution to paying data warehouses to analyze his data, your client asks you to explain why you are recommending Redshift. Which of the following would be a reasonable response to his request?

- A. It has high performance at scale as data and query complexity grows.
- B. It prevents reporting and analytic processing from interfering with the performance of OLTP workloads.
- C. You don't have the administrative burden of running your own data warehouse and dealing with setup, durability, monitoring, scaling, and patching.
- D. All answers listed are a reasonable response to his request

**Answer: D**

#### Explanation:

Amazon Redshift delivers fast query performance by using columnar storage technology to improve I/O efficiency and parallelizing queries across multiple nodes. Redshift uses standard PostgreSQL JDBC and ODBC drivers, allowing you to use a wide range of familiar SQL clients. Data load speed scales linearly with cluster size, with integrations to Amazon S3, Amazon DynamoDB, Amazon Elastic MapReduce, Amazon Kinesis or any SSH-enabled host.

AWS recommends Amazon Redshift for customers who have a combination of needs, such as: High performance at scale as data and query complexity grows  
Desire to prevent reporting and analytic processing from interfering with the performance of OLTP workloads

Large volumes of structured data to persist and query using standard SQL and existing BI tools  
Desire to the administrative burden of running one's own data warehouse and dealing with setup, durability, monitoring, scaling and patching

Reference: [https://aws.amazon.com/running\\_databases/#redshift\\_anchor](https://aws.amazon.com/running_databases/#redshift_anchor)

#### NEW QUESTION 4

A user is launching an EC2 instance in the US East region. Which of the below mentioned options is recommended by AWS with respect to the selection of the availability zone?

- A. Always select the AZ while launching an instance
- B. Always select the US-East-1-a zone for HA
- C. Do not select the AZ; instead let AWS select the AZ
- D. The user can never select the availability zone while launching an instance

**Answer: C**

#### Explanation:

When launching an instance with EC2, AWS recommends not to select the availability zone (AZ). AWS specifies that the default Availability Zone should be accepted. This is because it enables AWS to select the best Availability Zone based on the system health and available capacity. If the user launches additional instances, only then an Availability Zone should be specified. This is to specify the same or different AZ from the running instances.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html>

#### NEW QUESTION 5

What is a placement group in Amazon EC2?

- A. It is a group of EC2 instances within a single Availability Zone.
- B. It the edge location of your web content.
- C. It is the AWS region where you run the EC2 instance of your web content.
- D. It is a group used to span multiple Availability Zone

**Answer:** A

**Explanation:**

A placement group is a logical grouping of instances within a single Availability Zone. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html>

**NEW QUESTION 6**

Do Amazon EBS volumes persist independently from the running life of an Amazon EC2 instance?

- A. Yes, they do but only if they are detached from the instance.
- B. No, you cannot attach EBS volumes to an instance.
- C. No, they are dependent.
- D. Yes, they d

**Answer:** D

**Explanation:**

An Amazon EBS volume behaves like a raw, unformatted, external block device that you can attach to a single instance. The volume persists independently from the running life of an Amazon EC2 instance. Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/Storage.html>

**NEW QUESTION 7**

Your supervisor has asked you to build a simple file synchronization service for your department. He doesn't want to spend too much money and he wants to be notified of any changes to files by email. What do you think would be the best Amazon service to use for the email solution?

- A. Amazon SES
- B. Amazon CloudSearch
- C. Amazon SWF
- D. Amazon AppStream

**Answer:** A

**Explanation:**

File change notifications can be sent via email to users following the resource with Amazon Simple Email Service (Amazon SES), an easy-to-use, cost-effective email solution. Reference: [http://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_filesync\\_08.pdf](http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_filesync_08.pdf)

**NEW QUESTION 8**

Does DynamoDB support in-place atomic updates?

- A. Yes
- B. No
- C. It does support in-place non-atomic updates
- D. It is not defined

**Answer:** A

**Explanation:**

DynamoDB supports in-place atomic updates. Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.AtomicCounters>

**NEW QUESTION 9**

Your manager has just given you access to multiple VPN connections that someone else has recently set up between all your company's offices. She needs you to make sure that the communication between the VPNs is secure. Which of the following services would be best for providing a low-cost hub-and-spoke model for primary or backup connectMty between these remote offices?

- A. Amazon C|oudFront
- B. AWS Direct Connect
- C. AWS C|oudHSM
- D. AWS VPN CloudHub

**Answer:** D

**Explanation:**

If you have multiple VPN connections, you can provide secure communication between sites using the AWS VPN CloudHub. The VPN CloudHub operates on a simple hub-and-spoke model that you can use with or without a VPC. This design is suitable for customers with multiple branch offices and existing Internet connections who would like to implement a convenient, potentially low-cost hub-and-spoke model for primary or backup connectMty between these remote offices. Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPN\\_CloudHub.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPN_CloudHub.html)

#### NEW QUESTION 10

In Amazon AWS, which of the following statements is true of key pairs?

- A. Key pairs are used only for Amazon SDKs.
- B. Key pairs are used only for Amazon EC2 and Amazon CloudFront.
- C. Key pairs are used only for Elastic Load Balancing and AWS IAM.
- D. Key pairs are used for all Amazon service

**Answer: B**

#### Explanation:

Key pairs consist of a public and private key, where you use the private key to create a digital signature, and then AWS uses the corresponding public key to validate the signature. Key pairs are used only for Amazon EC2 and Amazon CloudFront.

Reference: <http://docs.aws.amazon.com/general/latest/gr/aws-sec-cred-types.html>

#### NEW QUESTION 10

Does Amazon DynamoDB support both increment and decrement atomic operations?

- A. Only increment, since decrement are inherently impossible with DynamoDB's data model.
- B. No, neither increment nor decrement operations.
- C. Yes, both increment and decrement operations.
- D. Only decrement, since increment are inherently impossible with DynamoDB's data mode

**Answer: C**

#### Explanation:

Amazon DynamoDB supports increment and decrement atomic operations.

Reference: <http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/APISummary.html>

#### NEW QUESTION 14

You are in the process of creating a Route 53 DNS failover to direct traffic to two EC2 zones. Obviously, if one fails, you would like Route 53 to direct traffic to the other region. Each region has an ELB with some instances being distributed. What is the best way for you to configure the Route 53 health check?

- A. Route 53 doesn't support ELB with an internal health check. You need to create your own Route 53 health check of the ELB
- B. Route 53 natively supports ELB with an internal health chec
- C. Turn "Evaluate target health" off and "Associate with Health Check" on and R53 will use the ELB's internal health check.
- D. Route 53 doesn't support ELB with an internal health chec
- E. You need to associate your resource record set for the ELB with your own health check
- F. Route 53 natively supports ELB with an internal health chec
- G. Turn "Evaluate target health" on and "Associate with Health Check" off and R53 will use the ELB's internal health check.

**Answer: D**

#### Explanation:

With DNS Failover, Amazon Route 53 can help detect an outage of your website and redirect your end users to alternate locations where your application is operating properly. When you enable this feature, Route 53 uses health checks-regularly making Internet requests to your application's endpoints from multiple locations around the world-to determine whether each endpoint of your application is up or down.

To enable DNS Failover for an ELB endpoint, create an Alias record pointing to the ELB and set the "Evaluate Target Health" parameter to true. Route 53 creates and manages the health checks for your ELB automatically. You do not need to create your own Route 53 health check of the ELB. You also do not need to associate your resource record set for the ELB with your own health check, because Route 53 automatically associates it with the health checks that Route 53 manages on your behalf. The ELB health check will also inherit the health of your backend instances behind that ELB.

Reference:

<http://aws.amazon.com/about-aws/whats-new/2013/05/30/amazon-route-53-adds-elb-integration-for-dns-failover/>

#### NEW QUESTION 17

A user wants to use an EBS-backed Amazon EC2 instance for a temporary job. Based on the input data, the job is most likely to finish within a week. Which of the following steps should be followed to terminate the instance automatically once the job is finished?

- A. Configure the EC2 instance with a stop instance to terminate it.
- B. Configure the EC2 instance with ELB to terminate the instance when it remains idle.
- C. Configure the CloudWatch alarm on the instance that should perform the termination action once the instance is idle.
- D. Configure the Auto Scaling schedule actMty that terminates the instance after 7 day

**Answer: C**

#### Explanation:

Auto Scaling can start and stop the instance at a pre-defined time. Here, the total running time is unknown. Thus, the user has to use the CloudWatch alarm, which monitors the CPU utilization. The user can create an alarm that is triggered when the average CPU utilization percentage has been lower than 10 percent for 24 hours, signaling that it is idle and no longer in use. When the utilization is below the threshold limit, it will terminate the instance as a part of the instance action.

Reference: <http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/UsingAlarmActions.html>

#### NEW QUESTION 21

Which of the following is true of Amazon EC2 security group?

- A. You can modify the outbound rules for EC2-Classic.
- B. You can modify the rules for a security group only if the security group controls the traffic for just one instance.
- C. You can modify the rules for a security group only when a new instance is created.
- D. You can modify the rules for a security group at any tim

**Answer:** D

**Explanation:**

A security group acts as a virtual firewall that controls the traffic for one or more instances. When you launch an instance, you associate one or more security groups with the instance. You add rules to each security group that allow traffic to or from its associated instances. You can modify the rules for a security group at any time; the new rules are automatically applied to all instances that are associated with the security group.

Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-network-security.html>

**NEW QUESTION 23**

An Elastic IP address (EIP) is a static IP address designed for dynamic cloud computing. With an EIP, you can mask the failure of an instance or software by rapidly remapping the address to another instance in your account. Your EIP is associated with your AWS account, not a particular EC2 instance, and it remains associated with your account until you choose to explicitly release it. By default how many EIPs is each AWS account limited to on a per region basis?

- A. 1
- B. 5
- C. Unlimited
- D. 10

**Answer:** B

**Explanation:**

By default, all AWS accounts are limited to 5 Elastic IP addresses per region for each AWS account, because public (IPv4) Internet addresses are a scarce public resource. AWS strongly encourages you to use an EIP primarily for load balancing use cases, and use DNS hostnames for all other inter-node communication.

If you feel your architecture warrants additional EIPs, you would need to complete the Amazon EC2 Elastic IP Address Request Form and give reasons as to your need for additional addresses. Reference:

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/elastic-ip-addresses-eip.html#using-instance-addressing-limit>

**NEW QUESTION 24**

In Amazon EC2, partial instance-hours are billed .

- A. per second used in the hour
- B. per minute used
- C. by combining partial segments into full hours
- D. as full hours

**Answer:** D

**Explanation:**

Partial instance-hours are billed to the next hour. Reference: <http://aws.amazon.com/ec2/faqs/>

**NEW QUESTION 25**

In EC2, what happens to the data in an instance store if an instance reboots (either intentionally or unintentionally)?

- A. Data is deleted from the instance store for security reasons.
- B. Data persists in the instance store.
- C. Data is partially present in the instance store.
- D. Data in the instance store will be lost

**Answer:** B

**Explanation:**

The data in an instance store persists only during the lifetime of its associated instance. If an instance reboots (intentionally or unintentionally), data in the instance store persists. However, data on instance store volumes is lost under the following circumstances.

Failure of an underlying drive

Stopping an Amazon EBS-backed instance Terminating an instance

Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/InstanceStorage.html>

**NEW QUESTION 26**

Can you specify the security group that you created for a VPC when you launch an instance in EC2-Classic?

- A. No, you can specify the security group created for EC2-Classic when you launch a VPC instance.
- B. No
- C. Yes
- D. No, you can specify the security group created for EC2-Classic to a non-VPC based instance only

**Answer:** B

**Explanation:**

If you're using EC2-Classic, you must use security groups created specifically for EC2-Classic. When you launch an instance in EC2-Classic, you must specify a security group in the same region as the instance. You can't specify a security group that you created for a VPC when you launch an instance in EC2-Classic.

Reference:

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html#ec2-classic-security-groups>

**NEW QUESTION 28**

A major finance organisation has engaged your company to set up a large data mining application. Using AWS you decide the best service for this is Amazon Elastic MapReduce(EMR) which you know uses Hadoop. Which of the following statements best describes Hadoop?

- A. Hadoop is 3rd Party software which can be installed using AMI
- B. Hadoop is an open source python web framework
- C. Hadoop is an open source Java software framework
- D. Hadoop is an open source javascript framework

**Answer: C**

**Explanation:**

Amazon EMR uses Apache Hadoop as its distributed data processing engine.

Hadoop is an open source, Java software framework that supports data-intensive distributed applications running on large clusters of commodity hardware.

Hadoop implements a programming model named "MapReduce," where the data is dMded into many small fragments of work, each of which may be executed on any node in the cluster.

This framework has been widely used by developers, enterprises and startups and has proven to be a reliable software platform for processing up to petabytes of data on clusters of thousands of commodity machines.

Reference: <http://aws.amazon.com/elasticmapreduce/faqs/>

**NEW QUESTION 29**

As AWS grows, most of your clients' main concerns seem to be about security, especially when all of their competitors also seem to be using AWS. One of your clients asks you whether having a competitor who hosts their EC2 instances on the same physical host would make it easier for the competitor to hack into the client's data. Which of the following statements would be the best choice to put your client's mind at rest?

- A. Different instances running on the same physical machine are isolated from each other via a 256-bit Advanced Encryption Standard (AES-256).
- B. Different instances running on the same physical machine are isolated from each other via the Xen hypervisor and via a 256-bit Advanced Encryption Standard (AES-256).
- C. Different instances running on the same physical machine are isolated from each other via the Xen hypervisor.
- D. Different instances running on the same physical machine are isolated from each other via IAM permissions.

**Answer: C**

**Explanation:**

Amazon Elastic Compute Cloud (EC2) is a key component in Amazon's Infrastructure as a Service (IaaS), providing resizable computing capacity using server instances in AWS's data centers. Amazon EC2 is designed to make web-scale computing easier by enabling you to obtain and configure capacity with minimal friction.

You create and launch instances, which are collections of platform hardware and software. Different instances running on the same physical machine are isolated from each other via the Xen hypervisor.

Amazon is active in the Xen community, which provides awareness of the latest developments. In addition, the AWS firewall resides within the hypervisor layer, between the physical network interface and the instance's virtual interface. All packets must pass through this layer, thus an instance's neighbors have no more access to that instance than any other host on the Internet and can be treated as if they are on separate physical hosts. The physical RAM is separated using similar mechanisms.

Reference: <http://d0.awsstatic.com/whitepapers/Security/AWS%20Security%20Whitepaper.pdf>

**NEW QUESTION 30**

In Amazon RDS, security groups are ideally used to:

- A. Define maintenance period for database engines
- B. Launch Amazon RDS instances in a subnet
- C. Create, describe, modify, and delete DB instances
- D. Control what IP addresses or EC2 instances can connect to your databases on a DB instance

**Answer: D**

**Explanation:**

In Amazon RDS, security groups are used to control what IP addresses or EC2 instances can connect to your databases on a DB instance.

When you first create a DB instance, its firewall prevents any database access except through rules specified by an associated security group.

Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/UsingWithRDS.html>

**NEW QUESTION 35**

Can resource record sets in a hosted zone have a different domain suffix (for example, www.blog. acme.com and www.acme.ca)?

- A. Yes, it can have for a maximum of three different TLDs.
- B. Yes
- C. Yes, it can have depending on the TLD.
- D. No

**Answer: D**

**Explanation:**

The resource record sets contained in a hosted zone must share the same suffix. For example, the example.com hosted zone can contain resource record sets for www.example.com and www.aws.example.com subdomains, but it cannot contain resource record sets for a www.example.ca subdomain.

Reference: <http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/AboutHostedZones.html>

**NEW QUESTION 36**

You are running PostgreSQL on Amazon RDS and it seems to be all running smoothly deployed in one availability zone. A database administrator asks you if DB instances running PostgreSQL support Multi-AZ deployments. What would be a correct response to this QUESTION ?

- A. Yes.
- B. Yes but only for small db instances.
- C. No.
- D. Yes but you need to request the service from AW

**Answer:** A

**Explanation:**

Amazon RDS supports DB instances running several versions of PostgreSQL. Currently we support PostgreSQL versions 9.3.1, 9.3.2, and 9.3.3. You can create DB instances and DB snapshots, point-in-time restores and backups.

DB instances running PostgreSQL support Multi-AZ deployments, Provisioned IOPS, and can be created inside a VPC. You can also use SSL to connect to a DB instance running PostgreSQL.

You can use any standard SQL client application to run commands for the instance from your client computer. Such applications include pgAdmin, a popular Open Source administration and development tool for PostgreSQL, or psql, a command line utility that is part of a PostgreSQL installation. In order to deliver a managed service experience, Amazon RDS does not provide host access to DB instances, and it restricts access to certain system procedures and tables that require advanced privileges. Amazon RDS supports access to databases on a DB instance using any standard SQL client application. Amazon RDS does not allow direct host access to a DB instance via Telnet or Secure Shell (SSH).

Reference: [http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP\\_PostgreSQL.html](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_PostgreSQL.html)

**NEW QUESTION 37**

A user has launched 10 EC2 instances inside a placement group. Which of the below mentioned statements is true with respect to the placement group?

- A. All instances must be in the same AZ
- B. All instances can be across multiple regions
- C. The placement group cannot have more than 5 instances
- D. All instances must be in the same region

**Answer:** A

**Explanation:**

A placement group is a logical grouping of EC2 instances within a single Availability Zone. Using placement groups enables applications to participate in a low-latency, 10 Gbps network. Placement groups are recommended for applications that benefit from low network latency, high network throughput or both.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html>

**NEW QUESTION 38**

An organization has developed a mobile application which allows end users to capture a photo on their mobile device, and store it inside an application. The application internally uploads the data to AWS S3. The organization wants each user to be able to directly upload data to S3 using their Google ID. How will the mobile app allow this?

- A. Use the AWS Web identity federation for mobile applications, and use it to generate temporary security credentials for each user.
- B. It is not possible to connect to AWS S3 with a Google ID.
- C. Create an IAM user every time a user registers with their Google ID and use IAM to upload files to S3.
- D. Create a bucket policy with a condition which allows everyone to upload if the login ID has a Google part to it.

**Answer:** A

**Explanation:**

For Amazon Web Services, the Web identity federation allows you to create cloud-backed mobile apps that use public identity providers, such as login with Facebook, Google, or Amazon. It will create temporary security credentials for each user, which will be authenticated by the AWS services, such as S3.

Reference: <http://docs.aws.amazon.com/STS/latest/UsingSTS/CreatingWIF.html>

**NEW QUESTION 42**

You are architecting an auto-scalable batch processing system using video processing pipelines and Amazon Simple Queue Service (Amazon SQS) for a customer. You are unsure of the limitations of SQS and need to find out. What do you think is a correct statement about the limitations of Amazon SQS?

- A. It supports an unlimited number of queues but a limited number of messages per queue for each user but automatically deletes messages that have been in the queue for more than 4 weeks.
- B. It supports an unlimited number of queues and unlimited number of messages per queue for each user but automatically deletes messages that have been in the queue for more than 4 days.
- C. It supports an unlimited number of queues but a limited number of messages per queue for each user but automatically deletes messages that have been in the queue for more than 4 days.
- D. It supports an unlimited number of queues and unlimited number of messages per queue for each user but automatically deletes messages that have been in the queue for more than 4 weeks.

**Answer:** B

**Explanation:**

Amazon Simple Queue Service (Amazon SQS) is a messaging queue service that handles message or workflows between other components in a system. Amazon SQS supports an unlimited number of queues and unlimited number of messages per queue for each user. Please be aware that Amazon SQS automatically deletes messages that have been in the queue for more than 4 days.

Reference: <http://aws.amazon.com/documentation/sqs/>

**NEW QUESTION 43**

An online gaming site asked you if you can deploy a database that is a fast, highly scalable NoSQL database service in AWS for a new site that he wants to build. Which database should you recommend?

- A. Amazon DynamoDB
- B. Amazon RDS
- C. Amazon Redshift
- D. Amazon SimpleDB

**Answer:** A

**Explanation:**

Amazon DynamoDB is ideal for database applications that require very low latency and predictable performance at any scale but don't need complex querying capabilities like joins or transactions. Amazon DynamoDB is a fully-managed NoSQL database service that offers high performance, predictable throughput and low cost. It is easy to set up, operate, and scale.

With Amazon DynamoDB, you can start small, specify the throughput and storage you need, and easily scale your capacity requirements on the fly. Amazon DynamoDB automatically partitions data over a number of servers to meet your request capacity. In addition, DynamoDB automatically replicates your data synchronously across multiple Availability Zones within an AWS Region to ensure high-availability and data durability.

Reference: [https://aws.amazon.com/running\\_databases/#dynamodb\\_anchor](https://aws.amazon.com/running_databases/#dynamodb_anchor)

**NEW QUESTION 47**

You log in to IAM on your AWS console and notice the following message. "Delete your root access keys." Why do you think IAM is requesting this?

- A. Because the root access keys will expire as soon as you log out.
- B. Because the root access keys expire after 1 week.
- C. Because the root access keys are the same for all users.
- D. Because they provide unrestricted access to your AWS resource

**Answer: D**

**Explanation:**

In AWS an access key is required in order to sign requests that you make using the command-line interface (CLI), using the AWS SDKs, or using direct API calls. Anyone who has the access key for your root account has unrestricted access to all the resources in your account, including billing information. One of the best ways to protect your account is to not have an access key for your root account. We recommend that unless you must have a root access key (this is very rare), that you do not generate one. Instead, AWS best practice is to create one or more AWS Identity and Access Management (IAM) users, give them the necessary permissions, and use IAM users for everyday interaction with AWS.

Reference:

<http://docs.aws.amazon.com/general/latest/gr/aws-access-keys-best-practices.html#root-password>

**NEW QUESTION 50**

Your company has been storing a lot of data in Amazon Glacier and has asked for an inventory of what is in there exactly. So you have decided that you need to download a vault inventory. Which of the following statements is incorrect in relation to Vault Operations in Amazon Glacier?

- A. You can use Amazon Simple Notification Service (Amazon SNS) notifications to notify you when the job completes.
- B. A vault inventory refers to the list of archives in a vault.
- C. You can use Amazon Simple Queue Service (Amazon SQS) notifications to notify you when the job completes.
- D. Downloading a vault inventory is an asynchronous operatio

**Answer: C**

**Explanation:**

Amazon Glacier supports various vault operations.

A vault inventory refers to the list of archives in a vault. For each archive in the list, the inventory provides archive information such as archive ID, creation date, and size. Amazon Glacier updates the vault inventory approximately once a day, starting on the day the first archive is uploaded to the vault. A vault inventory must exist for you to be able to download it.

Downloading a vault inventory is an asynchronous operation. You must first initiate a job to download the inventory. After receiving the job request, Amazon Glacier prepares your inventory for download. After the job completes, you can download the inventory data.

Given the asynchronous nature of the job, you can use Amazon Simple Notification Service (Amazon SNS) notifications to notify you when the job completes. You can specify an Amazon SNS topic for each individual job request or configure your vault to send a notification when specific vault events occur. Amazon Glacier prepares an inventory for each vault periodically, every 24 hours. If there have been no archive additions or deletions to the vault since the last inventory, the inventory date is not updated. When you initiate a job for a vault inventory, Amazon Glacier returns the last inventory it generated, which is a point-in-time snapshot and not real-time data. You might not find it useful to retrieve vault inventory for each archive upload. However, suppose you maintain a database on the client-side associating metadata about the archives you upload to Amazon Glacier. Then, you might find the vault inventory useful to reconcile information in your database with the actual vault inventory.

Reference: <http://docs.aws.amazon.com/amazonglacier/latest/dev/working-with-vaults.html>

**NEW QUESTION 53**

You are in the process of building an online gaming site for a client and one of the requirements is that it must be able to process vast amounts of data easily. Which AWS Service would be very helpful in processing all this data?

- A. Amazon S3
- B. AWS Data Pipeline
- C. AWS Direct Connect
- D. Amazon EMR

**Answer: D**

**Explanation:**

Managing and analyzing high data volumes produced by online games platforms can be difficult. The back-end infrastructures of online games can be challenging to maintain and operate. Peak usage periods, multiple players, and high volumes of write operations are some of the most common problems that operations teams face.

Amazon Elastic MapReduce (Amazon EMR) is a service that processes vast amounts of data easily. Input data can be retrieved from web server logs stored on Amazon S3 or from player data stored in Amazon DynamoDB tables to run analytics on player behavior, usage patterns, etc. Those results can be stored again on Amazon S3, or inserted in a relational database for further analysis with classic business intelligence tools.

Reference: [http://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_games\\_10.pdf](http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_games_10.pdf)

**NEW QUESTION 54**

You want to use AWS Import/Export to send data from your S3 bucket to several of your branch offices. What should you do if you want to send 10 storage units to AWS?

- A. Make sure your disks are encrypted prior to shipping.
- B. Make sure you format your disks prior to shipping.
- C. Make sure your disks are 1TB or more.
- D. Make sure you submit a separate job request for each device

**Answer:** D

**Explanation:**

When using Amazon Import/Export, a separate job request needs to be submitted for each physical device even if they belong to the same import or export job.  
Reference: <http://docs.aws.amazon.com/AWSImportExport/latest/DG/Concepts.html>

**NEW QUESTION 56**

Having set up a website to automatically be redirected to a backup website if it fails, you realize that there are different types of failovers that are possible. You need all your resources to be available the majority of the time. Using Amazon Route 53 which configuration would best suit this requirement?

- A. Active-active failover.
- B. Non
- C. Route 53 can't failover.
- D. Active-passive failover.
- E. Active-active-passive and other mixed configuration

**Answer:** A

**Explanation:**

You can set up a variety of failover configurations using Amazon Route 53 alias: weighted, latency, geolocation routing, and failover resource record sets.  
Active-active failover: Use this failover configuration when you want all of your resources to be available the majority of the time. When a resource becomes unavailable, Amazon Route 53 can detect that it's unhealthy and stop including it when responding to queries.  
Active-passive failover: Use this failover configuration when you want a primary group of resources to be available the majority of the time and you want a secondary group of resources to be on standby in case all of the primary resources become unavailable. When responding to queries, Amazon Route 53 includes only the healthy primary resources. If all of the primary resources are unhealthy, Amazon Route 53 begins to include only the healthy secondary resources in response to DNS queries.  
Active-active-passive and other mixed configurations: You can combine alias and non-alias resource record sets to produce a variety of Amazon Route 53 behaviors.  
Reference: <http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html>

**NEW QUESTION 61**

AWS CloudFormation is a service that helps you model and set up your Amazon Web Services resources so that you can spend less time managing those resources and more time focusing on your applications that run in AWS. You create a template that describes all the AWS resources that you want (like Amazon EC2 instances or Amazon RDS DB instances), and AWS CloudFormation takes care of provisioning and configuring those resources for you. What formatting is required for this template?

- A. JSON-formatted document
- B. CSS-formatted document
- C. XML-formatted document
- D. HTML-formatted document

**Answer:** A

**Explanation:**

You can write an AWS CloudFormation template (a JSON-formatted document) in a text editor or pick an existing template. The template describes the resources you want and their settings. For example, suppose you want to create an Amazon EC2. Your template can declare an instance Amazon EC2 and describe its properties, as shown in the following example:

```
{
  "AWSTemplateFormatVersion" : "2010-09-09",
  "Description" : "A simple Amazon EC2 instance", "Resources" : {
    "MyEC2Instance" : {
      "Type" : "AWS::EC2::Instance", "Properties" : {
        "ImageId" : "ami-2f726546", "InstanceType" : "t1.micro"
      }
    }
  }
}
```

Reference:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/cfn-what-is-how-does-it-work.html>

**NEW QUESTION 66**

True or False: In Amazon Route 53, you can create a hosted zone for a top-level domain (TLD).

- A. FALSE
- B. False, Amazon Route 53 automatically creates it for you.
- C. True, only if you send an XML document with a CreateHostedZoneRequest element for TLD.
- D. TRUE

**Answer:** A

**Explanation:**

In Amazon Route 53, you cannot create a hosted zone for a top-level domain (TLD).  
Reference: [http://docs.aws.amazon.com/Route53/latest/APIReference/API\\_CreateHostedZone.html](http://docs.aws.amazon.com/Route53/latest/APIReference/API_CreateHostedZone.html)

#### NEW QUESTION 70

You have been storing massive amounts of data on Amazon Glacier for the past 2 years and now start to wonder if there are any limitations on this. What is the correct answer to your QUESTION ?

- A. The total volume of data is limited but the number of archives you can store are unlimited.
- B. The total volume of data is unlimited but the number of archives you can store are limited.
- C. The total volume of data and number of archives you can store are unlimited.
- D. The total volume of data is limited and the number of archives you can store are limited.

**Answer:** C

#### Explanation:

An archive is a durably stored block of information. You store your data in Amazon Glacier as archives. You may upload a single file as an archive, but your costs will be lower if you aggregate your data. TAR and ZIP are common formats that customers use to aggregate multiple files into a single file before uploading to Amazon Glacier.

The total volume of data and number of archives you can store are unlimited. Individual Amazon Glacier archives can range in size from 1 byte to 40 terabytes. The largest archive that can be uploaded in a single upload request is 4 gigabytes.

For items larger than 100 megabytes, customers should consider using the Multipart upload capability. Archives stored in Amazon Glacier are immutable, i.e. archives can be uploaded and deleted but cannot be edited or overwritten.

Reference: <https://aws.amazon.com/glacier/faqs/>

#### NEW QUESTION 74

A user has configured ELB with two EBS backed EC2 instances. The user is trying to understand the DNS access and IP support for ELB. Which of the below mentioned statements may not help the user understand the IP mechanism supported by ELB?

- A. The client can connect over IPV4 or IPV6 using Dualstack
- B. Communication between the load balancer and back-end instances is always through IPV4
- C. ELB DNS supports both IPV4 and IPV6
- D. The ELB supports either IPV4 or IPV6 but not both

**Answer:** D

#### Explanation:

Elastic Load Balancing supports both Internet Protocol version 6 (IPv6) and Internet Protocol version 4 (IPv4). Clients can connect to the user's load balancer using either IPv4 or IPv6 (in EC2-Classic) DNS. However, communication between the load balancer and its back-end instances uses only IPv4. The user can use the Dualstack-prefixed DNS name to enable IPv6 support for communications between the client and the load balancers. Thus, the clients are able to access the load balancer using either IPv4 or IPv6 as their individual connectivity needs dictate.

Reference: <http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/UserScenariosForEC2.html>

#### NEW QUESTION 77

An existing client comes to you and says that he has heard that launching instances into a VPC (virtual private cloud) is a better strategy than launching instances into a EC2-classic which he knows is what you currently do. You suspect that he is correct and he has asked you to do some research about this and get back to him. Which of the following statements is true in regards to what ability launching your instances into a VPC instead of EC2-Classic gives you?

- A. All of the things listed here.
- B. Change security group membership for your instances while they're running
- C. Assign static private IP addresses to your instances that persist across starts and stops
- D. Define network interfaces, and attach one or more network interfaces to your instances

**Answer:** A

#### Explanation:

By launching your instances into a VPC instead of EC2-Classic, you gain the ability to: Assign static private IP addresses to your instances that persist across starts and stops Assign multiple IP addresses to your instances

Define network interfaces, and attach one or more network interfaces to your instances Change security group membership for your instances while they're running

Control the outbound traffic from your instances (egress filtering) in addition to controlling the inbound traffic to them (ingress filtering)

Add an additional layer of access control to your instances in the form of network access control lists (ACL)

Run your instances on single-tenant hardware

Reference: [http://media.amazonwebservices.com/AWS\\_Cloud\\_Best\\_Practices.pdf](http://media.amazonwebservices.com/AWS_Cloud_Best_Practices.pdf)

#### NEW QUESTION 78

You are building a system to distribute confidential documents to employees. Using CloudFront, what method could be used to serve content that is stored in S3, but not publically accessible from S3 directly?

- A. Add the CloudFront account security group "amazon-cf/amazon-cf-sg" to the appropriate S3 bucket policy.
- B. Create a S3 bucket policy that lists the CloudFront distribution ID as the Principal and the target bucket as the Amazon Resource Name (ARN).
- C. Create an Identity and Access Management (IAM) User for CloudFront and grant access to the objects in your S3 bucket to that IAM User.
- D. Create an Origin Access Identity (OAI) for CloudFront and grant access to the objects in your S3 bucket to that OAI.

**Answer:** D

#### Explanation:

You restrict access to Amazon S3 content by creating an origin access identity, which is a special CloudFront user. You change Amazon S3 permissions to give the origin access identity permission to access your objects, and to remove permissions from everyone else. When your users access your Amazon S3 objects using CloudFront URLs, the CloudFront origin access identity gets the objects on your users' behalf. If your users try to access objects using Amazon S3 URLs, they're denied access. The origin access identity has permission to access objects in your Amazon S3 bucket, but users don't. Reference:

<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3.html>

### NEW QUESTION 83

A user has created a subnet in VPC and launched an EC2 instance within it. The user has not selected the option to assign the IP address while launching the instance. The user has 3 elastic IPs and is trying to assign one of the Elastic IPs to the VPC instance from the console. The console does not show any instance in the IP assignment screen. What is a possible reason that the instance is unavailable in the assigned IP console?

- A. The IP address may be attached to one of the instances
- B. The IP address belongs to a different zone than the subnet zone
- C. The user has not created an internet gateway
- D. The IP addresses belong to EC2 Classic; so they cannot be assigned to VPC

**Answer:** D

#### Explanation:

A Virtual Private Cloud (VPC) is a virtual network dedicated to the user's AWS account. A user can create a subnet with VPC and launch instances inside that subnet. When the user is launching an instance he needs to select an option which attaches a public IP to the instance. If the user has not selected the option to attach the public IP then it will only have a private IP when launched. If the user wants to connect to an instance from the internet he should create an elastic IP with VPC. If the elastic IP is a part of EC2 Classic it cannot be assigned to a VPC instance.

Reference: <http://docs.aws.amazon.com/AmazonVPC/latest/GettingStartedGuide/LaunchInstance.html>

### NEW QUESTION 84

A user is aware that a huge download is occurring on his instance. He has already set the Auto Scaling policy to increase the instance count when the network I/O increases beyond a certain limit. How can the user ensure that this temporary event does not result in scaling?

- A. The network I/O are not affected during data download
- B. The policy cannot be set on the network I/O
- C. There is no way the user can stop scaling as it is already configured
- D. Suspend scaling

**Answer:** D

#### Explanation:

The user may want to stop the automated scaling processes on the Auto Scaling groups either to perform manual operations or during emergency situations. To perform this, the user can suspend one or more scaling processes at any time. Once it is completed, the user can resume all the suspended processes.

Reference: [http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS\\_Concepts.html](http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/AS_Concepts.html)

### NEW QUESTION 85

Select a true statement about Amazon EC2 Security Groups (EC2-Classic).

- A. After you launch an instance in EC2-Classic, you can't change its security groups.
- B. After you launch an instance in EC2-Classic, you can change its security groups only once.
- C. After you launch an instance in EC2-Classic, you can only add rules to a security group.
- D. After you launch an instance in EC2-Classic, you cannot add or remove rules from a security group.

**Answer:** A

#### Explanation:

After you launch an instance in EC2-Classic, you can't change its security groups. However, you can add rules to or remove rules from a security group, and those changes are automatically applied to all instances that are associated with the security group.

Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-network-security.html>

### NEW QUESTION 86

An accountant asks you to design a small VPC network for him and, due to the nature of his business, just needs something where the workload on the network will be low, and dynamic data will be accessed infrequently. Being an accountant, low cost is also a major factor. Which EBS volume type would best suit his requirements?

- A. Magnetic
- B. Any, as they all perform the same and cost the same.
- C. General Purpose (SSD)
- D. Magnetic or Provisioned IOPS (SSD)

**Answer:** A

#### Explanation:

You can choose between three EBS volume types to best meet the needs of their workloads: General Purpose (SSD), Provisioned IOPS (SSD), and Magnetic. General Purpose (SSD) is the new, SSD-backed, general purpose EBS volume type that we recommend as the default choice for customers. General Purpose (SSD) volumes are suitable for a broad range of workloads, including small to medium sized databases, development and test environments, and boot volumes. Provisioned IOPS (SSD) volumes offer storage with consistent and low-latency performance, and are designed for I/O intensive applications such as large relational or NoSQL databases. Magnetic volumes provide the lowest cost per gigabyte of all EBS volume types. Magnetic volumes are ideal for workloads where data is accessed infrequently, and applications where the lowest storage cost is important.

Reference: <https://aws.amazon.com/ec2/faqs/>

### NEW QUESTION 90

Which of the following strategies can be used to control access to your Amazon EC2 instances?

- A. DB security groups
- B. IAM policies
- C. None of these
- D. EC2 security groups

**Answer:** D

**Explanation:**

IAM policies allow you to specify what actions your IAM users are allowed to perform against your EC2 Instances. However, when it comes to access control, security groups are what you need in order to define and control the way you want your instances to be accessed, and whether or not certain kind of communications are allowed or not.

Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/UsingIAM.html>

**NEW QUESTION 91**

An organization has a statutory requirement to protect the data at rest for data stored in EBS volumes. Which of the below mentioned options can the organization use to achieve data protection?

- A. Data replication.
- B. Data encryption.
- C. Data snapshot.
- D. All the options listed her

**Answer:** D

**Explanation:**

For protecting the Amazon EBS data at REST, the user can use options, such as Data Encryption (Windows / Linux / third party based), Data Replication (AWS internally replicates data for redundancy), and Data Snapshot (for point in time backup).

Reference: [http://media.amazonwebservices.com/AWS\\_Security\\_Best\\_Practices.pdf](http://media.amazonwebservices.com/AWS_Security_Best_Practices.pdf)

**NEW QUESTION 93**

You have just set up a large site for a client which involved a huge database which you set up with Amazon RDS to run as a Multi-AZ deployment. You now start to worry about what will happen if the database instance fails. Which statement best describes how this database will function if there is a database failure?

- A. Updates to your DB Instance are synchronously replicated across Availability Zones to the standby in order to keep both in sync and protect your latest database updates against DB Instance failure.
- B. Your database will not resume operation without manual administrative intervention.
- C. Updates to your DB Instance are asynchronously replicated across Availability Zones to the standby in order to keep both in sync and protect your latest database updates against DB Instance failure.
- D. Updates to your DB Instance are synchronously replicated across S3 to the standby in order to keep both in sync and protect your latest database updates against DB Instance failure.

**Answer:** A

**Explanation:**

Amazon Relational Database Service (Amazon RDS) is a managed service that makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity, while managing time-consuming database administration tasks, freeing you up to focus on your applications and business.

When you create or modify your DB Instance to run as a Multi-AZ deployment, Amazon RDS automatically provisions and maintains a synchronous "standby" replica in a different Availability Zone. Updates to your DB Instance are synchronously replicated across Availability Zones to the standby in order to keep both in sync and protect your latest database updates against DB Instance failure.

During certain types of planned maintenance, or in the unlikely event of DB Instance failure or Availability Zone failure, Amazon RDS will automatically failover to the standby so that you can resume database writes and reads as soon as the standby is promoted. Since the name record for your DB Instance remains the same, your application can resume database operation without the need for manual administrative intervention. With Multi-AZ deployments, replication is transparent: you do not interact directly with the standby, and it cannot be used to serve read traffic. If you are using Amazon RDS for MySQL and are looking to scale read traffic beyond the capacity constraints of a single DB Instance, you can deploy one or more Read Replicas.

Reference: <http://aws.amazon.com/rds/faqs/>

**NEW QUESTION 95**

The common use cases for DynamoDB Fine-Grained Access Control (FGAC) are cases in which the end user wants .

- A. to change the hash keys of the table directly
- B. to check if an IAM policy requires the hash keys of the tables directly
- C. to read or modify any codecommit key of the table directly, without a middle-tier service
- D. to read or modify the table directly, without a middle-tier service

**Answer:** D

**Explanation:**

FGAC can benefit any application that tracks information in a DynamoDB table, where the end user (or application client acting on behalf of an end user) wants to read or modify the table directly, without a middle-tier service. For instance, a developer of a mobile app named Acme can use FGAC to track the top score of every Acme user in a DynamoDB table. FGAC allows the application client to modify only the top score for the user that is currently running the application.

Reference: [http://aws.amazon.com/dynamodb/faqs/#security\\_anchor](http://aws.amazon.com/dynamodb/faqs/#security_anchor)

**NEW QUESTION 98**

A user has set up the CloudWatch alarm on the CPU utilization metric at 50%, with a time interval of 5 minutes and 10 periods to monitor. What will be the state of the alarm at the end of 90 minutes, if the CPU utilization is constant at 80%?

- A. ALERT
- B. ALARM
- C. OK
- D. INSUFFICIENT\_DATA

**Answer:** B

**Explanation:**

In this case the alarm watches a metric every 5 minutes for 10 intervals. Thus, it needs at least 50 minutes to come to the "OK" state.

Till then it will be in the INSUFFICIENT\_DATA state.

Since 90 minutes have passed and CPU utilization is at 80% constant, the state of alarm will be "ALARM". Reference:

<http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/AlarmThatSendsEmail.html>

**NEW QUESTION 101**

You need to set up security for your VPC and you know that Amazon VPC provides two features that you can use to increase security for your VPC: security groups and network access control lists (ACLs). You have already looked into security groups and you are now trying to understand ACLs. Which statement below is incorrect in relation to ACLs?

- A. Supports allow rules and deny rules.
- B. Is stateful: Return traffic is automatically allowed, regardless of any rules.
- C. Processes rules in number order when deciding whether to allow traffic.
- D. Operates at the subnet level (second layer of defense).

**Answer:** B

**Explanation:**

Amazon VPC provides two features that you can use to increase security for your VPC:

Security groups—Act as a firewall for associated Amazon EC2 instances, controlling both inbound and outbound traffic at the instance level

Network access control lists (ACLs)—Act as a firewall for associated subnets, controlling both inbound and outbound traffic at the subnet level

Security groups are stateful: (Return traffic is automatically allowed, regardless of any rules) Network ACLs are stateless: (Return traffic must be explicitly allowed by rules)

Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Security.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Security.html)

**NEW QUESTION 102**

You have multiple VPN connections and want to provide secure communication between sites using the AWS VPN CloudHub. Which statement is the most accurate in describing what you must do to set this up correctly?

- A. Create a virtual private gateway with multiple customer gateways, each with unique Border Gateway Protocol (BGP) Autonomous System Numbers (ASNs)
- B. Create a virtual private gateway with multiple customer gateways, each with a unique set of keys
- C. Create a virtual public gateway with multiple customer gateways, each with a unique Private subnet
- D. Create a virtual private gateway with multiple customer gateways, each with unique subnet id

**Answer:** A

**Explanation:**

If you have multiple VPN connections, you can provide secure communication between sites using the AWS VPN CloudHub. The VPN CloudHub operates on a simple hub-and-spoke model that you can use with or without a VPC. This design is suitable for customers with multiple branch offices and existing Internet connections who'd like to implement a convenient, potentially low-cost hub-and-spoke model for primary or backup connectivity between these remote offices.

To use the AWS VPN CloudHub, you must create a virtual private gateway with multiple customer

gateways, each with unique Border Gateway Protocol (BGP) Autonomous System Numbers (ASNs). Customer gateways advertise the appropriate routes (BGP prefixes) over their VPN connections. These routing advertisements are received and re-advertised to each BGP peer, enabling each site to send data to and receive data from the other sites. The routes for each spoke must have unique ASNs and the sites must not have overlapping IP ranges. Each site can also send and receive data from the VPC as if they were using a standard VPN connection.

Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPN\\_CloudHub.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPN_CloudHub.html)

**NEW QUESTION 104**

You are very concerned about security on your network because you have multiple programmers testing APIs and SDKs and you have no idea what is happening. You think CloudTrail may help but are not sure what it does. Which of the following statements best describes the AWS service CloudTrail?

- A. With AWS CloudTrail you can get a history of AWS API calls and related events for your account.
- B. With AWS CloudTrail you can get a history of IAM users for your account.
- C. With AWS CloudTrail you can get a history of S3 logfiles for your account.
- D. With AWS CloudTrail you can get a history of CloudFormation JSON scripts used for your account

**Answer:** A

**Explanation:**

With AWS CloudTrail, you can get a history of AWS API calls for your account, including API calls made via the AWS Management Console, the AWS SDKs, the command line tools, and higher-level AWS services. You can also identify which users and accounts called AWS APIs for services that support CloudTrail, the source IP address the calls were made from, and when the calls occurred.

You can identify which users and accounts called AWS for services that support CloudTrail, the source IP address the calls were made from, and when the calls occurred. You can integrate CloudTrail into applications using the API, automate trail creation for your organization, check the status of your trails, and control how administrators turn CloudTrail logging on and off.

Reference: [http://docs.aws.amazon.com/awscloudtrail/latest/userguide/what\\_is\\_cloud\\_trail\\_top\\_level.html](http://docs.aws.amazon.com/awscloudtrail/latest/userguide/what_is_cloud_trail_top_level.html)

**NEW QUESTION 106**

A user has deployed an application on his private cloud. The user is using his own monitoring tool. He wants to configure it so that whenever there is an error, the monitoring tool will notify him via SMS. Which of the below mentioned AWS services will help in this scenario?

- A. AWS SES
- B. AWS SNS
- C. None because the user infrastructure is in the private cloud.
- D. AWS SMS

**Answer:** B

**Explanation:**

Amazon Simple Notification Service (Amazon SNS) is a fast, flexible, and fully managed push messaging service. Amazon SNS can be used to make push notifications to mobile devices. Amazon SNS can deliver notifications by SMS text message or email to the Amazon Simple Queue Service (SQS) queues or to any HTTP endpoint. In this case user can use the SNS APIs to send SMS.

Reference: <http://aws.amazon.com/sns/>

**NEW QUESTION 109**

After setting up an EC2 security group with a cluster of 20 EC2 instances, you find an error in the security group settings. You quickly make changes to the security group settings. When will the changes to the settings be effective?

- A. The settings will be effective immediately for all the instances in the security group.
- B. The settings will be effective only when all the instances are restarted.
- C. The settings will be effective for all the instances only after 30 minutes.
- D. The settings will be effective only for the new instances added to the security group.

**Answer:** A

**Explanation:**

Amazon Redshift applies changes to a cluster security group immediately. So if you have associated the cluster security group with a cluster, inbound cluster access rules in the updated cluster security group apply immediately.

Reference: <http://docs.aws.amazon.com/redshift/latest/mgmt/working-with-security-groups.html>

**NEW QUESTION 111**

Regarding Amazon Route 53, if your application is running on Amazon EC2 instances in two or more Amazon EC2 regions and if you have more than one Amazon EC2 instance in one or more regions, you can use to route traffic to the correct region and then use to route traffic to instances within the region, based on probabilities that you specify.

- A. weighted-based routing; alias resource record sets
- B. latency-based routing; weighted resource record sets
- C. weighted-based routing; weighted resource record sets
- D. latency-based routing; alias resource record sets

**Answer:** B

**Explanation:**

Regarding Amazon Route 53, if your application is running on Amazon EC2 instances in two or more Amazon EC2 regions, and if you have more than one Amazon EC2 instance in one or more regions, you can use latency-based routing to route traffic to the correct region and then use weighted resource record sets to route traffic to instances within the region based on weights that you specify.

Reference: <http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/Tutorials.html>

**NEW QUESTION 116**

You have a lot of data stored in the AWS Storage Gateway and your manager has come to you asking about how the billing is calculated, specifically the Virtual Tape Shelf usage. What would be a correct response to this?

- A. You are billed for the virtual tape data you store in Amazon Glacier and are billed for the size of the virtual tape.
- B. You are billed for the virtual tape data you store in Amazon Glacier and billed for the portion of virtual tape capacity that you use, not for the size of the virtual tape.
- C. You are billed for the virtual tape data you store in Amazon S3 and billed for the portion of virtual tape capacity that you use, not for the size of the virtual tape.
- D. You are billed for the virtual tape data you store in Amazon S3 and are billed for the size of the virtual tape.

**Answer:** B

**Explanation:**

The AWS Storage Gateway is a service connecting an on-premises software appliance with cloud-based storage to provide seamless and secure integration between an organization's on-premises IT environment and AWS's storage infrastructure.

AWS Storage Gateway billing is as follows. Volume storage usage (per GB per month):

You are billed for the Cached volume data you store in Amazon S3. You are only billed for volume capacity you use, not for the size of the volume you create.

Snapshot Storage usage (per GB per month): You are billed for the snapshots your gateway stores in Amazon S3. These snapshots are stored and billed as Amazon EBS snapshots. Snapshots are incremental backups, reducing your storage charges. When taking a new snapshot, only the data that has changed since your last snapshot is stored.

Virtual Tape Library usage (per GB per month):

You are billed for the virtual tape data you store in Amazon S3. You are only billed for the portion of virtual tape capacity that you use, not for the size of the virtual tape.

Virtual Tape Shelf usage (per GB per month):

You are billed for the virtual tape data you store in Amazon Glacier. You are only billed for the portion of virtual tape capacity that you use, not for the size of the virtual tape.

Reference: <https://aws.amazon.com/storagegateway/faqs/>

**NEW QUESTION 120**

You are configuring a new VPC for one of your clients for a cloud migration project, and only a public VPN will be in place. After you created your VPC, you created a new subnet, a new internet gateway, and attached your internet gateway to your VPC. When you launched your first instance into your VPC, you realized that you aren't able to connect to the instance, even if it is configured with an elastic IP. What should be done to access the instance?

- A. A route should be created as 0.0.0.0/0 and your internet gateway as target.
- B. Attach another ENI to the instance and connect via new ENI.
- C. A NAT instance should be created and all traffic should be forwarded to NAT instance.

D. A NACL should be created that allows all outbound traffic

**Answer:** A

**Explanation:**

All traffic should be routed via Internet Gateway. So, a route should be created with 0.0.0.0/0 as a source, and your Internet Gateway as your target.  
Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Scenario1.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Scenario1.html)

**NEW QUESTION 125**

You receive a bill from AWS but are confused because you see you are incurring different costs for the exact same storage size in different regions on Amazon S3. You ask AWS why this is so. What response would you expect to receive from AWS?

- A. We charge less in different time zones.
- B. We charge less where our costs are less.
- C. This will balance out next bill.
- D. It must be a mistake

**Answer:** B

**Explanation:**

Amazon S3 is storage for the internet. It's a simple storage service that offers software developers a highly-scalable, reliable, and low-latency data storage infrastructure at very low costs.  
AWS charges less where their costs are less.  
For example, their costs are lower in the US Standard Region than in the US West (Northern California) Region.  
Reference: <https://aws.amazon.com/s3/faqs/>

**NEW QUESTION 129**

You receive the following request from a client to quickly deploy a static website for them, specifically on AWS. The requirements are low-cost, reliable, online storage, and a reliable and cost-effective way to route customers to the website, as well as a way to deliver content with low latency and high data transfer speeds so that visitors to his website don't experience unnecessary delays. What do you think would be the minimum AWS services that could fulfill the client's request?

- A. Amazon Route 53, Amazon CloudFront and Amazon VPC.
- B. Amazon S3, Amazon Route 53 and Amazon RDS
- C. Amazon S3, Amazon Route 53 and Amazon CloudFront
- D. Amazon S3 and Amazon Route 53.

**Answer:** C

**Explanation:**

You can easily and inexpensively use AWS to host a website that uses client-side technologies (such as HTML, CSS, and JavaScript) and does not require server-side technologies (such as PHP and ASP.NET). This type of site is called a static website, and is used to display content that does not change frequently. Before you create and deploy a static website, you must plan your architecture to ensure that it meets your requirements. Amazon S3, Amazon Route 53, and Amazon CloudFront would be required in this instance.  
Reference: <http://docs.aws.amazon.com/gettingstarted/latest/swf/website-hosting-intro.html>

**NEW QUESTION 130**

You need to create a JSON-formatted text file for AWS CloudFormation. This is your first template and the only thing you know is that the templates include several major sections but there is only one that is required for it to work. What is the only section required?

- A. Mappings
- B. Outputs
- C. Resources
- D. Conditions

**Answer:** C

**Explanation:**

AWS CloudFormation is a service that helps you model and set up your Amazon Web Services resources so that you can spend less time managing those resources and more time focusing on your applications that run in AWS. You create a template that describes all the AWS resources that you want (like Amazon EC2 instances or Amazon RDS DB instances), and AWS CloudFormation takes care of provisioning and configuring those resources for you.  
A template is a JSON-formatted text file that describes your AWS infrastructure. Templates include several major sections.  
The Resources section is the only section that is required.  
The first character in the template must be an open brace ({), and the last character must be a closed brace (}). The following template fragment shows the template structure and sections.  
Reference: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/template-anatomy.html>

**NEW QUESTION 135**

A user is hosting a website in the US West-1 region. The website has the highest client base from the Asia-Pacific (Singapore / Japan) region. The application is accessing data from S3 before serving it to client. Which of the below mentioned regions gives a better performance for S3 objects?

- A. Japan
- B. Singapore
- C. US East
- D. US West-1

**Answer:** D

**Explanation:**

Access to Amazon S3 from within Amazon EC2 in the same region is fast. In this aspect, though the client base is Singapore, the application is being hosted in the US West-1 region. Thus, it is recommended that S3 objects be stored in the US-West-1 region.

Reference: [http://media.amazonwebservices.com/AWS\\_Storage\\_Options.pdf](http://media.amazonwebservices.com/AWS_Storage_Options.pdf)

#### NEW QUESTION 140

Which of the following statements is true of tagging an Amazon EC2 resource?

- A. You don't need to specify the resource identifier while terminating a resource.
- B. You can terminate, stop, or delete a resource based solely on its tags.
- C. You can't terminate, stop, or delete a resource based solely on its tags.
- D. You don't need to specify the resource identifier while stopping a resource.

**Answer: C**

#### Explanation:

You can assign tags only to resources that already exist. You can't terminate, stop, or delete a resource based solely on its tags; you must specify the resource identifier.

Reference: [http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/Using\\_Tags.html](http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/Using_Tags.html)

#### NEW QUESTION 145

You have been setting up an Amazon Virtual Private Cloud (Amazon VPC) for your company, including setting up subnets. Security is a concern, and you are not sure which is the best security practice for securing subnets in your VPC. Which statement below is correct in describing the protection of AWS resources in each subnet?

- A. You can use multiple layers of security, including security groups and network access control lists (ACL).
- B. You can only use access control lists (ACL).
- C. You don't need any security in subnets.
- D. You can use multiple layers of security, including security groups, network access control lists (ACL) and CloudHSM.

**Answer: A**

#### Explanation:

A subnet is a range of IP addresses in your VPC. You can launch AWS resources into a subnet that you select. Use a public subnet for resources that must be connected to the Internet, and a private subnet for resources that won't be connected to the Internet.

To protect the AWS resources in each subnet, you can use multiple layers of security, including security groups and network access control lists (ACL).

Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Introduction.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Introduction.html)

#### NEW QUESTION 148

You have been asked to tighten up the password policies in your organization after a serious security breach, so you need to consider every possible security measure. Which of the following is not an account password policy for IAM Users that can be set?

- A. Force IAM users to contact an account administrator when the user has allowed his or her password to expire.
- B. A minimum password length.
- C. Force IAM users to contact an account administrator when the user has entered his password incorrectly.
- D. Prevent IAM users from reusing previous password

**Answer: C**

#### Explanation:

IAM users need passwords in order to access the AWS Management Console. (They do not need passwords if they will access AWS resources programmatically by using the CLI, AWS SDKs, or the APIs.)

You can use a password policy to do these things: Set a minimum password length.

Require specific character types, including uppercase letters, lowercase letters, numbers, and non-alphanumeric characters. Be sure to remind your users that passwords are case sensitive. Allow all IAM users to change their own passwords.

Require IAM users to change their password after a specified period of time (enable password expiration). Prevent IAM users from reusing previous passwords.

Force IAM users to contact an account administrator when the user has allowed his or her password to expire.

Reference: [http://docs.aws.amazon.com/IAM/latest/UserGuide/Using\\_ManagingPasswordPolicies.htm](http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_ManagingPasswordPolicies.htm)

#### NEW QUESTION 153

A user has created a CloudFormation stack. The stack creates AWS services, such as EC2 instances, ELB, AutoScaling, and RDS. While creating the stack it created EC2, ELB and AutoScaling but failed to create RDS. What will CloudFormation do in this scenario?

- A. Rollback all the changes and terminate all the created services
- B. It will wait for the user's input about the error and correct the mistake after the input
- C. CloudFormation can never throw an error after launching a few services since it verifies all the steps before launching
- D. It will warn the user about the error and ask the user to manually create RDS

**Answer: A**

#### Explanation:

AWS CloudFormation is an application management tool which provides application modeling, deployment, configuration, management and related activities. The AWS CloudFormation stack is a collection of AWS resources which are created and managed as a single unit when AWS CloudFormation instantiates a template. If any of the services fails to launch, CloudFormation will rollback all the changes and terminate or delete all the created services.

Reference: <http://aws.amazon.com/cloudformation/faqs/>

#### NEW QUESTION 156

A major client who has been spending a lot of money on his internet service provider asks you to set up an AWS Direct Connection to try and save him some money. You know he needs high-speed connectivity. Which connection port speeds are available on AWS Direct Connect?

- A. 500Mbps and 1Gbps
- B. 1Gbps and 10Gbps
- C. 100Mbps and 1Gbps
- D. 1Gbps

**Answer: B**

**Explanation:**

AWS Direct Connect is a network service that provides an alternative to using the internet to utilize AWS cloud services.

Using AWS Direct Connect, data that would have previously been transported over the Internet can now be delivered through a private network connection between AWS and your datacenter or corporate network.

1Gbps and 10Gbps ports are available. Speeds of 50Mbps, 100Mbps, 200Mbps, 300Mbps, 400Mbps, and 500Mbps can be ordered from any APN partners supporting AWS Direct Connect.

Reference: <https://aws.amazon.com/directconnect/faqs/>

**NEW QUESTION 159**

The AWS CloudHSM service defines a resource known as a high-availability (HA) , which is a virtual partition that represents a group of partitions, typically distributed between several physical HSMs for high-availability.

- A. proxy group
- B. partition group
- C. functional group
- D. relational group

**Answer: B**

**Explanation:**

The AWS CloudHSM service defines a resource known as a high-availability (HA) partition group, which is a virtual partition that represents a group of partitions, typically distributed between several physical HSMs for high-availability.

Reference: <http://docs.aws.amazon.com/cloudhsm/latest/userguide/configuring-ha.html>

**NEW QUESTION 164**

After setting up some EC2 instances you now need to set up a monitoring solution to keep track of these instances and to send you an email when the CPU hits a certain threshold. Which statement below best describes what thresholds you can set to trigger a CloudWatch Alarm?

- A. Set a target value and choose whether the alarm will trigger when the value is greater than (>), greater than or equal to (>=), less than (<), or less than or equal to (<=) that value.
- B. Thresholds need to be set in IAM not CloudWatch
- C. Only default thresholds can be set you can't choose your own thresholds.
- D. Set a target value and choose whether the alarm will trigger when the value hits this threshold

**Answer: A**

**Explanation:**

Amazon CloudWatch is a monitoring service for AWS cloud resources and the applications you run on AWS. You can use Amazon CloudWatch to collect and track metrics, collect and monitor log files, and set alarms.

When you create an alarm, you first choose the Amazon CloudWatch metric you want it to monitor. Next, you choose the evaluation period (e.g., five minutes or one hour) and a statistical value to measure (e.g., Average or Maximum).

To set a threshold, set a target value and choose whether the alarm will trigger when the value is greater than (>), greater than or equal to (>=), less than (<), or less than or equal to (<=) that value.

Reference: <http://aws.amazon.com/cloudwatch/faqs/>

**NEW QUESTION 166**

After moving an E-Commerce website for a client from a dedicated server to AWS you have also set up auto scaling to perform health checks on the instances in your group and replace instances that fail these checks. Your client has come to you with his own health check system that he wants you to use as it has proved to be very useful prior to his site running on AWS. What do you think would be an appropriate response to this given all that you know about auto scaling?

- A. It is not possible to implement your own health check system
- B. You need to use AWS's health check system.
- C. It is not possible to implement your own health check system due to compatibility issues.
- D. It is possible to implement your own health check system and then send the instance's health information directly from your system to Cloud Watch.
- E. It is possible to implement your own health check system and then send the instance's health information directly from your system to Cloud Watch but only in the US East (
- F. Virginia) region.

**Answer: C**

**Explanation:**

Auto Scaling periodically performs health checks on the instances in your group and replaces instances that fail these checks. By default, these health checks use the results of EC2 instance status checks to determine the health of an instance. If you use a load balancer with your Auto Scaling group, you can optionally choose to include the results of Elastic Load Balancing health checks.

Auto Scaling marks an instance unhealthy if the calls to the Amazon EC2 action DescribeInstanceStatus returns any other state other than running, the system status shows impaired, or the calls to Elastic Load Balancing action DescribeInstanceHealth returns OutOfService in the instance state field.

After an instance is marked unhealthy because of an Amazon EC2 or Elastic Load Balancing health check, it is scheduled for replacement.

You can customize the health check conducted by your Auto Scaling group by specifying additional checks or by having your own health check system and then sending the instance's health information directly from your system to Auto Scaling.

Reference: <http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/healthcheck.html>

#### NEW QUESTION 171

What happens to Amazon EBS root device volumes, by default, when an instance terminates?

- A. Amazon EBS root device volumes are moved to IAM.
- B. Amazon EBS root device volumes are copied into Amazon RDS.
- C. Amazon EBS root device volumes are automatically deleted.
- D. Amazon EBS root device volumes remain in the database until you delete the

**Answer: C**

#### Explanation:

By default, Amazon EBS root device volumes are automatically deleted when the instance terminates. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/terminating-instances.html>

#### NEW QUESTION 176

Which of the following would you use to list your AWS Import/Export jobs?

- A. Amazon RDS
- B. AWS Import/Export Web Service Tool
- C. Amazon S3 REST API
- D. AWS Elastic Beanstalk

**Answer: C**

#### Explanation:

You can list AWS Import/Export jobs with the ListJobs command using the command line client or REST API. Reference: <http://docs.aws.amazon.com/AWSImportExport/latest/DG/ListingYourJobs.html>

#### NEW QUESTION 177

A gaming company comes to you and asks you to build them infrastructure for their site. They are not sure how big they will be as with all start ups they have limited money and big ideas. What they do tell you is that if the game becomes successful, like one of their previous games, it may rapidly grow to millions of users and generate tens (or even hundreds) of thousands of writes and reads per second. After considering all of this, you decide that they need a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability. Which of the following databases do you think would best fit their needs?

- A. Amazon DynamoDB
- B. Amazon Redshift
- C. Any non-relational database.
- D. Amazon SimpleDB

**Answer: A**

#### Explanation:

Amazon DynamoDB is a fully managed NoSQL database service that provides fast and predictable performance with seamless scalability. Amazon DynamoDB enables customers to offload the administrative burdens of operating and scaling distributed databases to AWS, so they don't have to worry about hardware provisioning, setup and configuration, replication, software patching, or cluster scaling. Today's web-based applications generate and consume massive amounts of data. For example, an online game might start out with only a few thousand users and a light database workload consisting of 10 writes per second and 50 reads per second. However, if the game becomes successful, it may rapidly grow to millions of users and generate tens (or even hundreds) of thousands of writes and reads per second. It may also create terabytes or more of data per day. Developing your applications against Amazon DynamoDB enables you to start small and simply dial-up your request capacity for a table as your requirements scale, without incurring downtime. You pay highly cost-efficient rates for the request capacity you provision, and let Amazon DynamoDB do the work over partitioning your data and traffic over sufficient server capacity to meet your needs. Amazon DynamoDB does the database management and administration, and you simply store and request your data. Automatic replication and failover provides built-in fault tolerance, high availability, and data durability. Amazon DynamoDB gives you the peace of mind that your database is fully managed and can grow with your application requirements. Reference: <http://aws.amazon.com/dynamodb/faqs/>

#### NEW QUESTION 181

You need to set up security for your VPC and you know that Amazon VPC provides two features that you can use to increase security for your VPC: Security groups and network access control lists (ACLs). You start to look into security groups first. Which statement below is incorrect in relation to security groups?

- A. Are stateful: Return traffic is automatically allowed, regardless of any rules.
- B. Evaluate all rules before deciding whether to allow traffic.
- C. Support allow rules and deny rules.
- D. Operate at the instance level (first layer of defense).

**Answer: C**

#### Explanation:

Amazon VPC provides two features that you can use to increase security for your VPC:

Security groups—Act as a firewall for associated Amazon EC2 instances, controlling both inbound and outbound traffic at the instance level and supports allow rules only.

Network access control lists (ACLs)—Act as a firewall for associated subnets, controlling both inbound and outbound traffic at the subnet level and supports allow rules and deny rules.

Reference: [http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Security.html](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Security.html)

#### NEW QUESTION 183

A user wants to increase the durability and availability of the EBS volume. Which of the below mentioned actions should he perform?

- A. Take regular snapshots.

- B. Create an AMI.
- C. Create EBS with higher capacity.
- D. Access EBS regularly

**Answer:** A

**Explanation:**

In Amazon Web Services, Amazon EBS volumes that operate with 20 GB or less of modified data since their most recent snapshot can expect an annual failure rate (AFR) between 0.1% and 0.5%. For this reason, to maximize both durability and availability of their Amazon EBS data, the user should frequently create snapshots of the Amazon EBS volumes.

Reference: [http://media.amazonwebservices.com/AWS\\_Storage\\_Options.pdf](http://media.amazonwebservices.com/AWS_Storage_Options.pdf)

**NEW QUESTION 185**

In relation to AWS CloudHSM, High-availability (HA) recovery is hands-off resumption by failed HA group members. Prior to the introduction of this function, the HA feature provided redundancy and performance, but required that a failed/lost group member be reinstated.

- A. automatically
- B. periodically
- C. manually
- D. continuously

**Answer:** C

**Explanation:**

In relation to AWS CloudHSM, High-availability (HA) recovery is hands-off resumption by failed HA group members.

Prior to the introduction of this function, the HA feature provided redundancy and performance, but required that a failed/lost group member be manually reinstated.

Reference: <http://docs.aws.amazon.com/cloudhsm/latest/userguide/ha-best-practices.html>

**NEW QUESTION 186**

Any person or application that interacts with AWS requires security credentials. AWS uses these credentials to identify who is making the call and whether to allow the requested access. You have just set up a VPC network for a client and you are now thinking about the best way to secure this network. You set up a security group called vpcsecuritygroup. Which following statement is true in respect to the initial settings that will be applied to this security group if you choose to use the default settings for this group?

- A. Allow all inbound traffic and allow no outbound traffic.
- B. Allow no inbound traffic and allow all outbound traffic.
- C. Allow inbound traffic on port 80 only and allow all outbound traffic.
- D. Allow all inbound traffic and allow all outbound traffic

**Answer:** B

**Explanation:**

Amazon VPC provides advanced security features such as security groups and network access control lists to enable inbound and outbound filtering at the instance level and subnet level.

AWS assigns each security group a unique ID in the form sg-xxxxxxx. The following are the initial settings for a security group that you create:

Allow no inbound traffic Allow all outbound traffic

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html>

**NEW QUESTION 189**

What is the time period with which metric data is sent to CloudWatch when detailed monitoring is enabled on an Amazon EC2 instance?

- A. 15 minutes
- B. 5 minutes
- C. 1 minute
- D. 45 seconds

**Answer:** C

**Explanation:**

By default, Amazon EC2 metric data is automatically sent to CloudWatch in 5-minute periods. However, you can, enable detailed monitoring on an Amazon EC2 instance, which sends data to CloudWatch in

1-minute periods

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-cloudwatch.html>

**NEW QUESTION 192**

Are penetration tests allowed as long as they are limited to the customer's instances?

- A. Yes, they are allowed but only for selected regions.
- B. No, they are never allowed.
- C. Yes, they are allowed without any permission.
- D. Yes, they are allowed but only with approval.

**Answer:** D

**Explanation:**

Penetration tests are allowed after obtaining permission from AWS to perform them. Reference: <http://aws.amazon.com/security/penetration-testing/>

#### NEW QUESTION 193

AWS Identity and Access Management is a web service that enables Amazon Web Services (AWS) customers to manage users and user permissions in AWS. In addition to supporting IAM user policies, some services support resource-based permissions. Which of the following services are supported by resource-based permissions?

- A. Amazon SNS, and Amazon SQS and AWS Direct Connect.
- B. Amazon S3 and Amazon SQS and Amazon ElastiCache.
- C. Amazon S3, Amazon SNS, Amazon SQS, Amazon Glacier and Amazon EBS.
- D. Amazon Glacier, Amazon SNS, and Amazon CloudWatch

**Answer: C**

#### Explanation:

In addition to supporting IAM user policies, some services support resource-based permissions, which let you attach policies to the service's resources instead of to IAM users or groups. Resource-based permissions are supported by Amazon S3, Amazon SNS, Amazon SQS, Amazon Glacier and Amazon EBS.

Reference: [http://docs.aws.amazon.com/IAM/latest/UserGuide/Using\\_SpecificProducts.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_SpecificProducts.html)

#### NEW QUESTION 196

You are setting up your first Amazon Virtual Private Cloud (Amazon VPC) network so you decide you should probably use the AWS Management Console and the VPC Wizard. Which of the following is not an option for network architectures after launching the "Start VPC Wizard" in Amazon VPC page on the AWS Management Console?

- A. VPC with a Single Public Subnet Only
- B. VPC with a Public Subnet Only and Hardware VPN Access
- C. VPC with Public and Private Subnets and Hardware VPN Access
- D. VPC with a Private Subnet Only and Hardware VPN Access

**Answer: B**

#### Explanation:

Amazon VPC enables you to build a virtual network in the AWS cloud - no VPNs, hardware, or physical datacenters required.

Your AWS resources are automatically provisioned in a ready-to-use default VPC. You can choose to create additional VPCs by going to Amazon VPC page on the AWS Management Console and click on the "Start VPC Wizard" button.

You'll be presented with four basic options for network architectures. After selecting an option, you can modify the size and IP address range of the VPC and its subnets. If you select an option with Hardware VPN Access, you will need to specify the IP address of the VPN hardware on your network. You can modify the VPC to add more subnets or add or remove gateways at any time after the VPC has been created.

The four options are:

VPC with a Single Public Subnet Only VPC with Public and Private Subnets

VPC with Public and Private Subnets and Hardware VPN Access VPC with a Private Subnet Only and Hardware VPN Access Reference:

<https://aws.amazon.com/vpc/faqs/>

#### NEW QUESTION 201

A friend wants you to set up a small BitTorrent storage area for him on Amazon S3. You tell him it is highly unlikely that AWS would allow such a thing in their infrastructure. However you decide to investigate. Which of the following statements best describes using BitTorrent with Amazon S3?

- A. Amazon S3 does not support the BitTorrent protocol because it is used for pirated software.
- B. You can use the BitTorrent protocol but only for objects that are less than 100 GB in size.
- C. You can use the BitTorrent protocol but you need to ask AWS for specific permissions first.
- D. You can use the BitTorrent protocol but only for objects that are less than 5 GB in size

**Answer: D**

#### Explanation:

BitTorrent is an open, peer-to-peer protocol for distributing files. You can use the BitTorrent protocol to retrieve any publicly-accessible object in Amazon S3.

Amazon S3 supports the BitTorrent protocol so that developers can save costs when distributing content at high scale. Amazon S3 is useful for simple, reliable storage of any data. The default distribution mechanism for Amazon S3 data is via client/server download. In client/server distribution, the entire object is transferred point-to-point from Amazon S3 to every authorized user who requests that object. While client/server delivery is appropriate for a wide variety of use cases, it is not optimal for everybody. Specifically, the costs of client/server distribution increase linearly as the number of users downloading objects increases. This can make it expensive to distribute popular objects.

BitTorrent addresses this problem by recruiting the very clients that are downloading the object as distributors themselves: Each client downloads some pieces of the object from Amazon S3 and some from other clients, while simultaneously uploading pieces of the same object to other interested "peers." The benefit for publishers is that for large, popular files the amount of data actually supplied by Amazon S3 can be substantially lower than what it would have been serving the same clients via client/server download. Less data transferred means lower costs for the publisher of the object.

Reference: <http://docs.aws.amazon.com/AmazonS3/latest/dev/S3Torrent.html>

#### NEW QUESTION 205

A user has configured a website and launched it using the Apache web server on port 80. The user is using ELB with the EC2 instances for Load Balancing. What should the user do to ensure that the EC2 instances accept requests only from ELB?

- A. Configure the security group of EC2, which allows access to the ELB source security group
- B. Configure the EC2 instance so that it only listens on the ELB port
- C. Open the port for an ELB static IP in the EC2 security group
- D. Configure the security group of EC2, which allows access only to the ELB listener

**Answer: A**

#### Explanation:

When a user is configuring ELB and registering the EC2 instances with it, ELB will create a source security group. If the user wants to allow traffic only from ELB, he should remove all the rules set for the other requests and open the port only for the ELB source security group.

Reference:

<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/using-elb-security-groups.html>

#### NEW QUESTION 208

You are playing around with setting up stacks using JSON templates in CloudFormation to try and understand them a little better. You have set up about 5 or 6 but now start to wonder if you are being charged for these stacks. What is AWS's billing policy regarding stack resources?

- A. You are not charged for the stack resources if they are not taking any traffic.
- B. You are charged for the stack resources for the time they were operating (even if you deleted the stack right away)
- C. You are charged for the stack resources for the time they were operating (but not if you deleted the stack within 60 minutes)
- D. You are charged for the stack resources for the time they were operating (but not if you deleted the stack within 30 minutes)

**Answer:** B

#### Explanation:

A stack is a collection of AWS resources that you can manage as a single unit. In other words, you can create, update, or delete a collection of resources by creating, updating, or deleting stacks. All the resources in a stack are defined by the stack's AWS CloudFormation template. A stack, for instance, can include all the resources required to run a web application, such as a web server, a database, and networking rules. If you no longer require that web application, you can simply delete the stack, and all of its related resources are deleted.

You are charged for the stack resources for the time they were operating (even if you deleted the stack right away).

Reference: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/stacks.html>

#### NEW QUESTION 211

All Amazon EC2 instances are assigned two IP addresses at launch. Which are those?

- A. 2 Elastic IP addresses
- B. A private IP address and an Elastic IP address
- C. A public IP address and an Elastic IP address
- D. A private IP address and a public IP address

**Answer:** D

#### Explanation:

In Amazon EC2-Classical every instance is given two IP Addresses: a private IP address and a public IP address

Reference:

<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-instance-addressing.html#differences>

#### NEW QUESTION 212

You want to establish a dedicated network connection from your premises to AWS in order to save money by transferring data directly to AWS rather than through your internet service provider. You are sure there must be some other benefits beyond cost savings. Which of the following would not be considered a benefit if you were to establish such a connection?

- A. Elasticity
- B. Compatibility with all AWS services.
- C. Private connectMty to your Amazon VPC.
- D. Everything listed is a benefi

**Answer:** D

#### Explanation:

AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS.

Using AWS Direct Connect, you can establish private connectMty between AWS and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than internet-based connections.

You could expect the following benefits if you use AWS Direct Connect. Reduced bandwidth costs

Consistent network performance Compatibility with all AWS services Private connectMty to your Amazon VPC Elasticity

Simplicity

Reference: <http://aws.amazon.com/directconnect/>

#### NEW QUESTION 213

Can I change the EC2 security groups after an instance is launched in EC2-Classical?

- A. Yes, you can change security groups after you launch an instance in EC2-Classical.
- B. No, you cannot change security groups after you launch an instance in EC2-Classical.
- C. Yes, you can only when you remove rules from a security group.
- D. Yes, you can only when you add rules to a security grou

**Answer:** B

#### Explanation:

After you launch an instance in EC2-Classical, you can't change its security groups. However, you can add rules to or remove rules from a security group, and those changes are automatically applied to all instances that are associated with the security group.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html>

#### NEW QUESTION 218

George has launched three EC2 instances inside the US-East-1a zone with his AWS account. Ray has launched two EC2 instances in the US-East-1a zone with his AWS account. Which of the below mentioned statements will help George and Ray understand the availability zone (AZ) concept better?

- A. All the instances of George and Ray can communicate over a private IP with a minimal cost

- B. The US-East-1a region of George and Ray can be different availability zones
- C. All the instances of George and Ray can communicate over a private IP without any cost
- D. The instances of George and Ray will be running in the same data centre

**Answer:** B

**Explanation:**

Each AWS region has multiple, isolated locations known as Availability Zones. To ensure that the AWS resources are distributed across the Availability Zones for a region, AWS independently maps the Availability Zones to identifiers for each account. In this case the Availability Zone US-East-1a where George's EC2 instances are running might not be the same location as the US-East-1a zone of Ray's EC2 instances. There is no way for the user to coordinate the Availability Zones between accounts.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-regions-availability-zones.html>

**NEW QUESTION 220**

In Amazon EC2, you are billed instance-hours when .

- A. your EC2 instance is in a running state
- B. the instance exits from Amazon S3 console
- C. your instance still exits the EC2 console
- D. EC2 instances stop

**Answer:** A

**Explanation:**

You are billed instance-hours as long as your EC2 instance is in a running state. Reference: <http://aws.amazon.com/ec2/faqs/>

**NEW QUESTION 222**

A user has created an ELB with Auto Scaling. Which of the below mentioned offerings from ELB helps the user to stop sending new requests traffic from the load balancer to the EC2 instance when the instance is being deregistered while continuing in-flight requests?

- A. ELB sticky session
- B. ELB deregistration check
- C. ELB auto registration Off
- D. ELB connection draining

**Answer:** D

**Explanation:**

The Elastic Load Balancer connection draining feature causes the load balancer to stop sending new requests to the back-end instances when the instances are deregistering or become unhealthy, while ensuring that in-flight requests continue to be served.

Reference:

<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/config-conn-drain.html>

**NEW QUESTION 227**

Your manager has come to you saying that he is very confused about the bills he is receiving from AWS as he is getting different bills for every user and needs you to look into making it more understandable. Which of the following would be the best solution to meet his request?

- A. AWS Billing Aggregation
- B. Consolidated Billing
- C. Deferred Billing
- D. Aggregated Billing

**Answer:** B

**Explanation:**

Consolidated Billing enables you to consolidate payment for multiple AWS accounts within your company by designating a single paying account. Consolidated Billing enables you to see a combined view of AWS costs incurred by all accounts, as well as obtain a detailed cost report for each of the individual AWS accounts associated with your "Paying Account". Consolidated Billing is offered at no additional charge. Reference: <https://aws.amazon.com/billing/faqs/>

**NEW QUESTION 230**

A user is planning to host a mobile game on EC2 which sends notifications to active users on either high score or the addition of new features. The user should get this notification when he is online on his mobile device. Which of the below mentioned AWS services can help achieve this functionality?

- A. AWS Simple Notification Service.
- B. AWS Simple Email Service.
- C. AWS Mobile Communication Service.
- D. AWS Simple Queue Service.

**Answer:** A

**Explanation:**

Amazon Simple Notification Service (Amazon SNS) is a fast, flexible, and fully managed push messaging service. Amazon SNS makes it simple and cost-effective to push to mobile devices, such as iPhone, iPad, Android, Kindle Fire, and internet connected smart devices, as well as pushing to other distributed services.

Reference: <http://aws.amazon.com/sns>

**NEW QUESTION 233**

You have written a CloudFormation template that creates 1 Elastic Load Balancer fronting 2 EC2 Instances. Which section of the template should you edit so that

the DNS of the load balancer is returned upon creation of the stack?

- A. Resources
- B. Outputs
- C. Parameters
- D. Mappings

**Answer: B**

**Explanation:**

You can use AWS CloudFormation's sample templates or create your own templates to describe the AWS resources, and any associated dependencies or runtime parameters, required to run your application.

Reference:

<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/outputs-section-structure.html>

**NEW QUESTION 235**

You have been asked to set up a database in AWS that will require frequent and granular updates. You know that you will require a reasonable amount of storage space but are not sure of the best option. What is the recommended storage option when you run a database on an instance with the above criteria?

- A. Amazon S3
- B. Amazon EBS
- C. AWS Storage Gateway
- D. Amazon Glacier

**Answer: B**

**Explanation:**

Amazon EBS provides durable, block-level storage volumes that you can attach to a running Amazon EC2 instance. You can use Amazon EBS as a primary storage device for data that requires frequent and granular updates. For example, Amazon EBS is the recommended storage option when you run a database on an instance.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/Storage.html>

**NEW QUESTION 240**

You have been asked to set up monitoring of your network and you have decided that Cloudwatch would be the best service to use. Amazon CloudWatch monitors your Amazon Web Services (AWS) resources and the applications you run on AWS in real-time. You can use CloudWatch to collect and track metrics, which are the variables you want to measure for your resources and applications. Which of the following items listed can AWS Cloudwatch monitor?

- A. Log files your applications generate.
- B. All of the items listed on this page.
- C. System-wide visibility into resource utilization, application performance, and operational health.
- D. Custom metrics generated by your applications and services .

**Answer: B**

**Explanation:**

Amazon CloudWatch can monitor AWS resources such as Amazon EC2 instances, Amazon DynamoDB tables, and Amazon RDS DB instances, as well as custom metrics generated by your applications and services, and any log files your applications generate. You can use Amazon CloudWatch to gain system-wide visibility into resource utilization, application performance, and operational health. You can use these insights to react and keep your application running smoothly.

Reference: <http://aws.amazon.com/cloudwatch/>

**NEW QUESTION 243**

You need to quickly set up an email-sending service because a client needs to start using it in the next hour. Amazon Simple Email Service (Amazon SES) seems to be the logical choice but there are several options available to set it up. Which of the following options to set up SES would best meet the needs of the client?

- A. Amazon SES console
- B. AWS CloudFormation
- C. SMTP Interface
- D. AWS Elastic Beanstalk

**Answer: A**

**Explanation:**

Amazon SES is an outbound-only email-sending service that provides an easy, cost-effective way for you to send email.

There are several ways that you can send an email by using Amazon SES. You can use the Amazon SES console, the Simple Mail Transfer Protocol (SMTP) interface, or you can call the Amazon SES API. Amazon SES console—This method is the quickest way to set up your system

Reference: <http://docs.aws.amazon.com/ses/latest/DeveloperGuide/Welcome.html>

**NEW QUESTION 248**

Which of the following statements is NOT true about using Elastic IP Address (EIP) in EC2-Classic and EC2-VPC platforms?

- A. In the EC2-VPC platform, the Elastic IP Address (EIP) does not remain associated with the instance when you stop it.
- B. In the EC2-Classic platform, stopping the instance disassociates the Elastic IP Address (EIP) from it.
- C. In the EC2-VPC platform, if you have attached a second network interface to an instance, when you disassociate the Elastic IP Address (EIP) from that instance, a new public IP address is not assigned to the instance automatically; you'll have to associate an EIP with it manually.
- D. In the EC2-Classic platform, if you disassociate an Elastic IP Address (EIP) from the instance, the instance is automatically assigned a new public IP address within a few minutes.

**Answer: A**

**Explanation:**

In the EC2-Classic platform, when you associate an Elastic IP Address (EIP) with an instance, the instance's current public IP address is released to the EC2-Classic public IP address pool. If you disassociate an EIP from the instance, the instance is automatically assigned a new public IP address within a few minutes. In addition, stopping the instance also disassociates the EIP from it.

But in the EC2-VPC platform, when you associate an EIP with an instance in a default Virtual Private Cloud (VPC), or an instance in which you assigned a public IP to the eth0 network interface during launch, its current public IP address is released to the EC2-VPC public IP address pool. If you disassociate an EIP from the instance, the instance is automatically assigned a new public IP address within a few minutes. However, if you have attached a second network interface to the instance, the instance is not automatically assigned a new public IP address; you'll have to associate an EIP with it manually. The EIP remains associated with the instance when you stop it.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/elastic-ip-addresses-eip.html>

**NEW QUESTION 249**

You need to create a load balancer in a VPC network that you are building. You can make your load balancer internal (private) or internet-facing (public). When you make your load balancer internal, a DNS name will be created, and it will contain the private IP address of the load balancer. An internal load balancer is not exposed to the internet. When you make your load balancer internet-facing, a DNS name will be created with the public IP address. If you want the Internet-facing load balancer to be connected to the Internet, where must this load balancer reside?

- A. The load balancer must reside in a subnet that is connected to the internet using the internet gateway.
- B. The load balancer must reside in a subnet that is not connected to the internet.
- C. The load balancer must not reside in a subnet that is connected to the internet.
- D. The load balancer must be completely outside of your VP

**Answer:** A

**Explanation:**

When you create an internal Elastic Load Balancer in a VPC, you need to select private subnets that are in the same Availability Zone as your instances. If the VPC Elastic Load Balancer is to be public facing, you need to create the Elastic Load Balancer in a public subnet. A subnet is a public subnet if it is attached to an Internet Gateway (IGW) with a defined route to that gateway. Selecting more than one public subnet increases the availability of your Elastic Load Balancer.

NB - Elastic Load Balancers in EC2-Classic are always Internet-facing load balancers. Reference:

<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/elb-internet-facing-load-balancers.html>

**NEW QUESTION 252**

Can you move a Reserved Instance from one Availability Zone to another?

- A. Yes, but each Reserved Instance is associated with a specific Region that cannot be changed.
- B. Yes, only in US-West-2.
- C. Yes, only in US-East-1.
- D. No

**Answer:** A

**Explanation:**

Each Reserved Instance is associated with a specific Region, which is fixed for the lifetime of the reservation and cannot be changed. Each reservation can, however, be used in any of the available AZs within the associated Region.

Reference: <https://aws.amazon.com/rds/faqs/>

**NEW QUESTION 253**

An application hosted at the EC2 instance receives an HTTP request from ELB. The same request has an X-Forwarded-For header, which has three IP addresses. Which system's IP will be a part of this header?

- A. Previous Request IP address.
- B. Client IP address.
- C. All of the answers listed here.
- D. Load Balancer IP address

**Answer:** C

**Explanation:**

When a user sends a request to ELB over HTTP/HTTPS, the request header log at the instance will only receive the IP of ELB. This is because ELB is the interceptor between the EC2 instance and the client request. To get the client IP, use the header X-Forwarded-For in header. The client IP address in the X-Forwarded-For request header is followed by the IP addresses of each successive proxy that passes along the request. The last IP address is the IP address that connects to the back-end application instance. e.g. if the HTTP request already has a header when it reaches the Load Balancer, the IP address from which the request came is appended at the end of the header followed by the IP address of the Load Balancer. In such cases, the X-Forwarded-For request header takes the following form:

X-Forwarded-For: clientIPAddress, previousRequestIPAddress, LoadBalancerIPAddress. Reference:

<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/TerminologyandKeyConcepts.html>

**NEW QUESTION 257**

You need to develop and run some new applications on AWS and you know that Elastic Beanstalk and CloudFormation can both help as a deployment mechanism for a broad range of AWS resources. Which of the following statements best describes the differences between Elastic Beanstalk and CloudFormation?

- A. Elastic Beanstalk uses Elastic load balancing and CloudFormation doesn't.
- B. CloudFormation is faster in deploying applications than Elastic Beanstalk.
- C. Elastic Beanstalk is faster in deploying applications than CloudFormation.
- D. CloudFormation is much more powerful than Elastic Beanstalk, because you can actually design and script custom resources

**Answer:** D

**Explanation:**

These services are designed to complement each other. AWS Elastic Beanstalk provides an environment to easily develop and run applications in the cloud. It is integrated with developer tools and provides a one-stop experience for you to manage the lifecycle of your applications. AWS CloudFormation is a convenient deployment mechanism for a broad range of AWS resources. It supports the infrastructure needs of many different types of applications such as existing enterprise applications, legacy applications, applications built using a variety of AWS resources and container-based solutions (including those built using AWS Elastic Beanstalk).

AWS CloudFormation introduces two new concepts: The template, a JSON-format, text-based file that describes all the AWS resources you need to deploy to run your application and the stack, the set of AWS resources that are created and managed as a single unit when AWS CloudFormation instantiates a template.

Reference: <http://aws.amazon.com/cloudformation/faqs/>

**NEW QUESTION 262**

When controlling access to Amazon EC2 resources, each Amazon EBS Snapshot has a attribute that controls which AWS accounts can use the snapshot.

- A. createVolumePermission
- B. LaunchPermission
- C. SharePermission
- D. RequestPermission

**Answer: A**

**Explanation:**

Each Amazon EBS Snapshot has a createVolumePermission attribute that you can set to one or more AWS Account IDs to share the AM with those AWS Accounts. To allow several AWS Accounts to use a particular EBS snapshot, you can use the snapshots's createVolumePermission attribute to include a list of the accounts that can use it.

Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/UsingIAM.html>

**NEW QUESTION 263**

A 3-tier e-commerce web application is current deployed on-premises and will be migrated to AWS for greater scalability and elasticity The web server currently shares read-only data using a network distributed file system The app server tier uses a clustering mechanism for discovery and shared session state that depends on I P multicast The database tier uses shared-storage clustering to provide database fail over capability, and uses several read slaves for scaling Data on all sewers and the distributed file system directory is backed up weekly to off-site tapes Which AWS storage and database architecture meets the requirements of the application?

- A. Web sewers: store read-only data in 53, and copy from 53 to root volume at boot tim
- B. App servers: share state using a combination of DynamoDB and IP unicas
- C. Database: use RDS with multi-AZ deployment and one or more read replica
- D. Backup: web servers, app servers, and database backed up weekly to Glacier using snapshots.
- E. Web sewers: store read-only data in an EC2 NFS server, mount to each web server at boot tim
- F. App servers: share state using a combination of DynamoDB and IP multicas
- G. Database: use RDS with multi-AZ deployment and one or more Read Replica
- H. Backup: web and app servers backed up weekly via AM Is, database backed up via DB snapshots.
- I. Web servers: store read-only data in 53, and copy from 53 to root volume at boot tim
- J. App servers: share state using a combination of DynamoDB and IP unicas
- K. Database: use RDS with multi-AZ deployment and one or more Read Replica
- L. Backup: web and app servers backed up weekly viaAM Is, database backed up via DB snapshots.
- M. Web servers: store read-only data in 53, and copy from 53 to root volume at boot tim
- N. App servers: share state using a combination of DynamoDB and IP unicas
- O. Database: use RDS with multi-AZ deploymen
- P. Backup: web and app sewers backed up weekly via ANI Is, database backed up via DB snapshots.

**Answer: C**

**Explanation:**

Amazon RDS Multi-AZ deployments provide enhanced availability and durability for Database (DB) Instances, making them a natural fit for production database workloads. When you provision a Multi-AZ DB Instance, Amazon RDS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ). Each AZ runs on its own physically distinct, independent infrastructure, and is engineered to be highly reliable. In case of an infrastructure failure (for example, instance hardware failure, storage failure, or network disruption), Amazon RDS performs an automatic failover to the standby, so that you can resume database operations as soon as the failover is complete. Since the endpoint for your DB Instance remains the same after a failover, your application can resume database operation without the need for manual administrative intervention.

**Benefits**

**Enhanced Durability**

Multi-AZ deployments for the MySQL, Oracle, and PostgreSQL engines utilize synchronous physical replication to keep data on the standby up-to-date with the primary. Multi-AZ deployments for the SQL Server engine use synchronous logical replication to achieve the same result, employing SQL Server-native Mrroring technology. Both approaches safeguard your data in the event of a DB Instance failure or loss of an Availability Zone.

If a storage volume on your primary fails in a Multi-AZ deployment, Amazon RDS automatically initiates a failover to the up-to-date standby. Compare this to a Single-AZ deployment: in case of a Single-AZ database failure, a user-initiated point-in-time-restore operation will be required. This operation can take several hours to complete, and any data updates that occurred after the latest restorable time (typically within the last five minutes) will not be available.

Amazon Aurora employs a highly durable, SSD-backed virtualized storage layer purpose-built for database workloads. Amazon Aurora automatically replicates your volume six ways, across three Availability Zones. Amazon Aurora storage is fault-tolerant, transparently handling the loss of up to two copies of data without affecting database write availability and up to three copies without affecting read availability. Amazon Aurora storage is also self-healing. Data blocks and disks are continuously scanned for errors and replaced automatically.

**Increased Availability**

You also benefit from enhanced database availability when running Multi-AZ deployments. If an Availability Zone failure or DB Instance failure occurs, your availability impact is limited to the time automatic failover takes to complete: typically under one minute for Amazon Aurora and one to two minutes for other database engines (see the RDS FAQ for details).

The availability benefits of Multi-AZ deployments also extend to planned maintenance and backups.

In the case of system upgrades like OS patching or DB Instance scaling, these operations are applied first on the standby, prior to the automatic failover. As a result, your availability impact is, again, only the time required for automatic fail over to complete.

Unlike Single-AZ deployments, 1/0 actMty is not suspended on your primary during backup for Multi-AZ deployments for the MySQL, Oracle, and PostgreSQL engines, because the backup is taken from the standby. However, note that you may still experience elevated latencies for a few minutes during backups for Mu|ti-AZ deployments.

On instance failure in Amazon Aurora deployments, Amazon RDS uses RDS Multi-AZ technology to automate failover to one of up to 15 Amazon Aurora Replicas you have created in any of three Availability Zones. If no Amazon Aurora Replicas have been provisioned, in the case of a failure, Amazon RDS will attempt to create a new Amazon Aurora DB instance for you automatically.

No Administrative Intervention

DB Instance failover is fully automatic and requires no administrative intervention. Amazon RDS monitors the health of your primary and standbys, and initiates a failover automatically in response to a variety of failure conditions.

Failover conditions

Amazon RDS detects and automatically recovers from the most common failure scenarios for Multi-AZ deployments so that you can resume database operations as quickly as possible without administrative intervention. Amazon RDS automatically performs a failover in the event of any of the following:

Loss of availability in primary Availability Zone  
Loss of network connectivity to primary Compute unit failure on primary

Storage failure on primary

Note: When operations such as DB Instance scaling or system upgrades like OS patching are initiated for Multi-AZ deployments, for enhanced availability, they are applied first on the standby prior to an automatic failover. As a result, your availability impact is limited only to the time required for automatic failover to complete.

Note that Amazon RDS Multi-AZ deployments do not failover automatically in response to database operations such as long running queries, deadlocks or database corruption errors.

#### NEW QUESTION 264

Your customer wishes to deploy an enterprise application to AWS which will consist of several web servers, several application servers and a small (50GB) Oracle database information is stored, both in the database and the file systems of the various servers. The backup system must support database recovery whole server and whole disk restores, and individual file restores with a recovery time of no more than two hours. They have chosen to use RDS Oracle as the database Which backup architecture will meet these requirements?

- A. Backup RDS using automated daily DB backups Backup the EC2 instances using AMIs and supplement with file-level backup to S3 using traditional enterprise backup software to provide file level restore
- B. Backup RDS using a Multi-AZ Deployment Backup the EC2 instances using AMIs, and supplement by copying file system data to S3 to provide file level restore.
- C. Backup RDS using automated daily DB backups Backup the EC2 instances using EBS snapshots and supplement with file-level backups to Amazon Glacier using traditional enterprise backup software to provide file level restore
- D. Backup RDS database to S3 using Oracle RMAN Backup the EC2 instances using AMIs, and supplement with EBS snapshots for individual volume restore.

**Answer:** A

#### Explanation:

Point-In-Time Recovery

In addition to the daily automated backup, Amazon RDS archives database change logs. This enables you to recover your database to any point in time during the backup retention period, up to the last five minutes of database usage.

Amazon RDS stores multiple copies of your data, but for Single-AZ DB instances these copies are stored in a single availability zone. If for any reason a Single-AZ DB instance becomes unusable, you can use point-in-time recovery to launch a new DB instance with the latest restorable data. For more information on working with point-in-time recovery, go to Restoring a DB Instance to a Specified Time.

Note

Multi-AZ deployments store copies of your data in different Availability Zones for greater levels of data durability. For more information on Multi-AZ deployments, see High Availability (Multi-AZ).

#### NEW QUESTION 267

Your company has HQ in Tokyo and branch offices all over the world and is using a logistics software with a multi-regional deployment on AWS in Japan, Europe and USA, The logistic software has a 3-tier architecture and currently uses MySQL 5.6 for data persistence. Each region has deployed its own database In the HQ region you run an hourly batch process reading data from every region to compute cross regional reports that are sent by email to all offices this batch process must be completed as fast as possible to quickly optimize logistics how do you build the database architecture in order to meet the requirements'?

- A. For each regional deployment, use RDS MySQL with a master in the region and a read replica in the HQ region
- B. For each regional deployment, use MySQL on EC2 with a master in the region and send hourly EBS snapshots to the HQ region
- C. For each regional deployment, use RDS MySQL with a master in the region and send hourly RDS snapshots to the HQ region
- D. For each regional deployment, use MySQL on EC2 with a master in the region and use S3 to copy data files hourly to the HQ region
- E. Use Direct Connect to connect all regional MySQL deployments to the HQ region and reduce network latency for the batch process

**Answer:** A

#### NEW QUESTION 268

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