



**Amazon**

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

Amazon AWS Certified Solutions Architect - Associate

#### NEW QUESTION 1

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 actMty 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 2

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 3

You are migrating an internal server on your DC to an EC2 instance with EBS volume. Your server disk usage is around 500GB so you just copied all your data to a 2TB disk to be used with AWS Import/Export. Where will the data be imported once it arrives at Amazon?

- A. to a 2TB EBS volume
- B. to an S3 bucket with 2 objects of 1TB
- C. to an 500GB EBS volume
- D. to an S3 bucket as a 2TB snapshot

**Answer:** B

#### Explanation:

An import to Amazon EBS will have different results depending on whether the capacity of your storage device is less than or equal to 1 TB or greater than 1 TB. The maximum size of an Amazon EBS snapshot is 1 TB, so if the device image is larger than 1 TB, the image is chunked and stored on Amazon S3. The target location is determined based on the total capacity of the device, not the amount of data on the device.

Reference: <http://docs.aws.amazon.com/AWSImportExport/latest/DG/Concepts.html>

#### NEW QUESTION 4

A client needs you to import some existing infrastructure from a dedicated hosting provider to AWS to try and save on the cost of running his current website. He also needs an automated process that manages backups, software patching, automatic failure detection, and recovery. You are aware that his existing set up currently uses an Oracle database. Which of the following AWS databases would be best for accomplishing this task?

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

**Answer:** A

#### Explanation:

Amazon RDS gives you access to the capabilities of a familiar MySQL, Oracle, SQL Server, or PostgreSQL database engine. This means that the code, applications, and tools you already use today with your existing databases can be used with Amazon RDS. Amazon RDS automatically patches the database software and backs up your database, storing the backups for a user-defined retention period and enabling point-in-time recovery.

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

#### NEW QUESTION 5

True or false? A VPC contains multiple subnets, where each subnet can span multiple Availability Zones.

- A. This is true only if requested during the set-up of VPC.
- B. This is true.
- C. This is false.
- D. This is true only for US region

**Answer:** C

**Explanation:**

A VPC can span several Availability Zones. In contrast, a subnet must reside within a single Availability Zone.  
Reference: <https://aws.amazon.com/vpc/faqs/>

**NEW QUESTION 6**

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 7**

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 8**

You need to import several hundred megabytes of data from a local Oracle database to an Amazon RDS DB instance. What does AWS recommend you use to accomplish this?

- A. Oracle export/import utilities
- B. Oracle SQL Developer
- C. Oracle Data Pump
- D. DBMS\_FILE\_TRANSFER

**Answer:** C

**Explanation:**

How you import data into an Amazon RDS DB instance depends on the amount of data you have and the number and variety of database objects in your database.  
For example, you can use Oracle SQL Developer to import a simple, 20 MB database; you want to use Oracle Data Pump to import complex databases or databases that are several hundred megabytes or several terabytes in size.  
Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Oracle.Procedural.Importing.html>

**NEW QUESTION 9**

A user has created an EBS volume with 1000 IOPS. What is the average IOPS that the user will get for most of the year as per EC2 SLA if the instance is attached to the EBS optimized instance?

- A. 950
- B. 990
- C. 1000
- D. 900

**Answer:** D

**Explanation:**

As per AWS SLA if the instance is attached to an EBS-Optimized instance, then the Provisioned IOPS volumes are designed to deliver within 10% of the provisioned IOPS performance 99.9% of the time in a given year. Thus, if the user has created a volume of 1000 IOPS, the user will get a minimum 900 IOPS 99.9% time of the year.  
Reference: <http://aws.amazon.com/ec2/faqs/>

**NEW QUESTION 10**

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 10**

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 15**

You have been given a scope to deploy some AWS infrastructure for a large organisation. The requirements are that you will have a lot of EC2 instances but may need to add more when the average utilization of your Amazon EC2 fleet is high and conversely remove them when CPU utilization is low. Which AWS services would be best to use to accomplish this?

- A. Auto Scaling, Amazon CloudWatch and AWS Elastic Beanstalk
- B. Auto Scaling, Amazon CloudWatch and Elastic Load Balancing.
- C. Amazon CloudFront, Amazon CloudWatch and Elastic Load Balancing.
- D. AWS Elastic Beanstalk, Amazon CloudWatch and Elastic Load Balancing

**Answer:** B

**Explanation:**

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

Amazon EC2 instances in increments to the Auto Scaling group when the average utilization of your Amazon EC2 fleet is high; and similarly, you can set a condition to remove instances in the same increments when CPU utilization is low. If you have predictable load changes, you can set a schedule through Auto Scaling to plan your scaling activities. You can use Amazon CloudWatch to send alarms to trigger scaling activities and Elastic Load Balancing to help distribute traffic to your instances within Auto Scaling groups. Auto Scaling enables you to run your Amazon EC2 fleet at optimal utilization. Reference:

<http://aws.amazon.com/autoscaling/>

**NEW QUESTION 20**

In DynamoDB, could you use IAM to grant access to Amazon DynamoDB resources and API actions?

- A. In DynamoDB there is no need to grant access
- B. Depended to the type of access
- C. No
- D. Yes

**Answer:** D

**Explanation:**

Amazon DynamoDB integrates with AWS Identity and Access Management (IAM). You can use AWS IAM to grant access to Amazon DynamoDB resources and API actions. To do this, you first write an AWS IAM policy, which is a document that explicitly lists the permissions you want to grant. You then attach that policy to an AWS IAM user or role.

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

**NEW QUESTION 25**

Much of your company's data does not need to be accessed often, and can take several hours for retrieval time, so it's stored on Amazon Glacier. However someone within your organization has expressed concerns that his data is more sensitive than the other data, and is wondering whether the high level of encryption that he knows is on S3 is also used on the much cheaper Glacier service. Which of the following statements would be most applicable in regards to this concern?

- A. There is no encryption on Amazon Glacier, that's why it is cheaper.
- B. Amazon Glacier automatically encrypts the data using AES-128 a lesser encryption method than Amazon S3 but you can change it to AES-256 if you are willing to pay more.
- C. Amazon Glacier automatically encrypts the data using AES-256, the same as Amazon S3.
- D. Amazon Glacier automatically encrypts the data using AES-128 a lesser encryption method than Amazon S3.

**Answer:** C

**Explanation:**

Like Amazon S3, the Amazon Glacier service provides low-cost, secure, and durable storage. But where S3 is designed for rapid retrieval, Glacier is meant to be used as an archival service for data that is not accessed often, and for which retrieval times of several hours are suitable. Amazon Glacier automatically encrypts the data using AES-256 and stores it durably in an immutable form. Amazon Glacier is designed to provide average annual durability of 99.999999999% for an archive. It stores each archive in multiple facilities and multiple devices. Unlike traditional systems which can require laborious data verification and manual repair, Glacier performs regular, systematic data integrity checks, and is built to be automatically self-healing. Reference: <http://d0.awsstatic.com/whitepapers/Security/AWS%20Security%20Whitepaper.pdf>

#### NEW QUESTION 26

Your EBS volumes do not seem to be performing as expected and your team leader has requested you look into improving their performance. Which of the following is not a true statement relating to the performance of your EBS volumes?

- A. Frequent snapshots provide a higher level of data durability and they will not degrade the performance of your application while the snapshot is in progress.
- B. General Purpose (SSD) and Provisioned IOPS (SSD) volumes have a throughput limit of 128 MB/s per volume.
- C. There is a relationship between the maximum performance of your EBS volumes, the amount of I/O you are drMng to them, and the amount of time it takes for each transaction to complete.
- D. There is a 5 to 50 percent reduction in IOPS when you first access each block of data on a newly created or restored EBS volume

**Answer:** A

#### Explanation:

Several factors can affect the performance of Amazon EBS volumes, such as instance configuration, I/O characteristics, workload demand, and storage configuration.

Frequent snapshots provide a higher level of data durability, but they may slightly degrade the performance of your application while the snapshot is in progress. This trade off becomes critical when you have data that changes rapidly. Whenever possible, plan for snapshots to occur during off-peak times in order to minimize workload impact.

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

#### NEW QUESTION 29

In Amazon EC2 Container Service, are other container types supported?

- A. Yes, EC2 Container Service supports any container service you need.
- B. Yes, EC2 Container Service also supports Microsoft container service.
- C. No, Docker is the only container platform supported by EC2 Container Service presently.
- D. Yes, EC2 Container Service supports Microsoft container service and Openstac

**Answer:** C

#### Explanation:

In Amazon EC2 Container Service, Docker is the only container platform supported by EC2 Container Service presently.

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

#### NEW QUESTION 33

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 34

You have just been given a scope for a new client who has an enormous amount of data(petabytes) that he constantly needs analysed. Currently he is paying a huge amount of money for a data warehousing company to do this for him and is wondering if AWS can provide a cheaper solution. Do you think AWS has a solution for this?

- A. Ye
- B. Amazon SimpleDB
- C. N
- D. Not presently
- E. Ye
- F. Amazon Redshift
- G. Ye
- H. Your choice of relational AMIs on Amazon EC2 and EBS

**Answer:** C

#### Explanation:

Amazon Redshift is a fast, fully managed, petabyte-scale data warehouse service that makes it simple and cost-effective to efficiently analyze all your data using your existing business intelligence tools. You can start small for just \$0.25 per hour with no commitments or upfront costs and scale to a petabyte or more for \$1,000 per terabyte per year, less than a tenth of most other data warehousing solutions. 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.

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

#### NEW QUESTION 37

In Amazon EC2, while sharing an Amazon EBS snapshot, can the snapshots with AWS Marketplace product codes be public?

- A. Yes, but only for US-based providers.
- B. Yes, they can be public.
- C. No, they cannot be made public.
- D. Yes, they are automatically made public by the system.

**Answer: C**

#### Explanation:

Snapshots with AWS Marketplace product codes can't be made public. Reference:  
<http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/ebs-modifying-snapshot-permissions.html>

#### NEW QUESTION 40

An organization has created an application which is hosted on the AWS EC2 instance. The application stores images to S3 when the end user uploads to it. The organization does not want to store the AWS secure credentials required to access the S3 inside the instance. Which of the below mentioned options is a possible solution to avoid any security threat?

- A. Use the IAM based single sign between the AWS resources and the organization application.
- B. Use the IAM role and assign it to the instance.
- C. Since the application is hosted on EC2, it does not need credentials to access S3.
- D. Use the X.509 certificates instead of the access and the secret access key

**Answer: B**

#### Explanation:

The AWS IAM role uses temporary security credentials to access AWS services. Once the role is assigned to an instance, it will not need any security credentials to be stored on the instance. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/iam-roles-for-amazon-ec2.html>

#### NEW QUESTION 43

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 46

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 50

You have been doing a lot of testing of your VPC Network by deliberately failing EC2 instances to test whether instances are failing over properly. Your customer who will be paying the AWS bill for all this asks you if he being charged for all these instances. You try to explain to him how the billing works on EC2 instances to the best of your knowledge. What would be an appropriate response to give to the customer in regards to this?

- A. Billing commences when Amazon EC2 AM instance is completely up and billing ends as soon as the instance starts to shutdown.
- B. Billing only commences only after 1 hour of uptime and billing ends when the instance terminates.
- C. Billing commences when Amazon EC2 initiates the boot sequence of an AM instance and billing ends when the instance shuts down.
- D. Billing commences when Amazon EC2 initiates the boot sequence of an AM instance and billing ends as soon as the instance starts to shutdown.

**Answer:** C

**Explanation:**

Billing commences when Amazon EC2 initiates the boot sequence of an AM instance. Billing ends when the instance shuts down, which could occur through a web services command, by running "shutdown -h", or through instance failure.

Reference: <http://aws.amazon.com/ec2/faqs/#Billing>

**NEW QUESTION 54**

Once again your customers are concerned about the security of their sensitive data and with their latest enquiry ask about what happens to old storage devices on AWS. What would be the best answer to this QUESTION ?

- A. AWS reformats the disks and uses them again.
- B. AWS uses the techniques detailed in DoD 5220.22-M to destroy data as part of the decommissioning process.
- C. AWS uses their own proprietary software to destroy data as part of the decommissioning process.
- D. AWS uses a 3rd party security organization to destroy data as part of the decommissioning process

**Answer:** B

**Explanation:**

When a storage device has reached the end of its useful life, AWS procedures include a decommissioning process that is designed to prevent customer data from being exposed to unauthorized individuals.

AWS uses the techniques detailed in DoD 5220.22-M ("National Industrial Security Program Operating Manual ") or NIST 800-88 ("Guidelines for Media Sanitization") to destroy data as part of the decommissioning process.

All decommissioned magnetic storage devices are degaussed and physically destroyed in accordance with industry-standard practices.

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

**NEW QUESTION 55**

Amazon RDS provides high availability and failover support for DB instances using .

- A. customized deployments
- B. Appstream customizations
- C. log events
- D. Multi-AZ deployments

**Answer:** D

**Explanation:**

Amazon RDS provides high availability and failover support for DB instances using Multi-AZ deployments. Multi-AZ deployments for Oracle, PostgreSQL, MySQL, and MariaDB DB instances use Amazon technology, while SQL Server DB instances use SQL Server Mirroring.

Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.IV|ultiAZ.html>

**NEW QUESTION 60**

A major customer has asked you to set up his AWS infrastructure so that it will be easy to recover in the case of a disaster of some sort. Which of the following is important when thinking about being able to quickly launch resources in AWS to ensure business continuity in case of a disaster?

- A. Create and maintain AMIs of key servers where fast recovery is required.
- B. Regularly run your servers, test them, and apply any software updates and configuration changes.
- C. All items listed here are important when thinking about disaster recovery.
- D. Ensure that you have all supporting custom software packages available in AWS

**Answer:** C

**Explanation:**

In the event of a disaster to your AWS infrastructure you should be able to quickly launch resources in Amazon Web Services (AWS) to ensure business continuity.

The following are some key steps you should have in place for preparation:

1. Set up Amazon EC2 instances to replicate or mirror data.
2. Ensure that you have all supporting custom software packages available in AWS.
3. Create and maintain AMIs of key servers where fast recovery is required.
4. Regularly run these servers, test them, and apply any software updates and configuration changes.
5. Consider automating the provisioning of AWS resources.

Reference: [http://d36cz9buwru1tt.cloudfront.net/AWS\\_Disaster\\_Recovery.pdf](http://d36cz9buwru1tt.cloudfront.net/AWS_Disaster_Recovery.pdf)

**NEW QUESTION 61**

You need to measure the performance of your EBS volumes as they seem to be under performing. You have come up with a measurement of 1,024 KB I/O but your colleague tells you that EBS volume performance is measured in IOPS. How many IOPS is equal to 1,024 KB I/O?

- A. 16
- B. 256
- C. 8
- D. 4

**Answer:** D

**Explanation:**

Several factors can affect the performance of Amazon EBS volumes, such as instance configuration, I/O characteristics, workload demand, and storage configuration.

IOPS are input/output operations per second. Amazon EBS measures each I/O operation per second (that is 256 KB or smaller) as one IOPS. I/O operations that are larger than 256 KB are counted in 256 KB capacity units. For example, a 1,024 KB I/O operation would count as 4 IOPS.

When you provision a 4,000 IOPS volume and attach it to an EBS-optimized instance that can provide the necessary bandwidth, you can transfer up to 4,000 chunks of data per second (provided that the I/O does not exceed the 128 MB/s per volume throughput limit of General Purpose (SSD) and Provisioned IOPS (SSD) volumes).

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

#### NEW QUESTION 62

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 63

You decide that you need to create a number of Auto Scaling groups to try and save some money as you have noticed that at certain times most of your EC2 instances are not being used. By default, what is the maximum number of Auto Scaling groups that AWS will allow you to create?

- A. 12
- B. Unlimited
- C. 20
- D. 2

**Answer:** C

#### Explanation:

Auto Scaling is an AWS service that allows you to increase or decrease the number of EC2 instances within your application's architecture. With Auto Scaling, you create collections of EC2 instances, called Auto Scaling groups. You can create these groups from scratch, or from existing EC2 instances that are already in production.

Reference: [http://docs.aws.amazon.com/general/latest/gr/aws\\_service\\_limits.html#limits\\_autoscaling](http://docs.aws.amazon.com/general/latest/gr/aws_service_limits.html#limits_autoscaling)

#### NEW QUESTION 64

A user needs to run a batch process which runs for 10 minutes. This will only be run once, or at maximum twice, in the next month, so the processes will be temporary only. The process needs 15 X-Large instances. The process downloads the code from S3 on each instance when it is launched, and then generates a temporary log file. Once the instance is terminated, all the data will be lost. Which of the below mentioned pricing models should the user choose in this case?

- A. Spot instance.
- B. Reserved instance.
- C. On-demand instance.
- D. EBS optimized instanc

**Answer:** A

#### Explanation:

In Amazon Web Services, the spot instance is useful when the user wants to run a process temporarily. The spot instance can terminate the instance if the other user outbids the existing bid. In this case all storage is temporary and the data is not required to be persistent. Thus, the spot instance is a good option to save money.

Reference: <http://aws.amazon.com/ec2/purchasing-options/spot-instances/>

#### NEW QUESTION 68

Which of the following is NOT a characteristic of Amazon Elastic Compute Cloud (Amazon EC2)?

- A. It can be used to launch as many or as few virtual servers as you need.
- B. It increases the need to forecast traffic by providing dynamic IP addresses for static cloud computing.
- C. It eliminates your need to invest in hardware up front, so you can develop and deploy applications faster.
- D. It offers scalable computing capacity in the Amazon Web Services (AWS) clou

**Answer:** B

#### Explanation:

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates

your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.  
Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html>

#### NEW QUESTION 73

You are setting up your first Amazon Virtual Private Cloud (Amazon VPC) so you decide to use the VPC wizard in the AWS console to help make it easier for you. Which of the following statements is correct regarding instances that you launch into a default subnet via the VPC wizard?

- A. Instances that you launch into a default subnet receive a public IP address and 10 private IP addresses.
- B. Instances that you launch into a default subnet receive both a public IP address and a private IP address.
- C. Instances that you launch into a default subnet don't receive any ip addresses and you need to define them manually.
- D. Instances that you launch into a default subnet receive a public IP address and 5 private IP addresses

**Answer: B**

#### Explanation:

Instances that you launch into a default subnet receive both a public IP address and a private IP address. Instances in a default subnet also receive both public and private DNS hostnames. Instances that you launch into a nondefault subnet in a default VPC don't receive a public IP address or a DNS hostname. You can change your subnet's default public IP addressing behavior.

Reference: <http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/default-vpc.html>

#### NEW QUESTION 74

Amazon S3 allows you to set per-file permissions to grant read and/or write access. However you have decided that you want an entire bucket with 100 files already in it to be accessible to the public. You don't want to go through 100 files individually and set permissions. What would be the best way to do this?

- A. Move the bucket to a new region
- B. Add a bucket policy to the bucket.
- C. Move the files to a new bucket.
- D. Use Amazon EBS instead of S3

**Answer: B**

#### Explanation:

Amazon S3 supports several mechanisms that give you flexibility to control who can access your data as well as how, when, and where they can access it. Amazon S3 provides four different access control mechanisms: AWS Identity and Access Management (IAM) policies, Access Control Lists (ACLs), bucket policies, and query string authentication. IAM enables organizations to create and manage multiple users under a single AWS account. With IAM policies, you can grant IAM users fine-grained control to your Amazon S3 bucket or objects. You can use ACLs to selectively add (grant) certain permissions on individual objects. Amazon S3 bucket policies can be used to add or deny permissions across some or all of the objects within a single bucket. With Query string authentication, you have the ability to share Amazon S3 objects through URLs that are valid for a specified period of time.

Reference: <http://aws.amazon.com/s3/details/#security>

#### NEW QUESTION 76

You have been using T2 instances as your CPU requirements have not been that intensive. However you now start to think about larger instance types and start looking at M and IV3 instances. You are a little confused as to the differences between them as they both seem to have the same ratio of CPU and memory. Which statement below is incorrect as to why you would use one over the other?

- A. M3 instances are less expensive than M1 instances.
- B. IV3 instances are configured with more swap memory than M instances.
- C. IV3 instances provide better, more consistent performance than M instances for most use-cases.
- D. M3 instances also offer SSD-based instance storage that delivers higher I/O performance

**Answer: B**

#### Explanation:

Amazon EC2 allows you to set up and configure everything about your instances from your operating system up to your applications. An Amazon Machine Image (AMI) is simply a packaged-up environment that includes all the necessary bits to set up and boot your instance. M1 and M3 Standard instances have the same ratio of CPU and memory, some reasons below as to why you would use one over the other. IV3 instances provide better, more consistent performance than M instances for most use-cases. M3 instances also offer SSD-based instance storage that delivers higher I/O performance.

M3 instances are also less expensive than M1 instances. Due to these reasons, we recommend M3 for applications that require general purpose instances with a balance of compute, memory, and network resources.

However, if you need more disk storage than what is provided in M3 instances, you may still find M1 instances useful for running your applications.

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

#### NEW QUESTION 81

You have set up an Elastic Load Balancer (ELB) with the usual default settings, which route each request independently to the application instance with the smallest load. However, someone has asked you to bind a user's session to a specific application instance so as to ensure that all requests coming from the user during the session will be sent to the same application instance. AWS has a feature to do this. What is it called?

- A. Connection draining
- B. Proxy protocol
- C. Tagging
- D. Sticky session

**Answer: D**

#### Explanation:

An Elastic Load Balancer(ELB) by default, routes each request independently to the application instance with the smallest load. However, you can use the sticky session feature (also known as session affinity), which enables the load balancer to bind a user's session to a specific application instance. This ensures that all requests coming from the user during the session will be sent to the same application instance. The key to managing the sticky session is determining how long your load balancer should consistently route the user's request to the same application instance. If your application has its own session cookie, then you can set Elastic Load Balancing to create the session cookie to follow the duration specified by the application's session cookie. If your application does not have its own session cookie, then you can set Elastic Load Balancing to create a session cookie by specifying your own stickiness duration. You can associate stickiness duration for only HTTP/HTTPS load balancer listeners.

An application instance must always receive and send two cookies: A cookie that defines the stickiness duration and a special Elastic Load Balancing cookie named AWSELB, that has the mapping to the application instance.

Reference: <http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/TerminologyandKeyConcepts.html#session-stickiness>

#### NEW QUESTION 83

A user wants to achieve High Availability with PostgreSQL DB. Which of the below mentioned functionalities helps achieve HA?

- A. Multi AZ
- B. Read Replica
- C. Multi region
- D. PostgreSQL does not support HA

**Answer:** A

#### Explanation:

The Multi AZ feature allows the user to achieve High Availability. For Multi AZ, Amazon RDS automatically provisions and maintains a synchronous "standby" replica in a different Availability Zone. Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html>

#### NEW QUESTION 88

A user has attached 1 EBS volume to a VPC instance. The user wants to achieve the best fault tolerance of data possible. Which of the below mentioned options can help achieve fault tolerance?

- A. Attach one more volume with RAID 1 configuration.
- B. Attach one more volume with RAID 0 configuration.
- C. Connect multiple volumes and stripe them with RAID 6 configuration.
- D. Use the EBS volume as a root device

**Answer:** A

#### Explanation:

The user can join multiple provisioned IOPS volumes together in a RAID 1 configuration to achieve better fault tolerance. RAID 1 does not provide a write performance improvement; it requires more bandwidth than non-RAID configurations since the data is written simultaneously to multiple volumes.

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

#### NEW QUESTION 91

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 96

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 97

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 99**

A user is planning to launch a scalable web application. Which of the below mentioned options will not affect the latency of the application?

- A. Region.
- B. Provisioned IOPS.
- C. Availability Zone.
- D. Instance size

**Answer:** C

**Explanation:**

In AWS, the instance size decides the I/O characteristics. The provisioned IOPS ensures higher throughput, and lower latency. The region does affect the latency; latency will always be less when the instance is near to the end user. Within a region the user uses any AZ and this does not affect the latency. The AZ is mainly for fault tolerance or HA.

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

**NEW QUESTION 100**

A user has launched one EC2 instance in the US East region and one in the US West region. The user has launched an RDS instance in the US East region. How can the user configure access from both the EC2 instances to RDS?

- A. It is not possible to access RDS of the US East region from the US West region
- B. Configure the US West region's security group to allow a request from the US East region's instance and configure the RDS security group's ingress rule for the US East EC2 group
- C. Configure the security group of the US East region to allow traffic from the US West region's instance and configure the RDS security group's ingress rule for the US East EC2 group
- D. Configure the security group of both instances in the ingress rule of the RDS security group

**Answer:** C

**Explanation:**

The user cannot authorize an Amazon EC2 security group if it is in a different AWS Region than the RDS

DB instance. The user can authorize an IP range or specify an Amazon EC2 security group in the same region that refers to an IP address in another region. In this case allow IP of US West inside US East's security group and open the RDS security group for US East region.

Reference: [http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_WorkingWithSecurityGroups.html](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_WorkingWithSecurityGroups.html)

**NEW QUESTION 103**

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 here

**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 106**

A client of yours has a huge amount of data stored on Amazon S3, but is concerned about someone stealing it while it is in transit. You know that all data is encrypted in transit on AWS, but which of the following is wrong when describing server-side encryption on AWS?

- A. Amazon S3 server-side encryption employs strong multi-factor encryption.
- B. Amazon S3 server-side encryption uses one of the strongest block ciphers available, 256-bit Advanced Encryption Standard (AES-256), to encrypt your data.
- C. In server-side encryption, you manage encryption/decryption of your data, the encryption keys, and related tools.
- D. Server-side encryption is about data encryption at rest—that is, Amazon S3 encrypts your data as it writes it to disks.

**Answer:** C

**Explanation:**

Amazon S3 encrypts your object before saving it on disks in its data centers and decrypts it when you download the objects. You have two options depending on how you choose to manage the encryption keys: Server-side encryption and client-side encryption.

Server-side encryption is about data encryption at rest—that is, Amazon S3 encrypts your data as it writes it to disks in its data centers and decrypts it for you when you access it. As long as you authenticate your request and you have access permissions, there is no difference in the way you access encrypted or unencrypted objects. Amazon S3 manages encryption and decryption for you. For example, if you share your objects using a pre-signed URL, that URL works the same way for both encrypted and unencrypted objects.

In client-side encryption, you manage encryption/decryption of your data, the encryption keys, and related tools. Server-side encryption is an alternative to client-side encryption in which Amazon S3 manages the encryption of your data, freeing you from the tasks of managing encryption and encryption keys.

Amazon S3 server-side encryption employs strong multi-factor encryption. Amazon S3 encrypts each object with a unique key. As an additional safeguard, it encrypts the key itself with a master key that it regularly rotates. Amazon S3 server-side encryption uses one of the strongest block ciphers available, 256-bit Advanced Encryption Standard (AES-256), to encrypt your data.

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

**NEW QUESTION 107**

Which IAM role do you use to grant AWS Lambda permission to access a DynamoDB Stream?

- A. Dynamic role
- B. Invocation role
- C. Execution role
- D. Event Source role

**Answer:** C

**Explanation:**

You grant AWS Lambda permission to access a DynamoDB Stream using an IAM role known as the "execution role".

Reference: <http://docs.aws.amazon.com/lambda/latest/dg/intro-permission-model.htm>

**NEW QUESTION 112**

You are signed in as root user on your account but there is an Amazon S3 bucket under your account that you cannot access. What is a possible reason for this?

- A. An IAM user assigned a bucket policy to an Amazon S3 bucket and didn't specify the root user as a principal
- B. The S3 bucket is full.
- C. The S3 bucket has reached the maximum number of objects allowed.
- D. You are in the wrong availability zone

**Answer:** A

**Explanation:**

With IAM, you can centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access.

In some cases, you might have an IAM user with full access to IAM and Amazon S3. If the IAM user assigns a bucket policy to an Amazon S3 bucket and doesn't specify the root user as a principal, the root user is denied access to that bucket. However, as the root user, you can still access the bucket by modifying the bucket policy to allow root user access.

Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/iam-troubleshooting.html#testing2>

**NEW QUESTION 114**

A user is observing the EC2 CPU utilization metric on CloudWatch. The user has observed some interesting patterns while filtering over the 1 week period for a particular hour. The user wants to zoom that data point to a more granular period. How can the user do that easily with CloudWatch?

- A. The user can zoom a particular period by selecting that period with the mouse and then releasing the mouse
- B. The user can zoom a particular period by specifying the aggregation data for that period
- C. The user can zoom a particular period by double clicking on that period with the mouse
- D. The user can zoom a particular period by specifying the period in the Time Range

**Answer:** A

**Explanation:**

Amazon CloudWatch provides the functionality to graph the metric data generated either by the AWS services or the custom metric to make it easier for the user to analyse. The AWS CloudWatch console provides the option to change the granularity of a graph and zoom in to see data over a shorter time period. To zoom, the user has to click in the graph details pane, drag on the graph area for selection, and then release the mouse button.

Reference: [http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/zoom\\_in\\_on\\_graph.html](http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/zoom_in_on_graph.html)

**NEW QUESTION 116**

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 118

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 123

A user is planning to make a mobile game which can be played online or offline and will be hosted on EC2.

The user wants to ensure that if someone breaks the highest score or they achieve some milestone they can inform all their colleagues through email. Which of the below mentioned AWS services helps achieve this goal?

- A. AWS Simple Workflow Service.
- B. AWS Simple Email Service.
- C. Amazon Cognito
- D. AWS Simple Queue Service

**Answer:** B

#### Explanation:

Amazon Simple Email Service (Amazon SES) is a highly scalable and cost-effective email-sending service for businesses and developers. It integrates with other AWS services, making it easy to send emails from applications that are hosted on AWS.

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

#### NEW QUESTION 125

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 129

A user is currently building a website which will require a large number of instances in six months, when a demonstration of the new site will be given upon launch. Which of the below mentioned options allows the user to procure the resources beforehand so that they need not worry about infrastructure availability during the demonstration?

- A. Procure all the instances as reserved instances beforehand.
- B. Launch all the instances as part of the cluster group to ensure resource availability.
- C. Pre-warm all the instances one month prior to ensure resource availability.
- D. Ask AWS now to procure the dedicated instances in 6 month

**Answer:** A

#### Explanation:

Amazon Web Services has massive hardware resources at its data centers, but they are finite. The best way for users to maximize their access to these resources is by reserving a portion of the computing capacity that they require. This can be done through reserved instances. With reserved instances, the user literally reserves the computing capacity in the Amazon Web Services cloud.

Reference: [http://media.amazonwebservices.com/AWS\\_Building\\_Fault\\_Tolerant\\_Applications.pdf](http://media.amazonwebservices.com/AWS_Building_Fault_Tolerant_Applications.pdf)

#### NEW QUESTION 134

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/sw/website-hosting-intro.html>

**NEW QUESTION 136**

What is the default maximum number of Access Keys per user?

- A. 10
- B. 15
- C. 2
- D. 20

**Answer:** C

**Explanation:**

The default maximum number of Access Keys per user is 2.

Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/LimitationsOnEntities.html>

**NEW QUESTION 138**

How long does an AWS free usage tier EC2 last for?

- A. Forever
- B. 12 Months upon signup
- C. 1 Month upon signup
- D. 6 Months upon signup

**Answer:** B

**Explanation:**

The AWS free usage tier will expire 12 months from the date you sign up. When your free usage expires or if your application use exceeds the free usage tiers, you simply pay the standard, pay-as-you-go service rates.

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

**NEW QUESTION 141**

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 143**

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

Your organization is in the business of architecting complex transactional databases. For a variety of reasons, this has been done on EBS. What is AWS's recommendation for customers who have architected databases using EBS for backups?

- A. Backups to Amazon S3 be performed through the database management system.
- B. Backups to AWS Storage Gateway be performed through the database management system.
- C. If you take regular snapshots no further backups are required.
- D. Backups to Amazon Glacier be performed through the database management system.

**Answer:** A

#### Explanation:

Data stored in Amazon EBS volumes is redundantly stored in multiple physical locations as part of normal operation of those services and at no additional charge. However, Amazon EBS replication is stored within the same availability zone, not across multiple zones; therefore, it is highly recommended that you conduct regular snapshots to Amazon S3 for long-term data durability.

For customers who have architected complex transactional databases using EBS, it is recommended that backups to Amazon S3 be performed through the database management system so that distributed transactions and logs can be checkpointed.

AWS does not perform backups of data that are maintained on virtual disks attached to running instances on Amazon EC2.

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

#### NEW QUESTION 152

In Amazon EC2, what is the limit of Reserved Instances per Availability Zone each month?

- A. 5
- B. 20
- C. 50
- D. 10

**Answer:** B

#### Explanation:

There are 20 Reserved Instances per Availability Zone in each month.

Reference: [http://docs.aws.amazon.com/general/latest/gr/aws\\_service\\_limits.html](http://docs.aws.amazon.com/general/latest/gr/aws_service_limits.html)

#### NEW QUESTION 154

Is it possible to get a history of all EC2 API calls made on your account for security analysis and operational troubleshooting purposes?

- A. Yes, by default, the history of your API calls is logged.
- B. Yes, you should turn on the CloudTrail in the AWS console.
- C. No, you can only get a history of VPC API calls.
- D. No, you cannot store history of EC2 API calls on Amazon.

**Answer:** B

#### Explanation:

To get a history of all EC2 API calls (including VPC and EBS) made on your account, you simply turn on CloudTrail in the AWS Management Console.

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

#### NEW QUESTION 159

When does the billing of an Amazon EC2 system begin?

- A. It starts when the Status column for your distribution changes from Creating to Deployed.
- B. It starts as soon as you click the create instance option on the main EC2 console.
- C. It starts when your instance reaches 720 instance hours.
- D. It starts when Amazon EC2 initiates the boot sequence of an AM instance.

**Answer:** D

#### Explanation:

Billing commences when Amazon EC2 initiates the boot sequence of an AM instance. Billing ends when the instance terminates, which could occur through a web services command, by running "shutdown -h", or through instance failure. When you stop an instance, Amazon shuts it down but doesn't charge hourly usage for a stopped instance, or data transfer fees, but charges for the storage for any Amazon EBS volumes.

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

#### NEW QUESTION 164

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 165

A for a VPC is a collection of subnets (typically private) that you may want to designate for your backend RDS DB Instances.

- A. DB Subnet Set
- B. RDS Subnet Group
- C. DB Subnet Group
- D. DB Subnet Collection

**Answer: C**

#### Explanation:

DB Subnet Groups are a set of subnets (one per Availability Zone of a particular region) designed for your DB instances that reside in a VPC. They make easy to manage Multi-AZ deployments as well as the conversion from a Single-AZ to a Multi-AZ one.

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

#### NEW QUESTION 170

Amazon Elastic Load Balancing is used to manage traffic on a fleet of Amazon EC2 instances, distributing traffic to instances across all availability zones within a region. Elastic Load Balancing has all the advantages of an on-premises load balancer, plus several security benefits.

Which of the following is not an advantage of ELB over an on-premise load balancer?

- A. ELB uses a four-tier, key-based architecture for encryption.
- B. ELB offers clients a single point of contact, and can also serve as the first line of defense against attacks on your network.
- C. ELB takes over the encryption and decryption work from the Amazon EC2 instances and manages it centrally on the load balancer.
- D. ELB supports end-to-end traffic encryption using TLS (previously SSL) on those networks that use secure HTTP (HTTPS) connections.

**Answer: A**

#### Explanation:

Amazon Elastic Load Balancing is used to manage traffic on a fleet of Amazon EC2 instances, distributing traffic to instances across all availability zones within a region. Elastic Load Balancing has all the advantages of an on-premises load balancer, plus several security benefits:

Takes over the encryption and decryption work from the Amazon EC2 instances and manages it centrally on the load balancer

Offers clients a single point of contact, and can also serve as the first line of defense against attacks on your network

When used in an Amazon VPC, supports creation and management of security groups associated with your Elastic Load Balancing to provide additional networking and security options

Supports end-to-end traffic encryption using TLS (previously SSL) on those networks that use secure HTTP (HTTPS) connections. When TLS is used, the TLS server certificate used to terminate client connections can be managed centrally on the load balancer, rather than on every individual instance. Reference:

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

#### NEW QUESTION 174

You have set up an S3 bucket with a number of images in it and you have decided that you want anybody to be able to access these images, even anonymous users. To accomplish this you create a bucket policy. You will need to use an Amazon S3 bucket policy that specifies a in the principal element, which means anyone can access the bucket.

- A. hash tag (#)
- B. anonymous user
- C. wildcard (\*)
- D. S3 user

**Answer: C**

#### Explanation:

You can use the AWS Policy Generator to create a bucket policy for your Amazon S3 bucket. You can then use the generated document to set your bucket policy by using the Amazon S3 console, by a number of third-party tools, or via your application.

You use an Amazon S3 bucket policy that specifies a wildcard (\*) in the principal element, which means anyone can access the bucket. With anonymous access, anyone (including users without an AWS account) will be able to access the bucket.

Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/iam-troubleshooting.html#d0e20565>

#### NEW QUESTION 176

You have been asked to build AWS infrastructure for disaster recovery for your local applications and within that you should use an AWS Storage Gateway as part of the solution. Which of the following best describes the function of an AWS Storage Gateway?

- A. Accelerates transferring large amounts of data between the AWS cloud and portable storage devices .
- B. A web service that speeds up distribution of your static and dynamic web content.
- C. Connects an on-premises software appliance with cloud-based storage to provide seamless and secure integration between your on-premises IT environment and AWS's storage infrastructure.
- D. Is a storage service optimized for infrequently used data, or "cold data."

**Answer: C**

#### Explanation:

AWS Storage Gateway connects an on-premises software appliance with cloud-based storage to provide seamless integration with data security features between your on-premises IT environment and the Amazon Web Services (AWS) storage infrastructure. You can use the service to store data in the AWS cloud for scalable and cost-effective storage that helps maintain data security. AWS Storage Gateway offers both volume-based and tape-based storage solutions:

Volume gateways Gateway-cached volumes Gateway-stored volumes

Gateway-virtual tape library (VTL)

Reference:

[http://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_disasterrecovery\\_07.pdf](http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_disasterrecovery_07.pdf)

#### NEW QUESTION 181

In Amazon CloudFront, if you use Amazon EC2 instances and other custom origins with CloudFront, it is recommended to .

- A. not use Elastic Load Balancing
- B. restrict Internet communication to private instances while allowing outgoing traffic
- C. enable access key rotation for CloudWatch metrics
- D. specify the URL of the load balancer for the domain name of your origin server

**Answer: D**

#### Explanation:

In Amazon CloudFront, you should use an Elastic Load Balancing load balancer to handle traffic across multiple Amazon EC2 instances and to isolate your application from changes to Amazon EC2 instances. When you create your CloudFront distribution, specify the URL of the load balancer for the domain name of your origin server.

Reference: <http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/CustomOriginBestPractices.html>

#### NEW QUESTION 184

Which of the following features are provided by Amazon EC2?

- A. Exadata Database Machine, Optimized Storage Management, Flashback Technology, and Data Warehousing
- B. Instances, Amazon Machine Images (AMIs), Key Pairs, Amazon EBS Volumes, Firewall, Elastic IP address, Tags, and Virtual Private Clouds (VPCs)
- C. Real Application Clusters (RAC), ElastiCache Machine Images (EMIs), Data Warehousing, Flashback Technology, Dynamic IP address
- D. Exadata Database Machine, Real Application Clusters (RAC), Data Guard, Table and Index Partitioning, and Data Pump Compression

**Answer: B**

#### Explanation:

Amazon EC2 provides the following features:

- Virtual computing environments, known as instances;
- Pre-configured templates for your instances, known as Amazon Machine Images (AMIs), that package the bits you need for your server (including the operating system and additional software)
- Various configurations of CPU, memory, storage, and networking capacity for your instances, known as instance types
- Secure login information for your instances using key pairs (AWS stores the public key, and you store the private key in a secure place)
- Storage volumes for temporary data that's deleted when you stop or terminate your instance, known as instance store volumes
- Persistent storage volumes for your data using Amazon Elastic Block Store (Amazon EBS), known as Amazon EBS volumes
- Multiple physical locations for your resources, such as instances and Amazon EBS volumes, known as regions and Availability Zones
- A firewall that enables you to specify the protocols, ports, and source IP ranges that can reach your instances using security groups
- Static IP addresses for dynamic cloud computing, known as Elastic IP addresses
- Metadata, known as tags, that you can create and assign to your Amazon EC2 resources
- Virtual networks you can create that are logically isolated from the rest of the AWS cloud, and that you can optionally connect to your own network, known as virtual private clouds (VPCs).

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

#### NEW QUESTION 186

In Amazon Elastic Compute Cloud, which of the following is used for communication between instances in the same network (EC2-Classic or a VPC)?

- A. Private IP addresses
- B. Elastic IP addresses
- C. Static IP addresses
- D. Public IP addresses

**Answer: A**

#### Explanation:

A private IP address is an IP address that's not reachable over the Internet. You can use private IP addresses for communication between instances in the same network (EC2-Classic or a VPC). Reference:

<http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-instance-addressing.html>

#### NEW QUESTION 187

A friend tells you he is being charged \$100 a month to host his WordPress website, and you tell him you can move it to AWS for him and he will only pay a fraction of that, which makes him very happy. He then tells you he is being charged \$50 a month for the domain, which is registered with the same people that set it up, and he asks if it's possible to move that to AWS as well. You tell him you aren't sure, but will look into it. Which of the following statements is true in regards to transferring domain names to AWS?

- A. You can't transfer existing domains to AWS.
- B. You can transfer existing domains into Amazon Route 53's management.
- C. You can transfer existing domains via AWS Direct Connect.
- D. You can transfer existing domains via AWS Import/Export

**Answer: B**

#### Explanation:

With Amazon Route 53, you can create and manage your public DNS records with the AWS Management Console or with an easy-to-use API. If you need a domain name, you can find an available name and register it using Amazon Route 53. You can also transfer existing domains into Amazon Route 53's management.

Reference: <http://aws.amazon.com/route53/>

#### 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 194**

What happens to data on an ephemeral volume of an EBS-backed EC2 instance if it is terminated or if it fails?

- A. Data is automatically copied to another volume.
- B. The volume snapshot is saved in S3.
- C. Data persists.
- D. Data is delete

**Answer:** D

**Explanation:**

Any data on the instance store volumes persists as long as the instance is running, but this data is deleted when the instance is terminated or if it fails (such as if an underlying drive has issues). After an instance store-backed instance fails or terminates, it cannot be restored.

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

**NEW QUESTION 198**

A user is sending bulk emails using AWS SES. The emails are not reaching some of the targeted audience because they are not authorized by the ISPs. How can the user ensure that the emails are all delivered?

- A. Send an email using DKINI with SES.
- B. Send an email using SMTP with SES.
- C. Open a ticket with AWS support to get it authorized with the ISP.
- D. Authorize the ISP by sending emails from the development account

**Answer:** A

**Explanation:**

Domain Keys Identified Mail (DKIM) is a standard that allows senders to sign their email messages and ISPs, and use those signatures to verify that those messages are legitimate and have not been modified by a third party in transit.

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

**NEW QUESTION 200**

In AWS CloudHSM, in addition to the AWS recommendation that you use two or more HSM appliances in a high-availability configuration to prevent the loss of keys and data, you can also perform a remote backup/restore of a Luna SA partition if you have purchased a:

- A. Luna Restore HSM.
- B. Luna Backup HSM.
- C. Luna HSM.
- D. Luna SA HSM.

**Answer:** B

**Explanation:**

In AWS CloudHSM, you can perform a remote backup/restore of a Luna SA partition if you have purchased a Luna Backup HSM.

Reference: <http://docs.aws.amazon.com/cloudhsm/latest/userguide/cloud-hsm-backup-restore.html>

**NEW QUESTION 202**

Content and IV|edia Server is the latest requirement that you need to meet for a client.

The client has been very specific about his requirements such as low latency, high availability, durability, and access control. Potentially there will be millions of views on this server and because of "spiky" usage patterns, operations teams will need to provision static hardware, network, and management resources to support the maximum expected need. The Customer base will be initially low but is expected to grow and become more geographically distributed.

Which of the following would be a good solution for content distribution?

- A. Amazon S3 as both the origin server and for caching
- B. AWS Storage Gateway as the origin server and Amazon EC2 for caching
- C. AWS CloudFront as both the origin server and for caching
- D. Amazon S3 as the origin server and Amazon CloudFront for caching

**Answer:** D

**Explanation:**

As your customer base grows and becomes more geographically distributed, using a high- performance edge cache like Amazon CloudFront can provide substantial improvements in latency, fault tolerance, and cost.

By using Amazon S3 as the origin server for the Amazon CloudFront distribution, you gain the advantages of fast in-network data transfer rates, simple publishing/caching workflow, and a unified security framework.

Amazon S3 and Amazon CloudFront can be configured by a web service, the AWS Management Console, or a host of third-party management tools.

Reference:[http://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_media\\_02.pdf](http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_media_02.pdf)

### NEW QUESTION 203

Which one of the below doesn't affect Amazon CloudFront billing?

- A. Distribution Type
- B. Data Transfer Out
- C. Dedicated IP SSL Certificates
- D. Requests

**Answer:** A

#### Explanation:

Amazon CloudFront is a web service for content delivery. CloudFront delivers your content using a global network of edge locations and works seamlessly with Amazon S3 which durably stores the original and definitive versions of your files.

Amazon CloudFront billing is mainly affected by Data Transfer Out

Edge Location Traffic Distribution Requests

Dedicated IP SSL Certificates

Reference: <http://calculator.s3.amazonaws.com/index.html>

### NEW QUESTION 206

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 210

In Route 53, what does a Hosted Zone refer to?

- A. A hosted zone is a collection of geographical load balancing rules for Route 53.
- B. A hosted zone is a collection of resource record sets hosted by Route 53.
- C. A hosted zone is a selection of specific resource record sets hosted by CloudFront for distribution to Route 53.
- D. A hosted zone is the Edge Location that hosts the Route 53 records for a use

**Answer:** B

#### Explanation:

A Hosted Zone refers to a selection of resource record sets hosted by Route 53.

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

### NEW QUESTION 212

Which DNS name can only be resolved within Amazon EC2?

- A. Public DNS name
- B. Internal DNS name
- C. External DNS name
- D. Global DNS name

**Answer:** B

#### Explanation:

Only Internal DNS name can be resolved within Amazon EC2. Reference:

<http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-instance-addressing.html>

### NEW QUESTION 217

You can seamlessly join an EC2 instance to your directory domain. What connectMty do you need to be able to connect remotely to this instance?

- A. You must have IP connectMty to the instance from the network you are connecting from.
- B. You must have the correct encryption keys to connect to the instance remotely.
- C. You must have enough bandwidth to connect to the instance.
- D. You must use MFA authentication to be able to connect to the instance remotel

**Answer:** A

**Explanation:**

You can seamlessly join an EC2 instance to your directory domain when the instance is launched using the Amazon EC2 Simple Systems Manager. If you need to manually join an EC2 instance to your domain, you must launch the instance in the proper region and security group or subnet, then join the instance to the domain. To be able to connect remotely to these instances, you must have IP connectivity to the instances from the network you are connecting from. In most cases, this requires that an Internet gateway be attached to your VPC and that the instance has a public IP address.

Reference: [http://docs.aws.amazon.com/directoryservice/latest/admin-guide/join\\_a\\_directory.html](http://docs.aws.amazon.com/directoryservice/latest/admin-guide/join_a_directory.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 219**

You are in the process of moving your friend's WordPress site onto AWS to try and save him some money, and you have told him that he should probably also move his domain name. He asks why he can't leave his domain name where it is and just have his infrastructure on AWS. What would be an incorrect response to his question ?

- A. Route 53 offers low query latency for your end users.
- B. Route 53 is designed to automatically answer queries from the optimal location depending on network conditions.
- C. The globally distributed nature of AWS's DNS servers helps ensure a consistent ability to route your end users to your application.
- D. Route 53 supports Domain Name System Security Extensions (DNSSEC).

**Answer: D**

**Explanation:**

Amazon Route 53 provides highly available and scalable Domain Name System (DNS), domain name registration, and health-checking web services. Route 53 is built using AWS's highly available and reliable infrastructure. The globally distributed nature of our DNS servers helps ensure a consistent ability to route your end users to your application by circumventing any internet or network related issues. Route 53 is designed to provide the level of dependability required by important applications. Using a global anycast network of DNS servers around the world, Route 53 is designed to automatically answer queries from the optimal location depending on network conditions. As a result, the service offers low query latency for your end users.

Amazon Route 53 does not support Domain Name System Security Extensions (DNSSEC) at this time. Reference: <https://aws.amazon.com/route53/faqs/>

**NEW QUESTION 223**

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 228**

While controlling access to Amazon EC2 resources, which of the following acts as a firewall that controls the traffic allowed to reach one or more instances?

- A. A security group
- B. An instance type
- C. A storage cluster
- D. An object

**Answer: A**

**Explanation:**

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. When you launch an instance, you assign it one or more security groups.

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

**NEW QUESTION 230**

A user is making a scalable web application with compartmentalization. The user wants the log module to be able to be accessed by all the application functionalities in an asynchronous way. Each module of the application sends data to the log module, and based on the resource availability it will process the logs. Which AWS service helps this functionality?

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

**Answer:** A

**Explanation:**

Amazon Simple Queue Service (SQS) is a highly reliable distributed messaging system for storing messages as they travel between computers. By using Amazon SQS, developers can simply move data between distributed application components. It is used to achieve compartmentalization or loose coupling. In this case all the modules will send a message to the logger queue and the data will be processed by queue as per the resource availability.

Reference: [http://media.amazonwebservices.com/AWS\\_Building\\_Fault\\_Tolerant\\_Applications.pdf](http://media.amazonwebservices.com/AWS_Building_Fault_Tolerant_Applications.pdf)

**NEW QUESTION 231**

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 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 237**

How can you apply more than 100 rules to an Amazon EC2-Classic?

- A. By adding more security groups
- B. You need to create a default security group specifying your required rules if you need to use more than 100 rules per security group.
- C. By default the Amazon EC2 security groups support 500 rules.
- D. You can't add more than 100 rules to security groups for an Amazon EC2 instance.

**Answer:** D

**Explanation:**

In EC2-Classic, you can associate an instance with up to 500 security groups and add up to 100 rules to a security group.

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

**NEW QUESTION 239**

Identify a true statement about the On-Demand instances purchasing option provided by Amazon EC2.

- A. Pay for the instances that you use by the hour, with no long-term commitments or up-front payments.
- B. Make a low, one-time, up-front payment for an instance, reserve it for a one- or three-year term, and pay a significantly lower hourly rate for these instances.
- C. Pay for the instances that you use by the hour, with long-term commitments or up-front payments.
- D. Make a high, one-time, all-front payment for an instance, reserve it for a one- or three-year term, and pay a significantly higher hourly rate for these instances.

**Answer:** A

**Explanation:**

On-Demand instances allow you to pay for the instances that you use by the hour, with no long-term commitments or up-front payments.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/reserved-instances-offerings.html>

#### NEW QUESTION 241

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 243

After deciding that EMR will be useful in analysing vast amounts of data for a gaming website that you are architecting you have just deployed an Amazon EMR Cluster and wish to monitor the cluster performance. Which of the following tools cannot be used to monitor the cluster performance?

- A. Kinesis
- B. Ganglia
- C. CloudWatch Metrics
- D. Hadoop Web Interfaces

**Answer:** A

#### Explanation:

Amazon EMR provides several tools to monitor the performance of your cluster. Hadoop Web Interfaces

Every cluster publishes a set of web interfaces on the master node that contain information about the cluster. You can access these web pages by using an SSH tunnel to connect them on the master node. For more information, see [View Web Interfaces Hosted on Amazon EMR Clusters](#).

CloudWatch Metrics

Every cluster reports metrics to CloudWatch. CloudWatch is a web service that tracks metrics, and which you can use to set alarms on those metrics. For more information, see [Monitor Metrics with CloudWatch](#).

Ganglia

Ganglia is a cluster monitoring tool. To have this available, you have to install Ganglia on the cluster when you launch it. After you've done so, you can monitor the cluster as it runs by using an SSH tunnel to connect to the Ganglia UI running on the master node. For more information, see [Monitor Performance with Ganglia](#).

Reference:

<http://docs.aws.amazon.com/ElasticMapReduce/latest/DeveloperGuide/emr-troubleshoot-tools.html>

#### NEW QUESTION 244

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 VPC

**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 245

You need to set up a security certificate for a client's e-commerce website as it will use the HTTPS protocol. Which of the below AWS services do you need to access to manage your SSL server certificate?

- A. AWS Directory Service
- B. AWS Identity & Access Management
- C. AWS CloudFormation
- D. Amazon Route 53

**Answer:** B

#### Explanation:

AWS Identity and Access Management (IAM) is a web service that enables Amazon Web Services (AWS) customers to manage users and user permissions in AWS.

All your SSL server certificates are managed by AWS Identity and Access management (IAM). Reference:  
<http://docs.aws.amazon.com/IAM/latest/UserGuide/ManagingServerCerts.htm>

#### NEW QUESTION 248

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 252

Your company plans to host a large donation website on Amazon Web Services (AWS). You anticipate a large and undetermined amount of traffic that will create many database writes. To be certain that you do not drop any writes to a database hosted on AWS. Which service should you use?

- A. Amazon RDS with provisioned IOPS up to the anticipated peak write throughput.
- B. Amazon Simple Queue Service (SQS) for capturing the writes and draining the queue to write to the database.
- C. Amazon ElastiCache to store the writes until the writes are committed to the database.
- D. Amazon DynamoDB with provisioned write throughput up to the anticipated peak write throughput

**Answer:** B

#### Explanation:

Amazon Simple Queue Service (Amazon SQS) offers a reliable, highly scalable hosted queue for storing messages as they travel between computers. By using Amazon SQS, developers can simply move data between distributed application components performing different tasks, without losing messages or requiring each component to be always available. Amazon SQS makes it easy to build a distributed, decoupled application, working in close conjunction with the Amazon Elastic Compute Cloud (Amazon EC2) and the other AWS infrastructure web services.

What can I do with Amazon SQS?

Amazon SQS is a web service that gives you access to a message queue that can be used to store messages while waiting for a computer to process them. This allows you to quickly build message queuing applications that can be run on any computer on the internet. Since Amazon SQS is highly scalable and you only pay for what you use, you can start small and grow your application as you wish, with no compromise on performance or reliability. This lets you focus on building sophisticated message-based applications, without worrying about how the messages are stored and managed.

You can use Amazon SQS with software applications in various ways. For example, you can: Integrate Amazon SQS with other AWS infrastructure web services to make applications more reliable and flexible.

Use Amazon SQS to create a queue of work where each message is a task that needs to be completed by a process. One or many computers can read tasks from the queue and perform them. Build a microservices architecture, using queues to connect your microservices.

Keep notifications of significant events in a business process in an Amazon SQS queue. Each event can have a corresponding message in a queue, and applications that need to be aware of the event can read and process the messages.

#### NEW QUESTION 255

A web design company currently runs several FTP servers that their 250 customers use to upload and download large graphic files. They wish to move this system to AWS to make it more scalable, but they wish to maintain customer privacy and keep costs to a minimum.

What AWS architecture would you recommend?

- A. Ask their customers to use an S3 client instead of an FTP client
- B. Create a single S3 bucket Create an IAM user for each customer Put the IAM Users in a Group that has an IAM policy that permits access to sub-directories within the bucket via use of the 'username' Policy variable.
- C. Create a single S3 bucket with Reduced Redundancy Storage turned on and ask their customers to use an S3 client instead of an FTP client Create a bucket for each customer with a Bucket Policy that permits access only to that one customer.
- D. Create an auto-scaling group of FTP servers with a scaling policy to automatically scale-in when minimum network traffic on the auto-scaling group is below a given threshold
- E. Load a central list of ftp users from S3 as part of the user Data startup script on each Instance.
- F. Create a single S3 bucket with Requester Pays turned on and ask their customers to use an S3 client instead of an FTP client Create a bucket for each customer with a Bucket Policy that permits access only to that one customer.

**Answer:** A

#### NEW QUESTION 260

You would like to create a mirror image of your production environment in another region for disaster recovery purposes. Which of the following AWS resources do not need to be recreated in the second region? (Choose 2 answers)

- A. Route 53 Record Sets
- B. IAM Roles
- C. Elastic IP Addresses (EIP)
- D. EC2 Key Pairs
- E. Launch configurations
- F. Security Groups

**Answer:** AC

**Explanation:**

Reference:

[http://tech.com/wp-content/themes/optimize/download/AWSDisaster\\_Recovery.pdf](http://tech.com/wp-content/themes/optimize/download/AWSDisaster_Recovery.pdf) (page 6)

**NEW QUESTION 263**

Your company runs a customer facing event registration site. This site is built with a 3-tier architecture with web and application tier servers and a MySQL database. The application requires 6 web tier servers and 6 application tier servers for normal operation, but can run on a minimum of 65% server capacity and a single MySQL database. When deploying this application in a region with three availability zones (AZs) which architecture provides high availability?

- A. A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer), and an application tier deployed across 2 AZs with 3 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB, and one RDS (Relational Database Service) instance deployed with read replicas in the other AZ.
- B. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and one RDS (Relational Database Service) Instance deployed with read replicas in the two other AZs.
- C. A web tier deployed across 2 AZs with 3 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer) and an application tier deployed across 2 AZs with 3 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and a Multi-AZ RDS (Relational Database Service) deployment.
- D. A web tier deployed across 3 AZs with 2 EC2 (Elastic Compute Cloud) instances in each AZ inside an Auto Scaling Group behind an ELB (elastic load balancer). And an application tier deployed across 3 AZs with 2 EC2 instances in each AZ inside an Auto Scaling Group behind an ELB and a Multi-AZ RDS (Relational Database services) deployment.
- E. And a Multi-AZ RDS (Relational Database services) deployment.

**Answer:** D

**Explanation:**

Amazon RDS Multi-AZ Deployments

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.

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 Mirroring 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 failover to complete.

Unlike Single-AZ deployments, I/O activity 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 Multi-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.

**NEW QUESTION 265**

Your company currently has a 2-tier web application running in an on-premises data center. You have experienced several infrastructure failures in the past two months resulting in significant financial losses. Your CIO is strongly agreeing to move the application to AWS. While working on achieving buy-in from the other company executives, he asks you to develop a disaster recovery plan to help improve Business continuity in the short term. He specifies a target Recovery Time Objective (RTO) of 4 hours and a Recovery Point Objective (RPO) of 1 hour or less. He also asks you to implement the solution within 2 weeks. Your database is 200GB in size and you have a 20Mbps Internet connection. How would you do this while minimizing costs?

- A. Create an EBS backed private AMI which includes a fresh install of your application
- B. Develop a CloudFormation template which includes your AMI and the required EC2, AutoScaling, and ELB resources to support deploying the application across Multiple- Availability-Zone
- C. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
- D. Deploy your application on EC2 instances within an Auto Scaling group across multiple availability zone
- E. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
- F. Create an EBS backed private AMI which includes a fresh install of your application

- G. Setup a script in your data center to backup the local database every 1 hour and to encrypt and copy the resulting file to an S3 bucket using multi-part upload.
- H. Install your application on a compute-optimized EC2 instance capable of supporting the application's average load.
- I. Synchronously replicate transactions from your on-premises database to a database instance in AWS across a secure Direct Connect connection.

**Answer:** A

**Explanation:**

**Overview of Creating Amazon EBS-Backed AMIs**

First, launch an instance from an AMI that's similar to the AMI that you'd like to create. You can connect to your instance and customize it. When the instance is configured correctly, ensure data integrity by stopping the instance before you create an AMI, then create the image. When you create an Amazon EBS-backed AMI, we automatically register it for you. Amazon EC2 powers down the instance before creating the AMI to ensure that everything on the instance is stopped and in a consistent state during the creation process. If you're confident that your instance is in a consistent state appropriate for AMI creation, you can tell Amazon EC2 not to power down and reboot the instance. Some file systems, such as XFS, can freeze and unfreeze actMty, making it safe to create the image without rebooting the instance. During the AMI-creation process, Amazon EC2 creates snapshots of your instance's root volume and any other EBS volumes attached to your instance. If any volumes attached to the instance are encrypted, the new AMI only launches successfully on instances that support Amazon EBS encryption. For more information, see Amazon EBS Encryption. Depending on the size of the volumes, it can take several minutes for the AMI-creation process to complete (sometimes up to 24 hours). You may find it more efficient to create snapshots of your volumes prior to creating your AMI. This way, only small, incremental snapshots need to be created when the AMI is created, and the process completes more quickly (the total time for snapshot creation remains the same). For more information, see Creating an Amazon EBS Snapshot. After the process completes, you have a new AMI and snapshot created from the root volume of the instance. When you launch an instance using the new AMI, we create a new EBS volume for its root volume using the snapshot. Both the AMI and the snapshot incur charges to your account until you delete them. For more information, see Deregistering Your AMI. If you add instance-store volumes or EBS volumes to your instance in addition to the root device volume, the block device mapping for the new AMI contains information for these volumes, and the block device mappings for instances that you launch from the new AMI automatically contain information for these volumes. The instance-store volumes specified in the block device mapping for the new instance are new and don't contain any data from the instance store volumes of the instance you used to create the AMI. The data on EBS volumes persists. For more information, see Block Device Mapping.

**NEW QUESTION 270**

An ERP application is deployed across multiple AZs in a single region. In the event of failure, the Recovery Time Objective (RTO) must be less than 3 hours, and the Recovery Point Objective (RPO) must be 15 minutes. The customer realizes that data corruption occurred roughly 1.5 hours ago. What DR strategy could be used to achieve this RTO and RPO in the event of this kind of failure?

- A. Take hourly DB backups to S3, with transaction logs stored in S3 every 5 minutes.
- B. Use synchronous database master-slave replication between two availability zones.
- C. Take hourly DB backups to EC2 Instance store volumes with transaction logs stored in S3 every 5 minutes.
- D. Take 15 minute DB backups stored in Glacier with transaction logs stored in S3 every 5 minutes.

**Answer:** A

**NEW QUESTION 275**

You have deployed a web application targeting a global audience across multiple AWS Regions under the domain name example.com. You decide to use Route53 Latency-Based Routing to serve web requests to users from the region closest to the user. To provide business continuity in the event of server downtime you configure weighted record sets associated with two web servers in separate Availability Zones per region. During a DR test you notice that when you disable all web servers in one of the regions Route53 does not automatically direct all users to the other region. What could be happening? (Choose 2 answers)

- A. Latency resource record sets cannot be used in combination with weighted resource record sets.
- B. You did not setup an HTTP health check for one or more of the weighted resource record sets associated with the disabled web servers.
- C. The value of the weight associated with the latency alias resource record set in the region with the disabled servers is higher than the weight for the other region.
- D. One of the two working web servers in the other region did not pass its HTTP health check.
- E. You did not set "Evaluate Target Health" to "Yes" on the latency alias resource record set associated with example.com in the region where you disabled the servers.

**Answer:** BE

**Explanation:**

**How Health Checks Work in Complex Amazon Route 53 Configurations**

Checking the health of resources in complex configurations works much the same way as in simple configurations. However, in complex configurations, you use a combination of alias resource record sets (including weighted alias, latency alias, and failover alias) and nonalias resource record sets to build a decision tree that gives you greater control over how Amazon Route 53 responds to requests.

For more information, see How Health Checks Work in Simple Amazon Route 53 Configurations.

For example, you might use latency alias resource record sets to select a region close to a user and use weighted resource record sets for two or more resources within each region to protect against the failure of a single endpoint or an Availability Zone. The following diagram shows this configuration.

Here's how Amazon EC2 and Amazon Route 53 are configured:

You have Amazon EC2 instances in two regions, us-east-1 and ap-southeast-2. You want Amazon Route 53 to respond to queries by using the resource record sets in the region that provides the lowest latency for your customers, so you create a latency alias resource record set for each region. (You create the latency alias resource record sets after you create resource record sets for the individual Amazon EC2 instances.)

Within each region, you have two Amazon EC2 instances. You create a weighted resource record set for each instance. The name and the type are the same for both of the weighted resource record sets in each region.

When you have multiple resources in a region, you can create weighted or failover resource record sets for your resources. You can also create even more complex configurations by creating weighted alias or failover alias resource record sets that, in turn, refer to multiple resources.

Each weighted resource record set has an associated health check. The IP address for each health check matches the IP address for the corresponding resource record set. This isn't required, but it's the most common configuration.

For both latency alias resource record sets, you set the value of Evaluate Target Health to Yes.

You use the Evaluate Target Health setting for each latency alias resource record set to make Amazon Route 53 evaluate the health of the alias targets-the weighted resource record sets-and respond accordingly.

The preceding diagram illustrates the following sequence of events:

Amazon Route 53 receives a query for example.com. Based on the latency for the user making the request, Amazon Route 53 selects the latency alias resource record set for the us-east-1 region.

Amazon Route 53 selects a weighted resource record set based on weight. Evaluate Target Health is Yes for the latency alias resource record set, so Amazon

Route 53 checks the health of the selected weighted resource record set.

The health check failed, so Amazon Route 53 chooses another weighted resource record set based on weight and checks its health. That resource record set also is unhealthy.

Amazon Route 53 backs out of that branch of the tree, looks for the latency alias resource record set with the next-best latency, and chooses the resource record set for ap-southeast-2.

Amazon Route 53 again selects a resource record set based on weight, and then checks the health of the selected resource record set. The health check passed, so Amazon Route 53 returns the applicable value in response to the query.

**What Happens When You Associate a Health Check with an Alias Resource Record Set?**

You can associate a health check with an alias resource record set instead of or in addition to setting the value of Evaluate Target Health to Yes. However, it's generally more useful if Amazon Route 53 responds to queries based on the health of the underlying resources- the HTTP servers, database servers, and other resources that your alias resource record sets refer to. For example, suppose the following configuration:

You assign a health check to a latency alias resource record set for which the alias target is a group of weighted resource record sets.

You set the value of Evaluate Target Health to Yes for the latency alias resource record set.

In this configuration, both of the following must be true before Amazon Route 53 will return the applicable value for a weighted resource record set:

The health check associated with the latency alias resource record set must pass.

At least one weighted resource record set must be considered healthy, either because it's associated with a health check that passes or because it's not associated with a health check. In the latter case, Amazon Route 53 always considers the weighted resource record set healthy.

If the health check for the latency alias resource record set fails, Amazon Route 53 stops responding to queries using any of the weighted resource record sets in the alias target, even if they're all healthy. Amazon Route 53 doesn't know the status of the weighted resource record sets because it never looks past the failed health check on the alias resource record set.

**What Happens When You Omit Health Checks?**

In a complex configuration, it's important to associate health checks with all of the non-alias resource record sets. Let's return to the preceding example, but assume that a health check is missing on one of the weighted resource record sets in the us-east-1 region:

Here's what happens when you omit a health check on a non-alias resource record set in this configuration:

Amazon Route 53 receives a query for example.com. Based on the latency for the user making the request, Amazon Route 53 selects the latency alias resource record set for the us-east-1 region.

Amazon Route 53 looks up the alias target for the latency alias resource record set, and checks the status of the corresponding health checks. The health check for one weighted resource record set failed, so that resource record set is omitted from consideration.

The other weighted resource record set in the alias target for the us-east-1 region has no health check. The corresponding resource might or might not be healthy, but without a health check, Amazon Route 53 has no way to know. Amazon Route 53 assumes that the resource is healthy and returns the applicable value in response to the query.

**What Happens When You Set Evaluate Target Health to No?**

In general, you also want to set Evaluate Target Health to Yes for all of the alias resource record sets. In the following example, all of the weighted resource record sets have associated health checks, but Evaluate Target Health is set to No for the latency alias resource record set for the us-east-1 region:

Here's what happens when you set Evaluate Target Health to No for an alias resource record set in this configuration:

Amazon Route 53 receives a query for example.com. Based on the latency for the user making the request, Amazon Route 53 selects the latency alias resource record set for the us-east-1 region.

Amazon Route 53 determines what the alias target is for the latency alias resource record set, and checks the corresponding health checks. They're both failing.

Because the value of Evaluate Target Health is No for the latency alias resource record set for the us-east-1 region, Amazon Route 53 must choose one resource record set in this branch instead of backing out of the branch and looking for a healthy resource record set in the ap-southeast-2 region.

## NEW QUESTION 278

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