



## 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

In Amazon EC2 Container Service components, what is the name of a logical grouping of container instances on which you can place tasks?

- A. A cluster
- B. A container instance
- C. A container
- D. A task definition

**Answer:** A

#### Explanation:

Amazon ECS contains the following components:

A Cluster is a logical grouping of container instances that you can place tasks on.

A Container instance is an Amazon EC2 instance that is running the Amazon ECS agent and has been registered into a cluster.

A Task definition is a description of an application that contains one or more container definitions. A Scheduler is the method used for placing tasks on container instances.

A Service is an Amazon ECS service that allows you to run and maintain a specified number of instances of a task definition simultaneously.

A Task is an instantiation of a task definition that is running on a container instance. A Container is a Linux container that was created as part of a task.

Reference: <http://docs.aws.amazon.com/AmazonECS/latest/developerguide/Welcome.html>

### NEW QUESTION 3

To specify a resource in a policy statement, in Amazon EC2, can you use its Amazon Resource Name (ARN)?

- A. Yes, you can.
- B. No, you can't because EC2 is not related to ARN.
- C. No, you can't because you can't specify a particular Amazon EC2 resource in an IAM policy.
- D. Yes, you can but only for the resources that are not affected by the action.

**Answer:** A

#### Explanation:

Some Amazon EC2 API actions allow you to include specific resources in your policy that can be created or modified by the action. To specify a resource in the statement, you need to use its Amazon Resource Name (ARN).

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-ug.pdf>

### NEW QUESTION 4

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

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

**Answer:** C

#### Explanation:

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

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

### NEW QUESTION 5

A user is storing a large number of objects on AWS S3. The user wants to implement the search functionality among the objects. How can the user achieve this?

- A. Use the indexing feature of S3.
- B. Tag the objects with the metadata to search on that.
- C. Use the query functionality of S3.
- D. Make your own DB system which stores the S3 metadata for the search functionality.

**Answer:** D

**Explanation:**

In Amazon Web Services, AWS S3 does not provide any query facility. To retrieve a specific object the user needs to know the exact bucket / object key. In this case it is recommended to have an own DB system which manages the S3 metadata and key mapping.

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

**NEW QUESTION 6**

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 7**

An edge location refers to which Amazon Web Service?

- A. An edge location is referred to the network configured within a Zone or Region
- B. An edge location is an AWS Region
- C. An edge location is the location of the data center used for Amazon CloudFront.
- D. An edge location is a Zone within an AWS Region

**Answer:** C

**Explanation:**

Amazon CloudFront is a content distribution network. A content delivery network or content distribution network (CDN) is a large distributed system of servers deployed in multiple data centers across the world. The location of the data center used for CDN is called edge location.

Amazon CloudFront can cache static content at each edge location. This means that your popular static content (e.g., your site's logo, navigational images, cascading style sheets, JavaScript code, etc.) will be available at a nearby edge location for the browsers to download with low latency and improved performance for viewers. Caching popular static content with Amazon CloudFront also helps you offload requests for such files from your origin server — CloudFront serves the cached copy when available and only makes a request to your origin server if the edge location receiving the browser's request does not have a copy of the file.

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

**NEW QUESTION 8**

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

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

**Answer:** D

**Explanation:**

An Amazon EBS volume behaves like a raw, unformatted, external block device that you can attach to a single instance. The volume persists independently from the running life of an Amazon EC2 instance. Reference:

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

**NEW QUESTION 9**

Does DynamoDB support in-place atomic updates?

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

**Answer:** A

**Explanation:**

DynamoDB supports in-place atomic updates.

Reference:

<http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.AtomicCounters>

**NEW QUESTION 10**

You need to migrate a large amount of data into the cloud that you have stored on a hard disk and you decide that the best way to accomplish this is with AWS Import/Export and you mail the hard disk to AWS. Which of the following statements is incorrect in regards to AWS Import/Export?

- A. It can export from Amazon S3
- B. It can Import to Amazon Glacier
- C. It can export from Amazon Glacier.
- D. It can Import to Amazon EBS

**Answer:** C

**Explanation:**

AWS Import/Export supports: Import to Amazon S3  
Export from Amazon S3 Import to Amazon EBS Import to Amazon Glacier  
AWS Import/Export does not currently support export from Amazon EBS or Amazon Glacier. Reference:  
<https://docs.aws.amazon.com/AWSImportExport/latest/DG/whatisdisk.html>

**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 12**

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

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

**Answer:** B

**Explanation:**

If you're using EC2-Classic, you must use security groups created specifically for EC2-Classic. When you launch an instance in EC2-Classic, you must specify a security group in the same region as the instance. You can't specify a security group that you created for a VPC when you launch an instance in EC2-Classic.  
Reference:  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html#ec2-classic-security-groups>

**NEW QUESTION 17**

You are checking the workload on some of your General Purpose (SSD) and Provisioned IOPS (SSD) volumes and it seems that the I/O latency is higher than you require. You should probably check the to make sure that your application is not trying to drive more IOPS than you have provisioned.

- A. Amount of IOPS that are available
- B. Acknowledgement from the storage subsystem
- C. Average queue length
- D. Time it takes for the I/O operation to complete

**Answer:** C

**Explanation:**

In EBS workload demand plays an important role in getting the most out of your General Purpose (SSD) and Provisioned IOPS (SSD) volumes. In order for your volumes to deliver the amount of IOPS that are available, they need to have enough I/O requests sent to them. There is a relationship between the demand on the volumes, the amount of IOPS that are available to them, and the latency of the request (the amount of time it takes for the I/O operation to complete). Latency is the true end-to-end client time of an I/O operation; in other words, when the client sends a IO, how long does it take to get an acknowledgement from the storage subsystem that the IO read or write is complete.  
If your I/O latency is higher than you require, check your average queue length to make sure that your application is not trying to drive more IOPS than you have provisioned. You can maintain high IOPS while keeping latency down by maintaining a low average queue length (which is achieved by provisioning more IOPS for your volume).  
Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-workload-demand.html>

**NEW QUESTION 18**

You are building infrastructure for a data warehousing solution and an extra request has come through that there will be a lot of business reporting queries running all the time and you are not sure if your current DB instance will be able to handle it. What would be the best solution for this?

- A. DB Parameter Groups
- B. Read Replicas
- C. Multi-AZ DB Instance deployment
- D. Database Snapshots

**Answer:** B

**Explanation:**

Read Replicas make it easy to take advantage of MySQL's built-in replication functionality to elastically scale out beyond the capacity constraints of a single DB Instance for read-heavy database workloads. There are a variety of scenarios where deploying one or more Read Replicas for a given source DB Instance may make sense. Common reasons for deploying a Read Replica include:

Scaling beyond the compute or I/O capacity of a single DB Instance for read-heavy database workloads. This excess read traffic can be directed to one or more Read Replicas.

Serving read traffic while the source DB Instance is unavailable. If your source DB Instance cannot take I/O requests (e.g. due to I/O suspension for backups or scheduled maintenance), you can direct read traffic to your Read Replica(s). For this use case, keep in mind that the data on the Read Replica may be "stale" since the source DB Instance is unavailable.

Business reporting or data warehousing scenarios; you may want business reporting queries to run against a Read Replica, rather than your primary, production DB Instance.

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

**NEW QUESTION 19**

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

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

**Answer:** C

**Explanation:**

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

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

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

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

**NEW QUESTION 20**

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

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

**Answer:** D

**Explanation:**

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

Reference:

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

**NEW QUESTION 21**

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

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

**Answer:** D

**Explanation:**

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

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

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

### NEW QUESTION 22

You are setting up a very complex financial services grid and so far it has 5 Elastic IP (EIP) addresses.

You go to assign another EIP address, but all accounts are limited to 5 Elastic IP addresses per region by default, so you aren't able to. What is the reason for this?

- A. For security reasons.
- B. Hardware restrictions.
- C. Public (IPv4) internet addresses are a scarce resource.
- D. There are only 5 network interfaces per instance

**Answer: C**

#### Explanation:

Public (IPv4) internet addresses are a scarce resource. There is only a limited amount of public IP space available, and Amazon EC2 is committed to helping use that space efficiently.

By default, all accounts are limited to 5 Elastic IP addresses per region. If you need more than 5 Elastic IP addresses, AWS asks that you apply for your limit to be raised. They will ask you to think through your use case and help them understand your need for additional addresses.

Reference: [http://aws.amazon.com/ec2/faqs/#How\\_many\\_instances\\_can\\_I\\_run\\_in\\_Amazon\\_EC2](http://aws.amazon.com/ec2/faqs/#How_many_instances_can_I_run_in_Amazon_EC2)

### NEW QUESTION 27

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 31

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

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

**Answer: A**

#### Explanation:

In Amazon Route 53, you cannot create a hosted zone for a top-level domain (TLD).

Reference: [http://docs.aws.amazon.com/Route53/latest/APIReference/API\\_CreateHostedZone.html](http://docs.aws.amazon.com/Route53/latest/APIReference/API_CreateHostedZone.html)

### NEW QUESTION 33

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 37

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. IV|3 instances are configured with more swap memory than M instances.
- C. IV|3 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.

IV|3 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 40**

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 42**

After setting up several database instances in Amazon Relational Database Service (Amazon RDS) you decide that you need to track the performance and health of your databases. How can you do this?

- A. Subscribe to Amazon RDS events to be notified when changes occur with a DB instance, DB snapshot, DB parameter group, or DB security group.
- B. Use the free Amazon CloudWatch service to monitor the performance and health of a DB instance.
- C. All of the items listed will track the performance and health of a database.
- D. View, download, or watch database log files using the Amazon RDS console or Amazon RDS API
- E. You can also query some database log files that are loaded into database tables.

**Answer: C**

**Explanation:**

Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resizable capacity for an industry-standard relational database and manages common database administration tasks.

There are several ways you can track the performance and health of a database or a DB instance. You can:

Use the free Amazon CloudWatch service to monitor the performance and health of a DB instance. Subscribe to Amazon RDS events to be notified when changes occur with a DB instance, DB snapshot, DB parameter group, or DB security group.

View, download, or watch database log files using the Amazon RDS console or Amazon RDS APIs. You can also query some database log files that are loaded into database tables.

Use the AWS CloudTrail service to record AWS calls made by your AWS account. The calls are recorded in log files and stored in an Amazon S3 bucket.

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

**NEW QUESTION 43**

A user has created photo editing software and hosted it on EC2. The software accepts requests from the user about the photo format and resolution and sends a message to S3 to enhance the picture accordingly. Which of the below mentioned AWS services will help make a scalable software with the AWS infrastructure in this scenario?

- A. AWS Simple Notification Service
- B. AWS Simple Queue Service
- C. AWS Elastic Transcoder
- D. AWS Glacier

**Answer: B**

**Explanation:**

Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, and fully managed message queuing service. SQS provides a simple and cost-effective way to decouple the components of an application. The user can configure SQS, which will decouple the call between the EC2 application and S3. Thus, the application does not keep waiting for S3 to provide the data.

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

#### NEW QUESTION 45

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

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

**Answer:** D

#### Explanation:

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

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

#### NEW QUESTION 49

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.html>

#### NEW QUESTION 52

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 55

You have a number of image files to encode. In an Amazon SQS worker queue, you create an Amazon SQS message for each file specifying the command (jpeg-encode) and the location of the file in Amazon S3. Which of the following statements best describes the functionality of Amazon SQS?

- A. Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receive speeds.
- B. Amazon SQS is for single-threaded sending or receive speeds.
- C. Amazon SQS is a non-distributed queuing system.
- D. Amazon SQS is a distributed queuing system that is optimized for vertical scalability and for single-threaded sending or receive speeds.

**Answer:** A

#### Explanation:

Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receive speeds. A single client can send or receive Amazon SQS messages at a rate of about 5 to 50 messages per second. Higher receive performance can be achieved by requesting multiple messages (up to 10) in a single call. It may take several seconds before a message that has been to a queue is available to be received.

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

#### NEW QUESTION 59

A scope has been handed to you to set up a super fast gaming server and you decide that you will use Amazon DynamoDB as your database. For efficient access to data in a table, Amazon DynamoDB creates and maintains indexes for the primary key attributes. A secondary index is a data structure that contains a subset of attributes from a table, along with an alternate key to support Query operations. How many types of secondary indexes does DynamoDB support?

- A. 2
- B. 16
- C. 4

D. As many as you need

**Answer:** A

**Explanation:**

DynamoDB supports two types of secondary indexes:

Local secondary index — an index that has the same hash key as the table, but a different range key. A local secondary index is "local" in the sense that every partition of a local secondary index is scoped to a table partition that has the same hash key.

Global secondary index — an index with a hash and range key that can be different from those on the table. A global secondary index is considered "global" because queries on the index can span all of the data in a table, across all partitions.

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

**NEW QUESTION 63**

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 66**

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 67**

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

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

**Answer:** B

**Explanation:**

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

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

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

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

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

**NEW QUESTION 69**

A user comes to you and wants access to Amazon CloudWatch but only wants to monitor a specific LoadBalancer. Is it possible to give him access to a specific set of instances or a specific LoadBalancer?

- A. No because you can't use IAM to control access to CloudWatch data for specific resources.
- B. Yes
- C. You can use IAM to control access to CloudWatch data for specific resources.
- D. No because you need to be Sysadmin to access CloudWatch data.
- E. Yes
- F. Any user can see all CloudWatch data and needs no access right

**Answer:** A

**Explanation:**

Amazon CloudWatch integrates with AWS Identity and Access Management (IAM) so that you can specify which CloudWatch actions a user in your AWS Account can perform. For example, you could create an IAM policy that gives only certain users in your organization permission to use GetMetricStatistics. They could then use the action to retrieve data about your cloud resources. You can't use IAM to control access to CloudWatch data for specific resources. For example, you can't give a user access to CloudWatch data for only a specific set of instances or a specific LoadBalancer. Permissions granted using IAM cover all the cloud resources you use with CloudWatch. In addition, you can't use IAM roles with the Amazon CloudWatch command line tools. Using Amazon CloudWatch with IAM doesn't change how you use CloudWatch. There are no changes to CloudWatch actions, and no new CloudWatch actions related to users and access control. Reference: <http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/UsingIAM.html>

**NEW QUESTION 72**

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 76**

You need to create an Amazon Machine Image (AMI) for a customer for an application which does not appear to be part of the standard AWS AMI template that you can see in the AWS console. What are the alternative possibilities for creating an AMI on AWS?

- A. You can purchase an AMIs from a third party but cannot create your own AMI.
- B. You can purchase an AMIs from a third party or can create your own AMI.
- C. Only AWS can create AMIs and you need to wait till it becomes available.
- D. Only AWS can create AMIs and you need to request them to create one for you

**Answer: B**

**Explanation:**

You can purchase an AMIs from a third party, including AMIs that come with service contracts from organizations such as Red Hat. You can also create an AMI and sell it to other Amazon EC2 users. After you create an AMI, you can keep it private so that only you can use it, or you can share it with a specified list of AWS accounts. You can also make your custom AMI public so that the community can use it. Building a safe, secure, usable AMI for public consumption is a fairly straightforward process, if you follow a few simple guidelines. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

**NEW QUESTION 80**

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 months

**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 81**

Doug has created a VPC with CIDR 10.201.0.0/16 in his AWS account. In this VPC he has created a public subnet with CIDR block 10.201.31.0/24. While launching a new EC2 from the console, he is not able to assign the private IP address 10.201.31.6 to this instance. Which is the most likely reason for this issue?

- A. Private IP address 10.201.31.6 is blocked via ACLs in Amazon infrastructure as a part of platform security.
- B. Private address IP 10.201.31.6 is currently assigned to another interface.
- C. Private IP address 10.201.31.6 is not part of the associated subnet's IP address range.
- D. Private IP address 10.201.31.6 is reserved by Amazon for IP networking purpose

**Answer: B**

**Explanation:**

In Amazon VPC, you can assign any Private IP address to your instance as long as it is: Part of the associated subnet's IP address range Not reserved by Amazon for IP networking purposes Not currently assigned to another interface Reference: <http://aws.amazon.com/vpc/faqs/>

#### NEW QUESTION 86

You are planning and configuring some EBS volumes for an application. In order to get the most performance out of your EBS volumes, you should attach them to an instance with enough to support your volumes.

- A. Redundancy
- B. Storage
- C. Bandwidth
- D. Memory

**Answer: C**

#### Explanation:

When you plan and configure EBS volumes for your application, it is important to consider the configuration of the instances that you will attach the volumes to. In order to get the most performance out of your EBS volumes, you should attach them to an instance with enough bandwidth to support your volumes, such as an EBS-optimized instance or an instance with 10 Gigabit network connectMty. This is especially important when you use General Purpose (SSD) or Provisioned IOPS (SSD) volumes, or when you stripe multiple volumes together in a RAID configuration.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-ec2-config.html>

#### NEW QUESTION 88

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 90

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 93

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

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

**Answer: C**

#### Explanation:

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

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

#### NEW QUESTION 97

You have three Amazon EC2 instances with Elastic IP addresses in the US East (Virginia) region, and you want to distribute requests across all three IPs evenly for users for whom US East (Virginia) is the appropriate region.

How many EC2 instances would be sufficient to distribute requests in other regions?

- A. 3
- B. 9
- C. 2
- D. 1

**Answer: D**

#### Explanation:

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.

For example, suppose you have three Amazon EC2 instances with Elastic IP addresses in the US East (Virginia) region and you want to distribute requests across all three IPs evenly for users for whom US East (Virginia) is the appropriate region. Just one Amazon EC2 instance is sufficient in the other regions, although you can apply the same technique to many regions at once.

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

#### NEW QUESTION 101

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 105

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

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

**Answer: B**

#### Explanation:

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

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

#### NEW QUESTION 108

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

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

**Answer: C**

#### Explanation:

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

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

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

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

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

#### NEW QUESTION 113

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 116

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

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

**Answer: B**

#### Explanation:

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

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

Allow no inbound traffic Allow all outbound traffic

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

#### NEW QUESTION 120

You are using Amazon SES as an email solution but are unsure of what its limitations are. Which statement below is correct in regards to that?

- A. New Amazon SES users who have received production access can send up to 1,000 emails per 24-hour period, at a maximum rate of 10 emails per second.
- B. Every Amazon SES sender has the same set of sending limits.
- C. Sending limits are based on messages rather than on recipients.
- D. Every Amazon SES sender has a unique set of sending limits.

**Answer: D**

#### Explanation:

Amazon Simple Email Service (Amazon SES) is a highly scalable and cost-effective email-sending service for businesses and developers. Amazon SES eliminates the complexity and expense of building an in-house email solution or licensing, installing, and operating a third-party email service for this type of email communication.

Every Amazon SES sender has a unique set of sending limits, which are calculated by Amazon SES on an ongoing basis:

Sending quota — the maximum number of emails you can send in a 24-hour period. Maximum send rate — the maximum number of emails you can send per second.

New Amazon SES users who have received production access can send up to 10,000 emails per 24-hour period, at a maximum rate of 5 emails per second.

Amazon SES automatically adjusts these limits upward, as long as you send high-quality email. If your existing quota is not adequate for your needs and the system has not automatically increased your quota, you can submit an SES Sending Quota Increase case at any time.

Sending limits are based on recipients rather than on messages. You can check your sending limits at any time by using the Amazon SES console.

Note that if your email is detected to be of poor or QUESTION able quality (e.g., high complaint rates, high bounce rates, spam, or abusive content), Amazon SES might temporarily or permanently reduce your permitted send volume, or take other action as AWS deems appropriate.

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

#### NEW QUESTION 123

Having just set up your first Amazon Virtual Private Cloud (Amazon VPC) network, which defined a default network interface, you decide that you need to create and attach an additional network interface, known as an elastic network interface (ENI) to one of your instances. Which of the following statements is true regarding attaching network interfaces to your instances in your VPC?

- A. You can attach 5 ENIs per instance type.
- B. You can attach as many ENIs as you want.
- C. The number of ENIs you can attach varies by instance type.
- D. You can attach 100 ENIs total regardless of instance type.

**Answer: C**

#### Explanation:

Each instance in your VPC has a default network interface that is assigned a private IP address from the IP address range of your VPC. You can create and attach an additional network interface, known as an elastic network interface (ENI), to any instance in your VPC. The number of ENIs you can attach varies by instance type.

#### NEW QUESTION 127

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 132

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 136

A government client needs you to set up secure cryptographic key storage for some of their extremely confidential data. You decide that the AWS CloudHSM is the best service for this. However, there seem to be a few pre-requisites before this can happen, one of those being a security group that has certain ports open. Which of the following is correct in regards to those security groups?

- A. A security group that has port 22 (for SSH) or port 3389 (for RDP) open to your network.
- B. A security group that has no ports open to your network.
- C. A security group that has only port 3389 (for RDP) open to your network.
- D. A security group that has only port 22 (for SSH) open to your network.

**Answer: A**

#### Explanation:

AWS CloudHSM provides secure cryptographic key storage to customers by making hardware security modules (HSMs) available in the AWS cloud.

AWS CloudHSM requires the following environment before an HSM appliance can be provisioned. A virtual private cloud (VPC) in the region where you want the AWS CloudHSM service.

One private subnet (a subnet with no Internet gateway) in the VPC. The HSM appliance is provisioned into this subnet.

One public subnet (a subnet with an Internet gateway attached). The control instances are attached to this subnet.

An AWS Identity and Access Management (IAM) role that delegates access to your AWS resources to AWS CloudHSM.

An EC2 instance, in the same VPC as the HSM appliance, that has the SafeNet client software installed. This instance is referred to as the control instance and is used to connect to and manage the HSM appliance.

A security group that has port 22 (for SSH) or port 3389 (for RDP) open to your network. This security group is attached to your control instances so you can access them remotely.

#### NEW QUESTION 139

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 deleted.

**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 142

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 147

An EC2 instance is connected to an ENI (Elastic Network Interface) in one subnet. What happens when you attach an ENI of a different subnet to this EC2 instance?

- A. The EC2 instance follows the rules of the older subnet
- B. The EC2 instance follows the rules of both the subnets
- C. Not possible, cannot be connected to 2 ENIs
- D. The EC2 instance follows the rules of the newer subnet

**Answer: B**

#### Explanation:

AWS allows you create an elastic network interface (ENI), attach an ENI to an EC2 instance, detach an ENI from an EC2 instance and attach this ENI to another EC2 instance. The attributes of a network traffic follow the ENI which is attached to an EC2 instance or detached from an EC2 instance. When you move an ENI from one EC2 instance to another, network traffic is redirected to the new EC2 instance. You can create and attach additional ENIs to an EC2 instance.

Attaching multiple network interfaces (ENIs) to an EC2 instance is useful to: Create a management network.

Use network and security appliances in your VPC.

Create dual-homed instances with workloads/roles on distinct subnets Create a low-budget, high-availability solution.

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

#### NEW QUESTION 152

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 153

You are architecting a highly-scalable and reliable web application which will have a huge amount of content. You have decided to use CloudFront as you know it will speed up distribution of your static and dynamic web content and know that Amazon CloudFront integrates with Amazon CloudWatch metrics so that you can monitor your web application. Because you live in Sydney you have chosen the the Asia Pacific (Sydney) region in the AWS console. However you have set up this up but no CloudFront metrics seem to be appearing in the CloudWatch console. What is the most likely reason from the possible choices below for this?

- A. Metrics for CloudWatch are available only when you choose the same region as the application you are monitoring.
- B. You need to pay for CloudWatch for it to become active.
- C. Metrics for CloudWatch are available only when you choose the US East (Virginia)
- D. Metrics for CloudWatch are not available for the Asia Pacific region as yet

**Answer: C**

#### Explanation:

CloudFront is a global service, and metrics are available only when you choose the US East (N. Virginia) region in the AWS console. If you choose another region, no CloudFront metrics will appear in the CloudWatch console.

Reference:

<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/monitoring-using-cloudwatch.html>

#### NEW QUESTION 156

After a major security breach your manager has requested a report of all users and their credentials in AWS. You discover that in IAM you can generate and download a credential report that lists all users in your account and the status of their various credentials, including passwords, access keys, MFA devices, and signing certificates. Which following statement is incorrect in regards to the use of credential reports?

- A. Credential reports are downloaded XML files.
- B. You can get a credential report using the AWS Management Console, the AWS CLI, or the IAM API.
- C. You can use the report to audit the effects of credential lifecycle requirements, such as password rotation.
- D. You can generate a credential report as often as once every four hour

**Answer: A**

#### Explanation:

To access your AWS account resources, users must have credentials.

You can generate and download a credential report that lists all users in your account and the status of their various credentials, including passwords, access

keys, MFA devices, and signing certificates. You can get a credential report using the AWS Management Console, the AWS CLI, or the IAM API. You can use credential reports to assist in your auditing and compliance efforts. You can use the report to audit the effects of credential lifecycle requirements, such as password rotation. You can provide the report to an external auditor, or grant permissions to an auditor so that he or she can download the report directly. You can generate a credential report as often as once every four hours. When you request a report, IAM first checks whether a report for the account has been generated within the past four hours. If so, the most recent report is downloaded. If the most recent report for the account is more than four hours old, or if there are no previous reports for the account, IAM generates and downloads a new report. Credential reports are downloaded as comma-separated values (CSV) files. You can open CSV files with common spreadsheet software to perform analysis, or you can build an application that consumes the CSV files programmatically and performs custom analysis. Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/credential-reports.html>

#### NEW QUESTION 160

Which of the following statements is true of Amazon EC2 security groups?

- A. You can change the outbound rules for EC2-Classic
- B. Also, you can add and remove rules to a group at any time.
- C. You can modify an existing rule in a group
- D. However, you can't add and remove rules to a group.
- E. None of the statements are correct.
- F. You can't change the outbound rules for EC2-Classic
- G. However, you can add and remove rules to a group at any time

**Answer:** D

#### Explanation:

When dealing with security groups, bear in mind that you can freely add and remove rules from a group, but you can't change the outbound rules for EC2-Classic. If you're using the Amazon EC2 console, you can modify existing rules, and you can copy the rules from an existing security group to a new security group. Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-network-security.html>

#### NEW QUESTION 161

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 164

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

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

**Answer:** D

#### Explanation:

In Amazon EC2-Classic every instance is given two IP Addresses: a private IP address and a public IP address. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-instance-addressing.html#differences>

#### NEW QUESTION 166

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

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

**Answer:** D

#### Explanation:

AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than internet-based connections. You could expect the following benefits if you use AWS Direct Connect. Reduced bandwidth costs Consistent network performance Compatibility with all AWS services Private connectivity to your Amazon VPC Elasticity Simplicity Reference: <http://aws.amazon.com/directconnect/>

#### NEW QUESTION 167

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 172

Can you encrypt EBS volumes?

- A. Yes, you can enable encryption when you create a new EBS volume using the AWS Management Console, API, or CLI.
- B. No, you should use a third-party software to perform raw block-level encryption of an EBS volume.
- C. Yes, but you must use a third-party API for encrypting data before it's loaded on EBS.
- D. Yes, you can encrypt with the special "ebs\_encrypt" command through Amazon API

**Answer:** A

#### Explanation:

With Amazon EBS encryption, you can now create an encrypted EBS volume and attach it to a supported instance type. Data on the volume, disk I/O, and snapshots created from the volume are then all encrypted. The encryption occurs on the servers that host the EC2 instances, providing encryption of data as it moves between EC2 instances and EBS storage. EBS encryption is based on the industry standard AES-256 cryptographic algorithm. To get started, simply enable encryption when you create a new EBS volume using the AWS Management Console, API, or CLI. Amazon EBS encryption is available for all the latest EC2 instances in all commercially available AWS regions. Reference: <https://aws.amazon.com/about-aws/whats-new/2014/05/21/Amazon-EBS-encryption-now-available/>

#### NEW QUESTION 174

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 179

Just when you thought you knew every possible storage option on AWS you hear someone mention Reduced Redundancy Storage (RRS) within Amazon S3. What is the ideal scenario to use Reduced Redundancy Storage (RRS)?

- A. Huge volumes of data
- B. Sensitive data
- C. Non-critical or reproducible data
- D. Critical data

**Answer:** C

#### Explanation:

Reduced Redundancy Storage (RRS) is a new storage option within Amazon S3 that enables customers to reduce their costs by storing non-critical, reproducible data at lower levels of redundancy than Amazon S3's standard storage. RRS provides a lower cost, less durable, highly available storage option that is designed to sustain the loss of data in a single facility. RRS is ideal for non-critical or reproducible data. For example, RRS is a cost-effective solution for sharing media content that is durably stored elsewhere. RRS also makes sense if you are storing thumbnails and other resized images that can be easily reproduced from an original image. Reference: <https://aws.amazon.com/s3/faqs/>

#### NEW QUESTION 183

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 187**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 192**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 193**

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

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

**Answer:** C

**Explanation:**

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

Benefits

Enhanced Durability

Multi-AZ deployments for the MySQL, Oracle, and PostgreSQL engines utilize synchronous physical replication to keep data on the standby up-to-date with the primary. Multi-AZ deployments for the SQL Server engine use synchronous logical replication to achieve the same result, employing SQL Server-native 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 fail over 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.

#### No Administrative Intervention

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

#### Failover conditions

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

Loss of availability in primary Availability Zone

Loss of network connectivity to primary

Compute unit failure on primary

Storage failure on primary

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

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

### NEW QUESTION 195

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

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

**Answer:** A

### NEW QUESTION 197

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 202

Your company is in the process of developing a next generation pet collar that collects biometric information to assist families with promoting healthy lifestyles for their pets. Each collar will push 30kb of biometric data in JSON format every 2 seconds to a collection platform that will process and analyze the data providing health trending information back to the pet owners and veterinarians via a web portal. Management has tasked you to architect the collection platform ensuring the following requirements are met.

Provide the ability for real-time analytics of the inbound biometric data. Ensure processing of the biometric data is highly durable, elastic and parallel. The results of the analytic processing should be persisted for data mining.

Which architecture outlined below will meet the initial requirements for the collection platform?

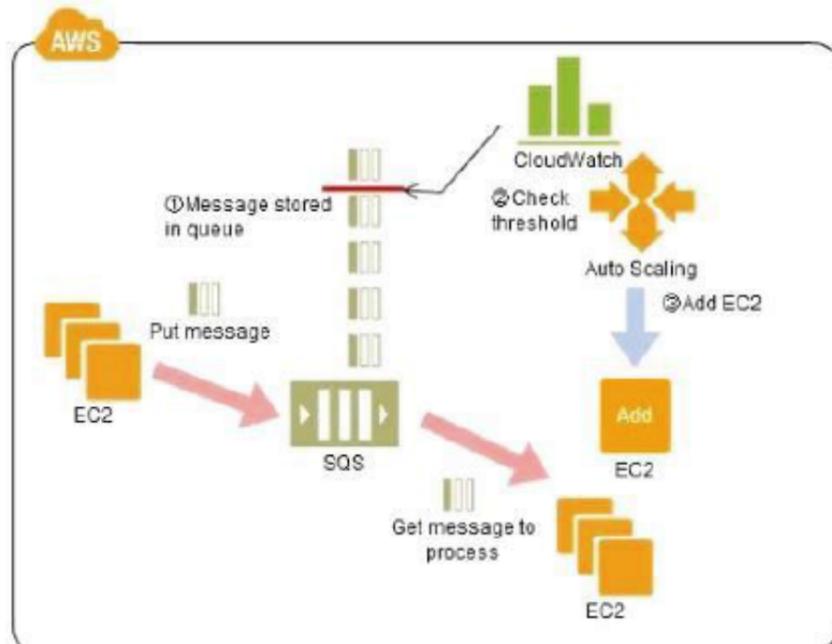
- A. Utilize S3 to collect the inbound sensor data, analyze the data from S3 with a daily scheduled Data Pipeline and save the results to a Redshift Cluster.

- B. Utilize Amazon Kinesis to collect the inbound sensor data, analyze the data with Kinesis clients and save the results to a Red shift cluster using EMR.
- C. Utilize SQS to collect the inbound sensor data analyze the data from SQS with Amazon Kinesis and save the results to a Microsoft SQL Server RDS instance.
- D. Utilize EMR to collect the inbound sensor data, analyze the data from EUR with Amazon Kinesis and save me results to Dynamo DB.

**Answer: B**

**NEW QUESTION 204**

Refer to the architecture diagram above of a batch processing solution using Simple Queue Service (SQS) to set up a message queue between EC2 instances which are used as batch processors Cloud Watch monitors the number of Job requests (queued messages) and an Auto Scaling group adds or deletes batch sewers automatically based on parameters set in Cloud Watch alarms. You can use this architecture to implement which of the following features in a cost effective and efficient manner?



- A. Reduce the overall lime for executing jobs through parallel processing by allowing a busy EC2 instance that receives a message to pass it to the next instance in a daisy-chain setup.
- B. Implement fault tolerance against EC2 instance failure since messages would remain in SQS and worn can continue with recovery of EC2 instances implement fault tolerance against SQS failure by backing up messages to 53.
- C. Implement message passing between EC2 instances within a batch by exchanging messages through SQS.
- D. Coordinate number of EC2 instances with number of job requests automatically thus Improving cost effectiveness.
- E. Handle high priority jobs before lower priority jobs by assigning a priority metadata fie Id to SQS messages.

**Answer: D**

**Explanation:**

Reference:

There are cases where a large number of batch jobs may need processing, and where the jobs may need to be re-prioritized. For example, one such case is one where there are differences between different levels of services for unpaid users versus subscriber users (such as the time until publication) in services enabling, for example, presentation files to be uploaded for publication from a web browser. When the user uploads a presentation file, the conversion processes, for example, for publication are performed as batch processes on the system side, and the file is published after the conversion. Is it then necessary to be able to assign the level of priority to the batch processes for each type of subscriber.

**Explanation of the Cloud Solution/Pattern**

A queue is used in controlling batch jobs. The queue need only be provided with priority numbers. Job requests are controlled by the queue, and the job requests in the queue are processed by a batch server. In Cloud computing, a highly reliable queue is provided as a service, which you can use to structure a highly reliable batch system with ease. You may prepare multiple queues depending on priority levels, with job requests put into the queues depending on their priority levels, to apply prioritization to batch processes. The performance (number) of batch servers corresponding to a queue must be in accordance with the priority level thereof.

**Implementation**

In AWS, the queue service is the Simple Queue Service (SQS). Multiple SQS queues may be prepared to prepare queues for indMdual priority levels (with a priority queue and a secondary queue). Moreover, you may also use the message Delayed Send function to delay process execution. Use SQS to prepare multiple queues for the indMdual priority levels. Place those processes to be executed immediately (job requests) in the high priority queue. Prepare numbers of batch servers, for processing the job requests of the queues, depending on the priority levels.

Queues have a message "Delayed Send" function. You can use this to delay the time for starting a process.

**Configuration**

**Benefits**  
 You can increase or decrease the number of servers for processing jobs to change automatically the processing speeds of the priority queues and secondary queues.

You can handle performance and service requirements through merely increasing or decreasing the number of EC2 instances used in job processing. Even if an EC2 were to fail, the messages (jobs) would remain in the queue service, enabling processing to be continued immediately upon recovery of the EC2 instance, producing a system that is robust to failure.

**Cautions**  
 Depending on the balance between the number of EC2 instances for performing the processes and the number of messages that are queued, there may be cases where processing in the secondary queue may be completed first, so you need to monitor the processing speeds in the primary queue and the secondary queue.

**NEW QUESTION 208**

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 resu lting 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 applicatio
- 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 applicatio
- 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 loa
- 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 212**

A customer has established an AWS Direct Connect connection to AWS. The link is up and routes are being advertised from the customer's end, however the customer is unable to connect from EC2 instances inside its VPC to servers residing in its datacenter.

Which of the following options provide a viable solution to remedy this situation? (Choose 2 answers)

- A. Add a route to the route table with an IPsec VPN connection as the target.
- B. Enable route propagation to the virtual pinnate gateway (VGW).
- C. Enable route propagation to the customer gateway (CGW).
- D. Modify the route table of all Instances using the 'route' command.
- E. Modify the Instances VPC subnet route table by adding a route back to the customer's on-premises environment.

**Answer: AC**

**NEW QUESTION 214**

You are implementing AWS Direct Connect. You intend to use AWS public service end points such as Amazon S3, across the AWS Direct Connect link. You want other Internet traffic to use your existing link to an Internet Service Provider.

What is the correct way to configure AWS Direct connect for access to services such as Amazon S3?

- A. Configure a public Interface on your AWS Direct Connect link Configure a static route via your AWS Direct Connect link that points to Amazon S3 Advertise a default route to AWS using BGP.
- B. Create a private interface on your AWS Direct Connect lin
- C. Configure a static route via your AWS Direct connect link that points to Amazon S3 Configure specific routes to your network in your VPC,
- D. Create a public interface on your AWS Direct Connect link Redistribute BGP routes into your existing routing infrastructure advertise specific routes for your network to AWS.
- E. Create a private interface on your AWS Direct connect lin
- F. Redistribute BGP routes into your existing routing infrastructure and advertise a default route to AWS.

**Answer: C**

**NEW QUESTION 217**

You have deployed a three-tier web application in a VPC with a CIDR block of 10.0.0.0/28. You initially deploy two web servers, two application servers, two database servers and one NAT instance for a total of seven EC2 instances. The web, application and database servers are deployed across two availability zones (AZs). You also deploy an ELB in front of the two web servers, and use Route53 for DNS. Web traffic gradually increases in the first few days following the deployment, so you attempt to double the number of instances in each tier of the application to handle the new load unfortunately some of these new instances fail to launch.

Which of the following could be the root cause? (Choose 2 answers)

- A. AWS reserves the first and the last private IP address in each subnet's CIDR block so you do not have enough addresses left to launch all of the new EC2 instances
- B. The Internet Gateway (IGW) of your VPC has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
- C. The ELB has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
- D. AWS reserves one IP address in each subnet's CIDR block for Route53 so you do not have enough addresses left to launch all of the new EC2 instances

E. AW5 reserves the first four and the last IP address in each subnet's CIDR block so you do not have enough addresses left to launch all of the new EC2 instances

**Answer:** CE

#### NEW QUESTION 221

You are tasked with moving a legacy application from a virtual machine running inside your datacenter to an Amazon VPC. Unfortunately, this app requires access to a number of on-premises services and no one who configured the app still works for your company. Even worse, there's no documentation for it. What will allow the application running inside the VPC to reach back and access its internal dependencies without being reconfigured? (Choose 3 answers)

- A. An AWS Direct Connect link between the VPC and the network housing the internal services.
- B. An Internet Gateway to allow a VPN connection.
- C. An Elastic IP address on the VPC instance
- D. An IP address space that does not conflict with the one on-premises
- E. Entries in Amazon Route 53 that allow the Instance to resolve its dependencies' IP addresses
- F. A VM Import of the current virtual machine

**Answer:** ADF

#### Explanation:

AWS Direct Connect

AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS, your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than Internet-based connections.

AWS Direct Connect lets you establish a dedicated network connection between your network and one of the AWS Direct Connect locations. Using industry standard 802.1Q VLANs, this dedicated connection can be partitioned into multiple virtual interfaces. This allows you to use the same connection to access public resources such as objects stored in Amazon S3 using public IP address space, and private resources

such as Amazon EC2 instances running within an Amazon Virtual Private Cloud (VPC) using private IP space, while maintaining network separation between the public and private environments. Virtual interfaces can be reconfigured at any time to meet your changing needs.

What is AWS Direct Connect?

AWS Direct Connect links your internal network to an AWS Direct Connect location over a standard 1-gigabit or 10-gigabit Ethernet fiber-optic cable. One end of the cable is connected to your router, the other to an AWS Direct Connect router. With this connection in place, you can create virtual interfaces directly to the AWS cloud (for example, to Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Simple Storage Service (Amazon S3)) and to Amazon Virtual Private Cloud (Amazon VPC), bypassing Internet service providers in your network path. An AWS Direct Connect location provides access to Amazon Web Services in the region it is associated with, as well as access to other US regions. For example, you can provision a single connection to any AWS Direct Connect location in the US and use it to access public AWS services in all US Regions and AWS GovCloud (US).

The following diagram shows how AWS Direct Connect interfaces with your network.

Requirements

To use AWS Direct Connect, your network must meet one of the following conditions:

Your network is colocated with an existing AWS Direct Connect location. For more information on available AWS Direct Connect locations, go to

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

You are working with an AWS Direct Connect partner who is a member of the AWS Partner Network (APN). For a list of AWS Direct Connect partners who can help you connect, go to <http://aws.amazon.com/directconnect>

You are working with an independent service provider to connect to AWS Direct Connect. In addition, your network must meet the following conditions:

Connections to AWS Direct Connect require single-mode fiber, 1000BASE-LX (1310nm) for 1-gigabit Ethernet, or 10GBASE-LR (1310nm) for 10-gigabit Ethernet.

Auto Negotiation for the port must be disabled. You must support 802.1Q VLANs across these connections.

Your network must support Border Gateway Protocol (BGP) and BGP MD5 authentication. Optionally,

you may configure Bidirectional Forwarding Detection (BFD).

To connect to Amazon Virtual Private Cloud (Amazon VPC), you must first do the following: Provide a private Autonomous System Number (ASN). Amazon allocates a private IP address in the

169.x.x.x range to you.

Create a virtual private gateway and attach it to your VPC. For more information about creating a virtual private gateway, see [Adding a Hardware Virtual Private Gateway to Your VPC in the Amazon VPC User Guide](#).

To connect to public AWS products such as Amazon EC2 and Amazon S3, you need to provide the following:

A public ASN that you own (preferred) or a private ASN.

Public IP addresses (/31) (that is, one for each end of the BGP session) for each BGP session. If you do not have public IP addresses to assign to this connection, log on to AWS and then open a ticket with AWS Support.

The public routes that you will advertise over BGP.

#### NEW QUESTION 223

A corporate web application is deployed within an Amazon Virtual Private Cloud (VPC) and is connected to the corporate data center via an IPsec VPN. The application must authenticate against the on-premises LDAP server. After authentication, each logged-in user can only access an Amazon Simple Storage Service (S3) keyspace specific to that user.

Which two approaches can satisfy these objectives? (Choose 2 answers)

- A. Develop an identity broker that authenticates against IAM Security Token service to assume a Lambda role in order to get temporary AWS security credentials. The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.
- B. The application authenticates against LDAP and retrieves the name of an IAM role associated with the user.
- C. The application then calls the IAM Security Token Service to assume that IAM role. The application can use the temporary credentials to access the appropriate S3 bucket.
- D. Develop an identity broker that authenticates against LDAP and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.
- E. The application authenticates against LDAP. The application then calls the AWS Identity and Access Management (IAM) Security service to log in to IAM using the LDAP credentials. The application can use the IAM temporary credentials to access the appropriate S3 bucket.
- F. The application authenticates against IAM Security Token Service using the LDAP credentials. The application uses those temporary AWS security credentials to access the appropriate S3 bucket.

**Answer:** BC

#### NEW QUESTION 227

Your company has an on-premises multi-tier PHP web application, which recently experienced downtime due to a large burst in web traffic due to a company announcement. Over the coming days, you are expecting similar announcements to drive similar unpredictable bursts, and are looking to find ways to quickly improve your infrastructure's ability to handle unexpected increases in traffic.

The application currently consists of 2 tiers: a web tier which consists of a load balancer and several Linux Apache web servers as well as a database tier which hosts a Linux server hosting a MySQL database. Which scenario below will provide full site functionality, while helping to improve the ability of your application in the short timeframe required?

- A. Failover environment: Create an S3 bucket and configure it for website hosting.
- B. Migrate your DNS to Route53 using zone file import, and leverage Route53 DNS failover to failover to the S3 hosted website.
- C. Hybrid environment: Create an AMI, which can be used to launch web servers in EC2. Create an Auto Scaling group, which uses the AMI to scale the web tier based on incoming traffic.
- D. Leverage Elastic Load Balancing to balance traffic between on-premises web servers and those hosted in AWS.
- E. Offload traffic from on-premises environment: Setup a CloudFront distribution, and configure CloudFront to cache objects from a custom origin.
- F. Choose to customize your object cache behavior, and select a TTL that objects should exist in cache.
- G. Migrate to AWS: Use VM Import/Export to quickly convert an on-premises web server to an AMI.
- H. Create an Auto Scaling group, which uses the imported AMI to scale the web tier based on incoming traffic.
- I. Create an RDS read replica and setup replication between the RDS instance and on-premises MySQL server to migrate the database.

**Answer: C**

### NEW QUESTION 230

Your company produces customer-commissioned one-of-a-kind skiing helmets combining high fashion with custom technical enhancements. Customers can show off their individuality on the ski slopes and have access to head-up-displays, GPS rear-view cams, and any other technical innovation they wish to embed in the helmet.

The current manufacturing process is data-rich and complex, including assessments to ensure that the custom electronics and materials used to assemble the helmets are to the highest standards. Assessments are a mixture of human and automated assessments; you need to add a new set of assessment to model the failure modes of the custom electronics using GPUs with CUDA, across a cluster of servers with low-latency networking.

What architecture would allow you to automate the existing process using a hybrid approach and ensure that the architecture can support the evolution of processes over time?

- A. Use AWS Data Pipeline to manage movement of data & meta-data and assessments. Use an auto-scaling group of G2 instances in a placement group.
- B. Use Amazon Simple Workflow (SWF) to manage assessments, movement of data & meta-data. Use an auto-scaling group of G2 instances in a placement group.
- C. Use Amazon Simple Workflow (SWF) to manage assessments, movement of data & meta-data. Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O Virtualization).
- D. Use AWS Data Pipeline to manage movement of data & meta-data and assessments. Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O virtualization).

**Answer: B**

### NEW QUESTION 235

You're running an application on-premises due to its dependency on non-x86 hardware and want to use AWS for data backup. Your backup application is only able to write to POSIX-compatible block-based storage. You have 140TB of data and would like to mount it as a single folder on your file server. Users must be able to access portions of this data while the backups are taking place. What backup solution would be most appropriate for this use case?

- A. Use Storage Gateway and configure it to use Gateway-Cached volumes.
- B. Configure your backup software to use S3 as the target for your data backups.
- C. Configure your backup software to use Glacier as the target for your data backups.
- D. Use Storage Gateway and configure it to use Gateway-Stored volume.

**Answer: A**

#### Explanation:

##### Gateway-Cached Volume Architecture

Gateway-cached volumes let you use Amazon Simple Storage Service (Amazon S3) as your primary data storage while retaining frequently accessed data locally in your storage gateway. Gateway-cached volumes minimize the need to scale your on-premises storage infrastructure, while still providing your applications with low-latency access to their frequently accessed data. You can create storage volumes up to 32 TiB in size and attach to them as iSCSI devices from your on-premises application servers. Your gateway stores data that you write to these volumes in Amazon S3 and retains recently read data in your on-premises storage gateway's cache and upload buffer storage.

Gateway-cached volumes can range from 1 GiB to 32 TiB in size and must be rounded to the nearest GiB. Each gateway configured for gateway-cached volumes can support up to 32 volumes for a total maximum storage volume of 1,024 TiB (1 PiB).

In the gateway-cached volume solution, AWS Storage Gateway stores all your on-premises application data in a storage volume in Amazon S3.

The following diagram provides an overview of the AWS Storage Gateway-cached volume deployment.

After you've installed the AWS Storage Gateway software appliance—the virtual machine (VM)—on a host in your data center and activated it, you can use the AWS Management Console to provision storage

volumes backed by Amazon S3. You can also provision storage volumes programmatically using the AWS Storage Gateway API or the AWS SDK libraries. You then mount these storage volumes to your on-premises application servers as iSCSI devices.

You also allocate disks on-premises for the VM. These on-premises disks serve the following purposes: Disks for use by the gateway as cache storage - As your applications write data to the storage volumes in AWS, the gateway initially stores the data on the on-premises disks referred to as cache storage before uploading the data to Amazon S3. The cache storage acts as the on-premises durable store for data that is waiting to upload to Amazon S3 from the upload buffer.

The cache storage also lets the gateway store your application's recently accessed data on-premises for low-latency access. If your application requests data, the gateway first checks the cache storage for the data before checking Amazon S3.

You can use the following guidelines to determine the amount of disk space to allocate for cache storage. Generally, you should allocate at least 20 percent of your existing file store size as cache storage. Cache storage should also be larger than the upload buffer. This latter guideline helps ensure cache storage is large enough to persistently hold all data in the upload buffer that has not yet been uploaded to Amazon S3.

Disks for use by the gateway as the upload buffer - To prepare for upload to Amazon S3, your gateway also stores incoming data in a staging area, referred to as an upload buffer. Your gateway uploads this buffer data over an encrypted Secure Sockets Layer (SSL) connection to AWS, where it is stored encrypted in Amazon S3.

You can take incremental backups, called snapshots, of your storage volumes in Amazon S3. These point-in-time snapshots are also stored in Amazon S3 as Amazon EBS snapshots. When you take a new snapshot, only the data that has changed since your last snapshot is stored. You can initiate snapshots on a scheduled or one-time basis. When you delete a snapshot, only the data not needed for any other snapshots is removed.

You can restore an Amazon EBS snapshot to a gateway storage volume if you need to recover a backup of your data. Alternatively, for snapshots up to 16 TiB in

size, you can use the snapshot as a starting point for a new Amazon EBS volume. You can then attach this new Amazon EBS volume to an Amazon EC2 instance.

All gateway-cached volume data and snapshot data is stored in Amazon S3 encrypted at rest using server-side encryption (SSE). However, you cannot access this data with the Amazon S3 API or other tools such as the Amazon S3 console.

#### NEW QUESTION 240

An administrator is using Amazon CloudFormation to deploy a three tier web application that consists of a web tier and application tier that will utilize Amazon DynamoDB for storage when creating the CloudFormation template which of the following would allow the application instance access to the DynamoDB tables without exposing API credentials?

- A. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and associate the Role to the application instances by referencing an instance profile.
- B. Use the Parameter section in the Cloud Formation template to have the user input Access and Secret Keys from an already created IAM user that has the permissions required to read and write from the required DynamoDB table.
- C. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and reference the Role in the instance profile property of the application instance.
- D. Create an identity and Access Management user in the CloudFormation template that has permissions to read and write from the required DynamoDB table, use the GetAtt function to retrieve the Access and secret keys and pass them to the application instance through user-data.

**Answer: C**

#### NEW QUESTION 243

You are designing an SSUTLS solution that requires HTTPS clients to be authenticated by the Web server using client certificate authentication. The solution must be resilient.

Which of the following options would you consider for configuring the web server infrastructure? (Choose 2 answers)

- A. Configure ELB with TCP listeners on TCP/4d3. And place the Web servers behind it.
- B. Configure your Web servers with EIPS Place the Web servers in a Route53 Record Set and configure health checks against all Web servers.
- C. Configure ELB with HTTPS listeners, and place the Web servers behind it.
- D. Configure your web servers as the origins for a Cloud Front distributio
- E. Use custom SSL certificates on your Cloud Front distribution.

**Answer: AB**

#### NEW QUESTION 248

You are designing a photo sharing mobile app the application will store all pictures in a single Amazon S3 bucket.

Users will upload pictures from their mobile device directly to Amazon S3 and will be able to view and download their own pictures directly from Amazon S3.

You want to configure security to handle potentially millions of users in the most secure manner possible. What should your server-side application do when a new user registers on the photo sharing mobile application?

- A. Create a set of long-term credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app and use them to access Amazon S3.
- B. Record the user's Information in Amazon RDS and create a role in IAM with appropriate permission
- C. When the user uses their mobile app create temporary credentials using the AWS Security Token Service 'Assume Role' function Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- D. Record the user's Information In Amazon DynamoD
- E. When the user uses their mobile app create temporary credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- F. Create IAM use
- G. Assign appropriate permissions to the IAM user Generate an access key and secret key for the IAM user, store them in the mobile app and use these credentials to access Amazon S3.
- H. Create an IAM use
- I. Update the bucket policy with appropriate permissions for the IAM user Generate an access Key and secret Key for the IAM user, store them In the mobile app and use these credentials to access Amazon S3.

**Answer: B**

#### NEW QUESTION 251

A benefits enrollment company is hosting a 3-tier web application running in a VPC on AWS which includes a NAT (Network Address Translation) instance in the public Web tier. There is enough provisioned capacity for the expected workload for the new fiscal year benefit enrollment period plus some extra overhead Enrollment proceeds nicely for two days and then the web tier becomes unresponsive, upon investigation using CloudWatch and other monitoring tools it is discovered that there is an extremely large and unanticipated amount of inbound traffic coming from a set of 15 specific IP addresses over port 80 from a country where the benefits company has no customers. The web tier instances are so overloaded that benefit enrollment administrators cannot even SSH into them. Which actMty would be useful in defending against this attack?

- A. Create a custom route table associated with the web tier and block the attacking IP addresses from the IGW (Internet Gateway)
- B. Change the EIP (Elastic IP Address) of the NAT instance in the web tier subnet and update the Main Route Table with the new EIP
- C. Create 15 Security Group rules to block the attacking IP addresses over port 80
- D. Create an inbound NACL (Network Access control list) associated with the web tier subnet with deny rules to block the attacking IP addresses

**Answer: D**

#### Explanation:

Use AWS Identity and Access Management (IAM) to control who in your organization has permission to create and manage security groups and network ACLs (NACL). Isolate the responsibilities and roles for better defense. For example, you can give only your network administrators or security admin the permission to manage the security groups and restrict other roles.

#### NEW QUESTION 253

An AWS customer runs a public blogging website. The site users upload two million blog entries a month. The average blog entry size is 200 KB. The access rate to blog entries drops to negligible 6 months after publication and users rarely access a blog entry 1 year after publication. Additionally, blog entries have a high update rate during the first 3 months following publication, this drops to no updates after 6 months. The customer wants to use CloudFront to improve his user's load times.

Which of the following recommendations would you make to the customer?

- A. Duplicate entries into two different buckets and create two separate CloudFront distributions where 53 access is restricted only to Cloud Front identity
- B. Create a CloudFront distribution with "US" Europe price class for US/ Europe users and a different CloudFront distribution with All Edge Locations' for the remaining users.
- C. Create a CloudFront distribution with 53 access restricted only to the CloudFront identity and partition the blog entry's location in 53 according to the month it was uploaded to be used with CloudFront behaviors.
- D. Create a CloudFront distribution with Restrict Viewer Access Forward Query string set to true and minimum TTL of 0.

**Answer: C**

#### NEW QUESTION 254

.....

## About ExamBible

### *Your Partner of IT Exam*

## Found in 1998

ExamBible is a company specialized on providing high quality IT exam practice study materials, especially Cisco CCNA, CCDA, CCNP, CCIE, Checkpoint CCSE, CompTIA A+, Network+ certification practice exams and so on. We guarantee that the candidates will not only pass any IT exam at the first attempt but also get profound understanding about the certificates they have got. There are so many alike companies in this industry, however, ExamBible has its unique advantages that other companies could not achieve.

## Our Advances

### \* 99.9% Uptime

All examinations will be up to date.

### \* 24/7 Quality Support

We will provide service round the clock.

### \* 100% Pass Rate

Our guarantee that you will pass the exam.

### \* Unique Gurantee

If you do not pass the exam at the first time, we will not only arrange FULL REFUND for you, but also provide you another exam of your claim, ABSOLUTELY FREE!

### 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

In Amazon EC2 Container Service components, what is the name of a logical grouping of container instances on which you can place tasks?

- A. A cluster
- B. A container instance
- C. A container
- D. A task definition

**Answer:** A

#### **Explanation:**

Amazon ECS contains the following components:

A Cluster is a logical grouping of container instances that you can place tasks on.

A Container instance is an Amazon EC2 instance that is running the Amazon ECS agent and has been registered into a cluster.

A Task definition is a description of an application that contains one or more container definitions. A Scheduler is the method used for placing tasks on container instances.

A Service is an Amazon ECS service that allows you to run and maintain a specified number of instances of a task definition simultaneously.

A Task is an instantiation of a task definition that is running on a container instance. A Container is a Linux container that was created as part of a task.

Reference: <http://docs.aws.amazon.com/AmazonECS/latest/developerguide/Welcome.html>

### NEW QUESTION 3

To specify a resource in a policy statement, in Amazon EC2, can you use its Amazon Resource Name (ARN)?

- A. Yes, you can.
- B. No, you can't because EC2 is not related to ARN.
- C. No, you can't because you can't specify a particular Amazon EC2 resource in an IAM policy.
- D. Yes, you can but only for the resources that are not affected by the action

**Answer:** A

#### **Explanation:**

Some Amazon EC2 API actions allow you to include specific resources in your policy that can be created or modified by the action. To specify a resource in the statement, you need to use its Amazon Resource Name (ARN).

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-ug.pdf>

### NEW QUESTION 4

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

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

**Answer:** C

#### **Explanation:**

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

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

### NEW QUESTION 5

A user is storing a large number of objects on AWS S3. The user wants to implement the search functionality among the objects. How can the user achieve this?

- A. Use the indexing feature of S3.
- B. Tag the objects with the metadata to search on that.
- C. Use the query functionality of S3.
- D. Make your own DB system which stores the S3 metadata for the search functionality

**Answer:** D

**Explanation:**

In Amazon Web Services, AWS S3 does not provide any query facility. To retrieve a specific object the user needs to know the exact bucket / object key. In this case it is recommended to have an own DB system which manages the S3 metadata and key mapping.

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

**NEW QUESTION 6**

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 7**

An edge location refers to which Amazon Web Service?

- A. An edge location is referred to the network configured within a Zone or Region
- B. An edge location is an AWS Region
- C. An edge location is the location of the data center used for Amazon CloudFront.
- D. An edge location is a Zone within an AWS Region

**Answer:** C

**Explanation:**

Amazon CloudFront is a content distribution network. A content delivery network or content distribution network (CDN) is a large distributed system of servers deployed in multiple data centers across the world. The location of the data center used for CDN is called edge location.

Amazon CloudFront can cache static content at each edge location. This means that your popular static content (e.g., your site's logo, navigational images, cascading style sheets, JavaScript code, etc.) will be available at a nearby edge location for the browsers to download with low latency and improved performance for viewers. Caching popular static content with Amazon CloudFront also helps you offload requests for such files from your origin server — CloudFront serves the cached copy when available and only makes a request to your origin server if the edge location receiving the browser's request does not have a copy of the file.

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

**NEW QUESTION 8**

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

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

**Answer:** D

**Explanation:**

An Amazon EBS volume behaves like a raw, unformatted, external block device that you can attach to a single instance. The volume persists independently from the running life of an Amazon EC2 instance. Reference:

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

**NEW QUESTION 9**

Does DynamoDB support in-place atomic updates?

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

**Answer:** A

**Explanation:**

DynamoDB supports in-place atomic updates.

Reference:

<http://docs.aws.amazon.com/amazondynamodb/latest/developerguide/WorkingWithItems.html#WorkingWithItems.AtomicCounters>

**NEW QUESTION 10**

You need to migrate a large amount of data into the cloud that you have stored on a hard disk and you decide that the best way to accomplish this is with AWS Import/Export and you mail the hard disk to AWS. Which of the following statements is incorrect in regards to AWS Import/Export?

- A. It can export from Amazon S3
- B. It can Import to Amazon Glacier
- C. It can export from Amazon EBS.
- D. It can Import to Amazon EBS

**Answer:** C

**Explanation:**

AWS Import/Export supports: Import to Amazon S3  
Export from Amazon S3 Import to Amazon EBS Import to Amazon Glacier  
AWS Import/Export does not currently support export from Amazon EBS or Amazon Glacier. Reference:  
<https://docs.aws.amazon.com/AWSImportExport/latest/DG/whatisdisk.html>

**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 12**

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

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

**Answer:** B

**Explanation:**

If you're using EC2-Classic, you must use security groups created specifically for EC2-Classic. When you launch an instance in EC2-Classic, you must specify a security group in the same region as the instance. You can't specify a security group that you created for a VPC when you launch an instance in EC2-Classic.  
Reference:  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html#ec2-classic-security-groups>

**NEW QUESTION 17**

You are checking the workload on some of your General Purpose (SSD) and Provisioned IOPS (SSD) volumes and it seems that the I/O latency is higher than you require. You should probably check the to make sure that your application is not trying to drive more IOPS than you have provisioned.

- A. Amount of IOPS that are available
- B. Acknowledgement from the storage subsystem
- C. Average queue length
- D. Time it takes for the I/O operation to complete

**Answer:** C

**Explanation:**

In EBS workload demand plays an important role in getting the most out of your General Purpose (SSD) and Provisioned IOPS (SSD) volumes. In order for your volumes to deliver the amount of IOPS that are available, they need to have enough I/O requests sent to them. There is a relationship between the demand on the volumes, the amount of IOPS that are available to them, and the latency of the request (the amount of time it takes for the I/O operation to complete). Latency is the true end-to-end client time of an I/O operation; in other words, when the client sends a IO, how long does it take to get an acknowledgement from the storage subsystem that the IO read or write is complete.  
If your I/O latency is higher than you require, check your average queue length to make sure that your application is not trying to drive more IOPS than you have provisioned. You can maintain high IOPS while keeping latency down by maintaining a low average queue length (which is achieved by provisioning more IOPS for your volume).  
Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-workload-demand.html>

**NEW QUESTION 18**

You are building infrastructure for a data warehousing solution and an extra request has come through that there will be a lot of business reporting queries running all the time and you are not sure if your current DB instance will be able to handle it. What would be the best solution for this?

- A. DB Parameter Groups
- B. Read Replicas
- C. Multi-AZ DB Instance deployment
- D. Database Snapshots

**Answer:** B

**Explanation:**

Read Replicas make it easy to take advantage of MySQL's built-in replication functionality to elastically scale out beyond the capacity constraints of a single DB Instance for read-heavy database workloads. There are a variety of scenarios where deploying one or more Read Replicas for a given source DB Instance may make sense. Common reasons for deploying a Read Replica include:

Scaling beyond the compute or I/O capacity of a single DB Instance for read-heavy database workloads. This excess read traffic can be directed to one or more Read Replicas.

Serving read traffic while the source DB Instance is unavailable. If your source DB Instance cannot take I/O requests (e.g. due to I/O suspension for backups or scheduled maintenance), you can direct read traffic to your Read Replica(s). For this use case, keep in mind that the data on the Read Replica may be "stale" since the source DB Instance is unavailable.

Business reporting or data warehousing scenarios; you may want business reporting queries to run against a Read Replica, rather than your primary, production DB Instance.

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

**NEW QUESTION 19**

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

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

**Answer:** C

**Explanation:**

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

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

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

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

**NEW QUESTION 20**

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

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

**Answer:** D

**Explanation:**

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

Reference:

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

**NEW QUESTION 21**

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

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

**Answer:** D

**Explanation:**

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

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

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

### NEW QUESTION 22

You are setting up a very complex financial services grid and so far it has 5 Elastic IP (EIP) addresses.

You go to assign another EIP address, but all accounts are limited to 5 Elastic IP addresses per region by default, so you aren't able to. What is the reason for this?

- A. For security reasons.
- B. Hardware restrictions.
- C. Public (IPv4) internet addresses are a scarce resource.
- D. There are only 5 network interfaces per instance

**Answer: C**

#### Explanation:

Public (IPv4) internet addresses are a scarce resource. There is only a limited amount of public IP space available, and Amazon EC2 is committed to helping use that space efficiently.

By default, all accounts are limited to 5 Elastic IP addresses per region. If you need more than 5 Elastic IP addresses, AWS asks that you apply for your limit to be raised. They will ask you to think through your use case and help them understand your need for additional addresses.

Reference: [http://aws.amazon.com/ec2/faqs/#How\\_many\\_instances\\_can\\_I\\_run\\_in\\_Amazon\\_EC2](http://aws.amazon.com/ec2/faqs/#How_many_instances_can_I_run_in_Amazon_EC2)

### NEW QUESTION 27

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 31

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

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

**Answer: A**

#### Explanation:

In Amazon Route 53, you cannot create a hosted zone for a top-level domain (TLD).

Reference: [http://docs.aws.amazon.com/Route53/latest/APIReference/API\\_CreateHostedZone.html](http://docs.aws.amazon.com/Route53/latest/APIReference/API_CreateHostedZone.html)

### NEW QUESTION 33

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 37

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. IV|3 instances are configured with more swap memory than M instances.
- C. IV|3 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.

IV|3 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 40**

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 42**

After setting up several database instances in Amazon Relational Database Service (Amazon RDS) you decide that you need to track the performance and health of your databases. How can you do this?

- A. Subscribe to Amazon RDS events to be notified when changes occur with a DB instance, DB snapshot, DB parameter group, or DB security group.
- B. Use the free Amazon CloudWatch service to monitor the performance and health of a DB instance.
- C. All of the items listed will track the performance and health of a database.
- D. View, download, or watch database log files using the Amazon RDS console or Amazon RDS API
- E. You can also query some database log files that are loaded into database tables.

**Answer: C**

**Explanation:**

Amazon Relational Database Service (Amazon RDS) is a web service that makes it easier to set up, operate, and scale a relational database in the cloud. It provides cost-efficient, resizable capacity for an industry-standard relational database and manages common database administration tasks.

There are several ways you can track the performance and health of a database or a DB instance. You can:

Use the free Amazon CloudWatch service to monitor the performance and health of a DB instance. Subscribe to Amazon RDS events to be notified when changes occur with a DB instance, DB snapshot, DB parameter group, or DB security group.

View, download, or watch database log files using the Amazon RDS console or Amazon RDS APIs. You can also query some database log files that are loaded into database tables.

Use the AWS CloudTrail service to record AWS calls made by your AWS account. The calls are recorded in log files and stored in an Amazon S3 bucket.

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

**NEW QUESTION 43**

A user has created photo editing software and hosted it on EC2. The software accepts requests from the user about the photo format and resolution and sends a message to S3 to enhance the picture accordingly. Which of the below mentioned AWS services will help make a scalable software with the AWS infrastructure in this scenario?

- A. AWS Simple Notification Service
- B. AWS Simple Queue Service
- C. AWS Elastic Transcoder
- D. AWS Glacier

**Answer: B**

**Explanation:**

Amazon Simple Queue Service (SQS) is a fast, reliable, scalable, and fully managed message queuing service. SQS provides a simple and cost-effective way to decouple the components of an application. The user can configure SQS, which will decouple the call between the EC2 application and S3. Thus, the application does not keep waiting for S3 to provide the data.

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

#### NEW QUESTION 45

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

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

**Answer:** D

#### Explanation:

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

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

#### NEW QUESTION 49

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.html>

#### NEW QUESTION 52

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 55

You have a number of image files to encode. In an Amazon SQS worker queue, you create an Amazon SQS message for each file specifying the command (jpeg-encode) and the location of the file in Amazon S3. Which of the following statements best describes the functionality of Amazon SQS?

- A. Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receive speeds.
- B. Amazon SQS is for single-threaded sending or receive speeds.
- C. Amazon SQS is a non-distributed queuing system.
- D. Amazon SQS is a distributed queuing system that is optimized for vertical scalability and for single-threaded sending or receive speeds.

**Answer:** A

#### Explanation:

Amazon SQS is a distributed queuing system that is optimized for horizontal scalability, not for single-threaded sending or receive speeds. A single client can send or receive Amazon SQS messages at a rate of about 5 to 50 messages per second. Higher receive performance can be achieved by requesting multiple messages (up to 10) in a single call. It may take several seconds before a message that has been to a queue is available to be received.

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

#### NEW QUESTION 59

A scope has been handed to you to set up a super fast gaming server and you decide that you will use Amazon DynamoDB as your database. For efficient access to data in a table, Amazon DynamoDB creates and maintains indexes for the primary key attributes. A secondary index is a data structure that contains a subset of attributes from a table, along with an alternate key to support Query operations. How many types of secondary indexes does DynamoDB support?

- A. 2
- B. 16
- C. 4

D. As many as you need

**Answer:** A

**Explanation:**

DynamoDB supports two types of secondary indexes:

Local secondary index — an index that has the same hash key as the table, but a different range key. A local secondary index is "local" in the sense that every partition of a local secondary index is scoped to a table partition that has the same hash key.

Global secondary index — an index with a hash and range key that can be different from those on the table. A global secondary index is considered "global" because queries on the index can span all of the data in a table, across all partitions.

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

**NEW QUESTION 63**

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 66**

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 67**

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

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

**Answer:** B

**Explanation:**

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

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

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

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

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

**NEW QUESTION 69**

A user comes to you and wants access to Amazon CloudWatch but only wants to monitor a specific LoadBalancer. Is it possible to give him access to a specific set of instances or a specific LoadBalancer?

- A. No because you can't use IAM to control access to CloudWatch data for specific resources.
- B. Yes
- C. You can use IAM to control access to CloudWatch data for specific resources.
- D. No because you need to be Sysadmin to access CloudWatch data.
- E. Yes
- F. Any user can see all CloudWatch data and needs no access right

**Answer:** A

**Explanation:**

Amazon CloudWatch integrates with AWS Identity and Access Management (IAM) so that you can specify which CloudWatch actions a user in your AWS Account can perform. For example, you could create an IAM policy that gives only certain users in your organization permission to use GetMetricStatistics. They could then use the action to retrieve data about your cloud resources. You can't use IAM to control access to CloudWatch data for specific resources. For example, you can't give a user access to CloudWatch data for only a specific set of instances or a specific LoadBalancer. Permissions granted using IAM cover all the cloud resources you use with CloudWatch. In addition, you can't use IAM roles with the Amazon CloudWatch command line tools. Using Amazon CloudWatch with IAM doesn't change how you use CloudWatch. There are no changes to CloudWatch actions, and no new CloudWatch actions related to users and access control. Reference: <http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/UsingIAM.html>

**NEW QUESTION 72**

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 76**

You need to create an Amazon Machine Image (AMI) for a customer for an application which does not appear to be part of the standard AWS AMI template that you can see in the AWS console. What are the alternative possibilities for creating an AMI on AWS?

- A. You can purchase an AMIs from a third party but cannot create your own AMI.
- B. You can purchase an AMIs from a third party or can create your own AMI.
- C. Only AWS can create AMIs and you need to wait till it becomes available.
- D. Only AWS can create AMIs and you need to request them to create one for you

**Answer: B**

**Explanation:**

You can purchase an AMIs from a third party, including AMIs that come with service contracts from organizations such as Red Hat. You can also create an AMI and sell it to other Amazon EC2 users. After you create an AMI, you can keep it private so that only you can use it, or you can share it with a specified list of AWS accounts. You can also make your custom AMI public so that the community can use it. Building a safe, secure, usable AMI for public consumption is a fairly straightforward process, if you follow a few simple guidelines. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.html>

**NEW QUESTION 80**

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 months

**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 81**

Doug has created a VPC with CIDR 10.201.0.0/16 in his AWS account. In this VPC he has created a public subnet with CIDR block 10.201.31.0/24. While launching a new EC2 from the console, he is not able to assign the private IP address 10.201.31.6 to this instance. Which is the most likely reason for this issue?

- A. Private IP address 10.201.31.6 is blocked via ACLs in Amazon infrastructure as a part of platform security.
- B. Private address IP 10.201.31.6 is currently assigned to another interface.
- C. Private IP address 10.201.31.6 is not part of the associated subnet's IP address range.
- D. Private IP address 10.201.31.6 is reserved by Amazon for IP networking purpose

**Answer: B**

**Explanation:**

In Amazon VPC, you can assign any Private IP address to your instance as long as it is: Part of the associated subnet's IP address range Not reserved by Amazon for IP networking purposes Not currently assigned to another interface Reference: <http://aws.amazon.com/vpc/faqs/>

#### NEW QUESTION 86

You are planning and configuring some EBS volumes for an application. In order to get the most performance out of your EBS volumes, you should attach them to an instance with enough to support your volumes.

- A. Redundancy
- B. Storage
- C. Bandwidth
- D. Memory

**Answer: C**

#### Explanation:

When you plan and configure EBS volumes for your application, it is important to consider the configuration of the instances that you will attach the volumes to. In order to get the most performance out of your EBS volumes, you should attach them to an instance with enough bandwidth to support your volumes, such as an EBS-optimized instance or an instance with 10 Gigabit network connectMty. This is especially important when you use General Purpose (SSD) or Provisioned IOPS (SSD) volumes, or when you stripe multiple volumes together in a RAID configuration.

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-ec2-config.html>

#### NEW QUESTION 88

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 90

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 93

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

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

**Answer: C**

#### Explanation:

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

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

#### NEW QUESTION 97

You have three Amazon EC2 instances with Elastic IP addresses in the US East (Virginia) region, and you want to distribute requests across all three IPs evenly for users for whom US East (Virginia) is the appropriate region.

How many EC2 instances would be sufficient to distribute requests in other regions?

- A. 3
- B. 9
- C. 2
- D. 1

**Answer: D**

#### Explanation:

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.

For example, suppose you have three Amazon EC2 instances with Elastic IP addresses in the US East (Virginia) region and you want to distribute requests across all three IPs evenly for users for whom US East (Virginia) is the appropriate region. Just one Amazon EC2 instance is sufficient in the other regions, although you can apply the same technique to many regions at once.

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

#### NEW QUESTION 101

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 105

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

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

**Answer: B**

#### Explanation:

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

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

#### NEW QUESTION 108

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

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

**Answer: C**

#### Explanation:

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

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

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

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

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

#### NEW QUESTION 113

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 116

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

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

**Answer: B**

#### Explanation:

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

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

Allow no inbound traffic Allow all outbound traffic

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

#### NEW QUESTION 120

You are using Amazon SES as an email solution but are unsure of what its limitations are. Which statement below is correct in regards to that?

- A. New Amazon SES users who have received production access can send up to 1,000 emails per 24-hour period, at a maximum rate of 10 emails per second.
- B. Every Amazon SES sender has the same set of sending limits.
- C. Sending limits are based on messages rather than on recipients.
- D. Every Amazon SES sender has a unique set of sending limits.

**Answer: D**

#### Explanation:

Amazon Simple Email Service (Amazon SES) is a highly scalable and cost-effective email-sending service for businesses and developers. Amazon SES eliminates the complexity and expense of building an in-house email solution or licensing, installing, and operating a third-party email service for this type of email communication.

Every Amazon SES sender has a unique set of sending limits, which are calculated by Amazon SES on an ongoing basis:

Sending quota — the maximum number of emails you can send in a 24-hour period. Maximum send rate — the maximum number of emails you can send per second.

New Amazon SES users who have received production access can send up to 10,000 emails per 24-hour period, at a maximum rate of 5 emails per second.

Amazon SES automatically adjusts these limits upward, as long as you send high-quality email. If your existing quota is not adequate for your needs and the system has not automatically increased your quota, you can submit an SES Sending Quota Increase case at any time.

Sending limits are based on recipients rather than on messages. You can check your sending limits at any time by using the Amazon SES console.

Note that if your email is detected to be of poor or QUESTION-able quality (e.g., high complaint rates, high bounce rates, spam, or abusive content), Amazon SES might temporarily or permanently reduce your permitted send volume, or take other action as AWS deems appropriate.

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

#### NEW QUESTION 123

Having just set up your first Amazon Virtual Private Cloud (Amazon VPC) network, which defined a default network interface, you decide that you need to create and attach an additional network interface, known as an elastic network interface (ENI) to one of your instances. Which of the following statements is true regarding attaching network interfaces to your instances in your VPC?

- A. You can attach 5 ENIs per instance type.
- B. You can attach as many ENIs as you want.
- C. The number of ENIs you can attach varies by instance type.
- D. You can attach 100 ENIs total regardless of instance type.

**Answer: C**

#### Explanation:

Each instance in your VPC has a default network interface that is assigned a private IP address from the IP address range of your VPC. You can create and attach an additional network interface, known as an elastic network interface (ENI), to any instance in your VPC. The number of ENIs you can attach varies by instance type.

#### NEW QUESTION 127

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 132

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 136

A government client needs you to set up secure cryptographic key storage for some of their extremely confidential data. You decide that the AWS CloudHSM is the best service for this. However, there seem to be a few pre-requisites before this can happen, one of those being a security group that has certain ports open. Which of the following is correct in regards to those security groups?

- A. A security group that has port 22 (for SSH) or port 3389 (for RDP) open to your network.
- B. A security group that has no ports open to your network.
- C. A security group that has only port 3389 (for RDP) open to your network.
- D. A security group that has only port 22 (for SSH) open to your network.

**Answer: A**

#### Explanation:

AWS CloudHSM provides secure cryptographic key storage to customers by making hardware security modules (HSMs) available in the AWS cloud.

AWS CloudHSM requires the following environment before an HSM appliance can be provisioned. A virtual private cloud (VPC) in the region where you want the AWS CloudHSM service.

One private subnet (a subnet with no Internet gateway) in the VPC. The HSM appliance is provisioned into this subnet.

One public subnet (a subnet with an Internet gateway attached). The control instances are attached to this subnet.

An AWS Identity and Access Management (IAM) role that delegates access to your AWS resources to AWS CloudHSM.

An EC2 instance, in the same VPC as the HSM appliance, that has the SafeNet client software installed. This instance is referred to as the control instance and is used to connect to and manage the HSM appliance.

A security group that has port 22 (for SSH) or port 3389 (for RDP) open to your network. This security group is attached to your control instances so you can access them remotely.

#### NEW QUESTION 139

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 deleted.

**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 142

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 147

An EC2 instance is connected to an ENI (Elastic Network Interface) in one subnet. What happens when you attach an ENI of a different subnet to this EC2 instance?

- A. The EC2 instance follows the rules of the older subnet
- B. The EC2 instance follows the rules of both the subnets
- C. Not possible, cannot be connected to 2 ENIs
- D. The EC2 instance follows the rules of the newer subnet

**Answer: B**

#### Explanation:

AWS allows you create an elastic network interface (ENI), attach an ENI to an EC2 instance, detach an ENI from an EC2 instance and attach this ENI to another EC2 instance. The attributes of a network traffic follow the ENI which is attached to an EC2 instance or detached from an EC2 instance. When you move an ENI from one EC2 instance to another, network traffic is redirected to the new EC2 instance. You can create and attach additional ENIs to an EC2 instance.

Attaching multiple network interfaces (ENIs) to an EC2 instance is useful to: Create a management network.

Use network and security appliances in your VPC.

Create dual-homed instances with workloads/roles on distinct subnets Create a low-budget, high-availability solution.

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

#### NEW QUESTION 152

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 153

You are architecting a highly-scalable and reliable web application which will have a huge amount of content. You have decided to use CloudFront as you know it will speed up distribution of your static and dynamic web content and know that Amazon CloudFront integrates with Amazon CloudWatch metrics so that you can monitor your web application. Because you live in Sydney you have chosen the the Asia Pacific (Sydney) region in the AWS console. However you have set up this up but no CloudFront metrics seem to be appearing in the CloudWatch console. What is the most likely reason from the possible choices below for this?

- A. Metrics for CloudWatch are available only when you choose the same region as the application you are monitoring.
- B. You need to pay for CloudWatch for it to become active.
- C. Metrics for CloudWatch are available only when you choose the US East (Virginia)
- D. Metrics for CloudWatch are not available for the Asia Pacific region as yet

**Answer: C**

#### Explanation:

CloudFront is a global service, and metrics are available only when you choose the US East (N. Virginia) region in the AWS console. If you choose another region, no CloudFront metrics will appear in the CloudWatch console.

Reference:

<http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/monitoring-using-cloudwatch.html>

#### NEW QUESTION 156

After a major security breach your manager has requested a report of all users and their credentials in AWS. You discover that in IAM you can generate and download a credential report that lists all users in your account and the status of their various credentials, including passwords, access keys, MFA devices, and signing certificates. Which following statement is incorrect in regards to the use of credential reports?

- A. Credential reports are downloaded XML files.
- B. You can get a credential report using the AWS Management Console, the AWS CLI, or the IAM API.
- C. You can use the report to audit the effects of credential lifecycle requirements, such as password rotation.
- D. You can generate a credential report as often as once every four hour

**Answer: A**

#### Explanation:

To access your AWS account resources, users must have credentials.

You can generate and download a credential report that lists all users in your account and the status of their various credentials, including passwords, access

keys, MFA devices, and signing certificates. You can get a credential report using the AWS Management Console, the AWS CLI, or the IAM API. You can use credential reports to assist in your auditing and compliance efforts. You can use the report to audit the effects of credential lifecycle requirements, such as password rotation. You can provide the report to an external auditor, or grant permissions to an auditor so that he or she can download the report directly. You can generate a credential report as often as once every four hours. When you request a report, IAM first checks whether a report for the account has been generated within the past four hours. If so, the most recent report is downloaded. If the most recent report for the account is more than four hours old, or if there are no previous reports for the account, IAM generates and downloads a new report. Credential reports are downloaded as comma-separated values (CSV) files. You can open CSV files with common spreadsheet software to perform analysis, or you can build an application that consumes the CSV files programmatically and performs custom analysis. Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/credential-reports.html>

#### NEW QUESTION 160

Which of the following statements is true of Amazon EC2 security groups?

- A. You can change the outbound rules for EC2-Classi
- B. Also, you can add and remove rules to a group at any time.
- C. You can modify an existing rule in a grou
- D. However, you can't add and remove rules to a group.
- E. None of the statements are correct.
- F. You can't change the outbound rules for EC2-Classi
- G. However, you can add and remove rules to a group at any tim

**Answer:** D

#### Explanation:

When dealing with security groups, bear in mind that you can freely add and remove rules from a group, but you can't change the outbound rules for EC2-Classic. If you're using the Amazon EC2 console, you can modify existing rules, and you can copy the rules from an existing security group to a new security group. Reference: <http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/using-network-security.html>

#### NEW QUESTION 161

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 164

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

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

**Answer:** D

#### Explanation:

In Amazon EC2-Classic every instance is given two IP Addresses: a private IP address and a public IP address  
Reference:  
<http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-instance-addressing.html#differences>

#### NEW QUESTION 166

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

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

**Answer:** D

#### Explanation:

AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectMty between AWS and your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than internet-based connections. You could expect the following benefits if you use AWS Direct Connect. Reduced bandwidth costs  
Consistent network performance  
Compatibility with all AWS services  
Private connectMty to your Amazon VPC  
Elasticity  
Simplicity  
Reference: <http://aws.amazon.com/directconnect/>

#### NEW QUESTION 167

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 172

Can you encrypt EBS volumes?

- A. Yes, you can enable encryption when you create a new EBS volume using the AWS Management Console, API, or CLI.
- B. No, you should use a third-party software to perform raw block-level encryption of an EBS volume.
- C. Yes, but you must use a third-party API for encrypting data before it's loaded on EBS.
- D. Yes, you can encrypt with the special "ebs\_encrypt" command through Amazon API

**Answer:** A

#### Explanation:

With Amazon EBS encryption, you can now create an encrypted EBS volume and attach it to a supported instance type. Data on the volume, disk I/O, and snapshots created from the volume are then all encrypted. The encryption occurs on the servers that host the EC2 instances, providing encryption of data as it moves between EC2 instances and EBS storage. EBS encryption is based on the industry standard AES-256 cryptographic algorithm. To get started, simply enable encryption when you create a new EBS volume using the AWS Management Console, API, or CLI. Amazon EBS encryption is available for all the latest EC2 instances in all commercially available AWS regions. Reference: <https://aws.amazon.com/about-aws/whats-new/2014/05/21/Amazon-EBS-encryption-now-available/>

#### NEW QUESTION 174

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

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

**Answer:** A

#### Explanation:

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

#### NEW QUESTION 179

Just when you thought you knew every possible storage option on AWS you hear someone mention Reduced Redundancy Storage (RRS) within Amazon S3. What is the ideal scenario to use Reduced Redundancy Storage (RRS)?

- A. Huge volumes of data
- B. Sensitive data
- C. Non-critical or reproducible data
- D. Critical data

**Answer:** C

#### Explanation:

Reduced Redundancy Storage (RRS) is a new storage option within Amazon S3 that enables customers to reduce their costs by storing non-critical, reproducible data at lower levels of redundancy than Amazon S3's standard storage. RRS provides a lower cost, less durable, highly available storage option that is designed to sustain the loss of data in a single facility. RRS is ideal for non-critical or reproducible data. For example, RRS is a cost-effective solution for sharing media content that is durably stored elsewhere. RRS also makes sense if you are storing thumbnails and other resized images that can be easily reproduced from an original image. Reference: <https://aws.amazon.com/s3/faqs/>

#### NEW QUESTION 183

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 187**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 192**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 193**

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

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

**Answer:** C

**Explanation:**

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

Benefits

Enhanced Durability

Multi-AZ deployments for the MySQL, Oracle, and PostgreSQL engines utilize synchronous physical replication to keep data on the standby up-to-date with the primary. Multi-AZ deployments for the SQL Server engine use synchronous logical replication to achieve the same result, employing SQL Server-native 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 fail over 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.

#### No Administrative Intervention

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

#### Failover conditions

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

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

Storage failure on primary

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

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

### NEW QUESTION 195

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

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

**Answer:** A

### NEW QUESTION 197

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 202

Your company is in the process of developing a next generation pet collar that collects biometric information to assist families with promoting healthy lifestyles for their pets. Each collar will push 30kb of biometric data in JSON format every 2 seconds to a collection platform that will process and analyze the data providing health trending information back to the pet owners and veterinarians via a web portal. Management has tasked you to architect the collection platform ensuring the following requirements are met.

Provide the ability for real-time analytics of the inbound biometric data. Ensure processing of the biometric data is highly durable, elastic and parallel. The results of the analytic processing should be persisted for data mining.

Which architecture outlined below will meet the initial requirements for the collection platform?

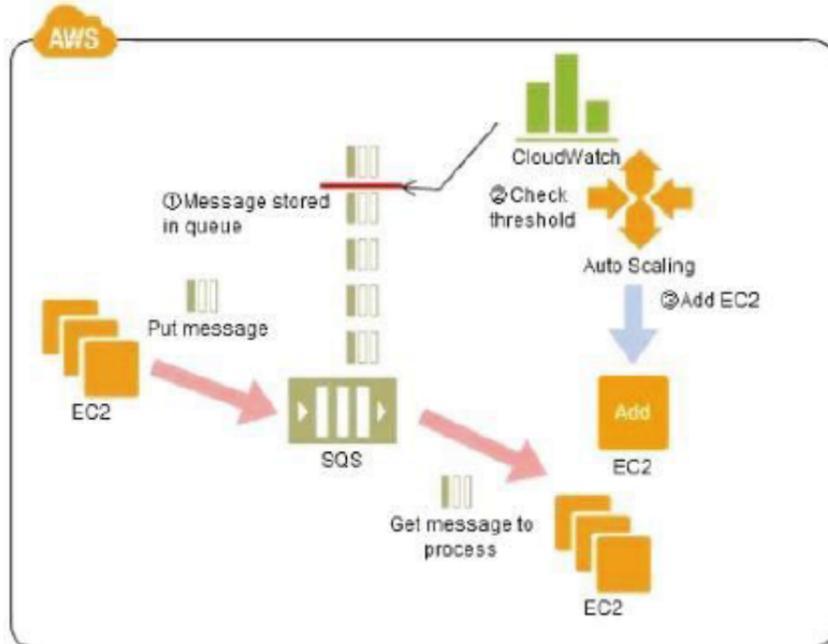
- A. Utilize S3 to collect the inbound sensor data, analyze the data from S3 with a daily scheduled Data Pipeline and save the results to a Redshift Cluster.

- B. Utilize Amazon Kinesis to collect the inbound sensor data, analyze the data with Kinesis clients and save the results to a Red shift cluster using EMR.
- C. Utilize SQS to collect the inbound sensor data analyze the data from SQS with Amazon Kinesis and save the results to a Microsoft SQL Server RDS instance.
- D. Utilize EMR to collect the inbound sensor data, analyze the data from EUR with Amazon Kinesis and save me results to Dynamo DB.

**Answer: B**

**NEW QUESTION 204**

Refer to the architecture diagram above of a batch processing solution using Simple Queue Service (SQS) to set up a message queue between EC2 instances which are used as batch processors Cloud Watch monitors the number of Job requests (queued messages) and an Auto Scaling group adds or deletes batch sewers automatically based on parameters set in Cloud Watch alarms. You can use this architecture to implement which of the following features in a cost effective and efficient manner?



- A. Reduce the overall lime for executing jobs through parallel processing by allowing a busy EC2 instance that receives a message to pass it to the next instance in a daisy-chain setup.
- B. Implement fault tolerance against EC2 instance failure since messages would remain in SQS and worn can continue with recovery of EC2 instances implement fault tolerance against SQS failure by backing up messages to 53.
- C. Implement message passing between EC2 instances within a batch by exchanging messages through SQS.
- D. Coordinate number of EC2 instances with number of job requests automatically thus Improving cost effectiveness.
- E. Handle high priority jobs before lower priority jobs by assigning a priority metadata fie Id to SQS messages.

**Answer: D**

**Explanation:**

Reference:

There are cases where a large number of batch jobs may need processing, and where the jobs may need to be re-prioritized.

For example, one such case is one where there are differences between different levels of services for unpaid users versus subscriber users (such as the time until publication) in services enabling, for example, presentation files to be uploaded for publication from a web browser. When the user uploads a presentation file, the conversion processes, for example, for publication are performed as batch processes on the system side, and the file is published after the conversion. Is it then necessary to be able to assign the level of priority to the batch processes for each type of subscriber.

Explanation of the Cloud Solution/Pattern

A queue is used in controlling batch jobs. The queue need only be provided with priority numbers. Job requests are controlled by the queue, and the job requests in the queue are processed by a batch server. In Cloud computing, a highly reliable queue is provided as a service, which you can use to structure a highly reliable batch system with ease. You may prepare multiple queues depending on priority levels, with job requests put into the queues depending on their priority levels, to apply prioritization to batch processes. The performance (number) of batch servers corresponding to a queue must be in accordance with the priority level thereof.

Implementation

In AWS, the queue service is the Simple Queue Service (SQS). Multiple SQS queues may be prepared to prepare queues for indMdual priority levels (with a priority queue and a secondary queue).

Moreover, you may also use the message Delayed Send function to delay process execution. Use SQS to prepare multiple queues for the indMdual priority levels. Place those processes to be executed immediately (job requests) in the high priority queue. Prepare numbers of batch servers, for processing the job requests of the queues, depending on the priority levels.

Queues have a message "Delayed Send" function. You can use this to delay the time for starting a process.

Configuration

Benefits

You can increase or decrease the number of servers for processing jobs to change automatically the processing speeds of the priority queues and secondary queues.

You can handle performance and service requirements through merely increasing or decreasing the number of EC2 instances used in job processing.

Even if an EC2 were to fail, the messages (jobs) would remain in the queue service, enabling processing to be continued immediately upon recovery of the EC2 instance, producing a system that is robust to failure.

Cautions

Depending on the balance between the number of EC2 instances for performing the processes and the number of messages that are queued, there may be cases where processing in the secondary queue may be completed first, so you need to monitor the processing speeds in the primary queue and the secondary queue.

**NEW QUESTION 208**

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 resu lting 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 applicatio
- 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 applicatio
- 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 loa
- 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 212**

A customer has established an AWS Direct Connect connection to AWS. The link is up and routes are being advertised from the customer's end, however the customer is unable to connect from EC2 instances inside its VPC to servers residing in its datacenter.

Which of the following options provide a viable solution to remedy this situation? (Choose 2 answers)

- A. Add a route to the route table with an IPsec VPN connection as the target.
- B. Enable route propagation to the virtual pinnate gateway (VGW).
- C. Enable route propagation to the customer gateway (CGW).
- D. Modify the route table of all Instances using the 'route' command.
- E. Modify the Instances VPC subnet route table by adding a route back to the customer's on-premises environment.

**Answer: AC**

**NEW QUESTION 214**

You are implementing AWS Direct Connect. You intend to use AWS public service end points such as Amazon S3, across the AWS Direct Connect link. You want other Internet traffic to use your existing link to an Internet Service Provider.

What is the correct way to configure AWS Direct connect for access to services such as Amazon S3?

- A. Configure a public Interface on your AWS Direct Connect link Configure a static route via your AWS Direct Connect link that points to Amazon S3 Advertise a default route to AWS using BGP.
- B. Create a private interface on your AWS Direct Connect lin
- C. Configure a static route via your AWS Direct connect link that points to Amazon S3 Configure specific routes to your network in your VPC,
- D. Create a public interface on your AWS Direct Connect link Redistribute BGP routes into your existing routing infrastructure advertise specific routes for your network to AWS.
- E. Create a private interface on your AWS Direct connect lin
- F. Redistribute BGP routes into your existing routing infrastructure and advertise a default route to AWS.

**Answer: C**

**NEW QUESTION 217**

You have deployed a three-tier web application in a VPC with a CIDR block of 10.0.0.0/28. You initially deploy two web servers, two application servers, two database servers and one NAT instance for a total of seven EC2 instances. The web, application and database servers are deployed across two availability zones (AZs). You also deploy an ELB in front of the two web servers, and use Route53 for DNS. Web traffic gradually increases in the first few days following the deployment, so you attempt to double the number of instances in each tier of the application to handle the new load. Unfortunately some of these new instances fail to launch.

Which of the following could be the root cause? (Choose 2 answers)

- A. AWS reserves the first and the last private IP address in each subnet's CIDR block so you do not have enough addresses left to launch all of the new EC2 instances
- B. The Internet Gateway (IGW) of your VPC has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
- C. The ELB has scaled-up, adding more instances to handle the traffic spike, reducing the number of available private IP addresses for new instance launches
- D. AWS reserves one IP address in each subnet's CIDR block for Route53 so you do not have enough addresses left to launch all of the new EC2 instances

E. AW5 reserves the first four and the last IP address in each subnet's CIDR block so you do not have enough addresses left to launch all of the new EC2 instances

**Answer:** CE

#### NEW QUESTION 221

You are tasked with moving a legacy application from a virtual machine running inside your datacenter to an Amazon VPC. Unfortunately, this app requires access to a number of on-premises services and no one who configured the app still works for your company. Even worse, there's no documentation for it. What will allow the application running inside the VPC to reach back and access its internal dependencies without being reconfigured? (Choose 3 answers)

- A. An AWS Direct Connect link between the VPC and the network housing the internal services.
- B. An Internet Gateway to allow a VPN connection.
- C. An Elastic IP address on the VPC instance
- D. An IP address space that does not conflict with the one on-premises
- E. Entries in Amazon Route 53 that allow the Instance to resolve its dependencies' IP addresses
- F. A VM Import of the current virtual machine

**Answer:** ADF

#### Explanation:

AWS Direct Connect

AWS Direct Connect makes it easy to establish a dedicated network connection from your premises to AWS. Using AWS Direct Connect, you can establish private connectivity between AWS, your datacenter, office, or colocation environment, which in many cases can reduce your network costs, increase bandwidth throughput, and provide a more consistent network experience than Internet-based connections.

AWS Direct Connect lets you establish a dedicated network connection between your network and one of the AWS Direct Connect locations. Using industry standard 802.1Q VLANs, this dedicated connection can be partitioned into multiple virtual interfaces. This allows you to use the same connection to access public resources such as objects stored in Amazon S3 using public IP address space, and private resources

such as Amazon EC2 instances running within an Amazon Virtual Private Cloud (VPC) using private IP space, while maintaining network separation between the public and private environments. Virtual interfaces can be reconfigured at any time to meet your changing needs.

What is AWS Direct Connect?

AWS Direct Connect links your internal network to an AWS Direct Connect location over a standard 1-gigabit or 10-gigabit Ethernet fiber-optic cable. One end of the cable is connected to your router, the other to an AWS Direct Connect router. With this connection in place, you can create virtual interfaces directly to the AWS cloud (for example, to Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Simple Storage Service (Amazon S3)) and to Amazon Virtual Private Cloud (Amazon VPC), bypassing Internet service providers in your network path. An AWS Direct Connect location provides access to Amazon Web Services in the region it is associated with, as well as access to other US regions. For example, you can provision a single connection to any AWS Direct Connect location in the US and use it to access public AWS services in all US Regions and AWS GovCloud (US).

The following diagram shows how AWS Direct Connect interfaces with your network.

Requirements

To use AWS Direct Connect, your network must meet one of the following conditions:

Your network is colocated with an existing AWS Direct Connect location. For more information on available AWS Direct Connect locations, go to <http://aws.amazon.com/directconnect/>.

You are working with an AWS Direct Connect partner who is a member of the AWS Partner Network (APN). For a list of AWS Direct Connect partners who can help you connect, go to <http://aws.amazon.com/directconnect>

You are working with an independent service provider to connect to AWS Direct Connect. In addition, your network must meet the following conditions:

Connections to AWS Direct Connect require single-mode fiber, 1000BASE-LX (1310nm) for 1-gigabit Ethernet, or 10GBASE-LR (1310nm) for 10-gigabit Ethernet. Auto Negotiation for the port must be disabled. You must support 802.1Q VLANs across these connections.

Your network must support Border Gateway Protocol (BGP) and BGP MD5 authentication. Optionally, you may configure Bidirectional Forwarding Detection (BFD).

To connect to Amazon Virtual Private Cloud (Amazon VPC), you must first do the following: Provide a private Autonomous System Number (ASN). Amazon allocates a private IP address in the 169.x.x.x range to you.

Create a virtual private gateway and attach it to your VPC. For more information about creating a virtual private gateway, see [Adding a Hardware Virtual Private Gateway to Your VPC in the Amazon VPC User Guide](#).

To connect to public AWS products such as Amazon EC2 and Amazon S3, you need to provide the following:

A public ASN that you own (preferred) or a private ASN.

Public IP addresses (/31) (that is, one for each end of the BGP session) for each BGP session. If you do not have public IP addresses to assign to this connection, log on to AWS and then open a ticket with AWS Support.

The public routes that you will advertise over BGP.

#### NEW QUESTION 223

A corporate web application is deployed within an Amazon Virtual Private Cloud (VPC) and is connected to the corporate data center via an IPsec VPN. The application must authenticate against the on-premises LDAP server. After authentication, each logged-in user can only access an Amazon Simple Storage Service (S3) keyspace specific to that user.

Which two approaches can satisfy these objectives? (Choose 2 answers)

- A. Develop an identity broker that authenticates against IAM Security Token service to assume a Lambda role in order to get temporary AWS security credentials. The application calls the identity broker to get AWS temporary security credentials with access to the appropriate S3 bucket.
- B. The application authenticates against LDAP and retrieves the name of an IAM role associated with the user.
- C. The application then calls the IAM Security Token Service to assume that IAM role. The application can use the temporary credentials to access the appropriate S3 bucket.
- D. Develop an identity broker that authenticates against LDAP and then calls IAM Security Token Service to get IAM federated user credentials. The application calls the identity broker to get IAM federated user credentials with access to the appropriate S3 bucket.
- E. The application authenticates against LDAP. The application then calls the AWS Identity and Access Management (IAM) Security service to log in to IAM using the LDAP credentials. The application can use the IAM temporary credentials to access the appropriate S3 bucket.
- F. The application authenticates against IAM Security Token Service using the LDAP credentials. The application uses those temporary AWS security credentials to access the appropriate S3 bucket.

**Answer:** BC

#### NEW QUESTION 227

Your company has an on-premises multi-tier PHP web application, which recently experienced downtime due to a large burst in web traffic due to a company announcement. Over the coming days, you are expecting similar announcements to drive similar unpredictable bursts, and are looking to find ways to quickly improve your infrastructure's ability to handle unexpected increases in traffic.

The application currently consists of 2 tiers: a web tier which consists of a load balancer and several Linux Apache web servers as well as a database tier which hosts a Linux server hosting a MySQL database. Which scenario below will provide full site functionality, while helping to improve the ability of your application in the short timeframe required?

- A. Failover environment: Create an S3 bucket and configure it for website hosting.
- B. Migrate your DNS to Route53 using zone file import, and leverage Route53 DNS failover to failover to the S3 hosted website.
- C. Hybrid environment: Create an AMI, which can be used to launch web servers in EC2. Create an Auto Scaling group, which uses the AMI to scale the web tier based on incoming traffic.
- D. Leverage Elastic Load Balancing to balance traffic between on-premises web servers and those hosted in AWS.
- E. Offload traffic from on-premises environment: Setup a CloudFront distribution, and configure CloudFront to cache objects from a custom origin.
- F. Choose to customize your object cache behavior, and select a TTL that objects should exist in cache.
- G. Migrate to AWS: Use VM Import/Export to quickly convert an on-premises web server to an AMI.
- H. Create an Auto Scaling group, which uses the imported AMI to scale the web tier based on incoming traffic.
- I. Create an RDS read replica and setup replication between the RDS instance and on-premises MySQL server to migrate the database.

**Answer: C**

#### NEW QUESTION 230

Your company produces customer-commissioned one-of-a-kind skiing helmets combining high fashion with custom technical enhancements. Customers can show off their individuality on the ski slopes and have access to head-up-displays, GPS rear-view cams, and any other technical innovation they wish to embed in the helmet.

The current manufacturing process is data-rich and complex, including assessments to ensure that the custom electronics and materials used to assemble the helmets are to the highest standards. Assessments are a mixture of human and automated assessments; you need to add a new set of assessment to model the failure modes of the custom electronics using GPUs with CUDA, across a cluster of servers with low-latency networking.

What architecture would allow you to automate the existing process using a hybrid approach and ensure that the architecture can support the evolution of processes over time?

- A. Use AWS Data Pipeline to manage movement of data & meta-data and assessments. Use an auto-scaling group of G2 instances in a placement group.
- B. Use Amazon Simple Workflow (SWF) to manage assessments, movement of data & meta-data. Use an auto-scaling group of G2 instances in a placement group.
- C. Use Amazon Simple Workflow (SWF) to manage assessments, movement of data & meta-data. Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O Virtualization).
- D. Use AWS Data Pipeline to manage movement of data & meta-data and assessments. Use an auto-scaling group of C3 instances with SR-IOV (Single Root I/O virtualization).

**Answer: B**

#### NEW QUESTION 235

You're running an application on-premises due to its dependency on non-x86 hardware and want to use AWS for data backup. Your backup application is only able to write to POSIX-compatible block-based storage. You have 140TB of data and would like to mount it as a single folder on your file server. Users must be able to access portions of this data while the backups are taking place. What backup solution would be most appropriate for this use case?

- A. Use Storage Gateway and configure it to use Gateway-Cached volumes.
- B. Configure your backup software to use S3 as the target for your data backups.
- C. Configure your backup software to use Glacier as the target for your data backups.
- D. Use Storage Gateway and configure it to use Gateway-Stored volume.

**Answer: A**

#### Explanation:

##### Gateway-Cached Volume Architecture

Gateway-cached volumes let you use Amazon Simple Storage Service (Amazon S3) as your primary data storage while retaining frequently accessed data locally in your storage gateway. Gateway-cached volumes minimize the need to scale your on-premises storage infrastructure, while still providing your applications with low-latency access to their frequently accessed data. You can create storage volumes up to 32 TiB in size and attach to them as iSCSI devices from your on-premises application servers. Your gateway stores data that you write to these volumes in Amazon S3 and retains recently read data in your on-premises storage gateway's cache and upload buffer storage.

Gateway-cached volumes can range from 1 GiB to 32 TiB in size and must be rounded to the nearest GiB. Each gateway configured for gateway-cached volumes can support up to 32 volumes for a total maximum storage volume of 1,024 TiB (1 PiB).

In the gateway-cached volume solution, AWS Storage Gateway stores all your on-premises application data in a storage volume in Amazon S3.

The following diagram provides an overview of the AWS Storage Gateway-cached volume deployment.

After you've installed the AWS Storage Gateway software appliance—the virtual machine (VM)—on a host in your data center and activated it, you can use the AWS Management Console to provision storage

volumes backed by Amazon S3. You can also provision storage volumes programmatically using the AWS Storage Gateway API or the AWS SDK libraries. You then mount these storage volumes to your on-premises application servers as iSCSI devices.

You also allocate disks on-premises for the VM. These on-premises disks serve the following purposes: Disks for use by the gateway as cache storage - As your applications write data to the storage volumes in AWS, the gateway initially stores the data on the on-premises disks referred to as cache storage before uploading the data to Amazon S3. The cache storage acts as the on-premises durable store for data that is waiting to upload to Amazon S3 from the upload buffer.

The cache storage also lets the gateway store your application's recently accessed data on-premises for low-latency access. If your application requests data, the gateway first checks the cache storage for the data before checking Amazon S3.

You can use the following guidelines to determine the amount of disk space to allocate for cache storage. Generally, you should allocate at least 20 percent of your existing file store size as cache storage. Cache storage should also be larger than the upload buffer. This latter guideline helps ensure cache storage is large enough to persistently hold all data in the upload buffer that has not yet been uploaded to Amazon S3.

Disks for use by the gateway as the upload buffer - To prepare for upload to Amazon S3, your gateway also stores incoming data in a staging area, referred to as an upload buffer. Your gateway uploads this buffer data over an encrypted Secure Sockets Layer (SSL) connection to AWS, where it is stored encrypted in Amazon S3.

You can take incremental backups, called snapshots, of your storage volumes in Amazon S3. These point-in-time snapshots are also stored in Amazon S3 as Amazon EBS snapshots. When you take a new snapshot, only the data that has changed since your last snapshot is stored. You can initiate snapshots on a scheduled or one-time basis. When you delete a snapshot, only the data not needed for any other snapshots is removed.

You can restore an Amazon EBS snapshot to a gateway storage volume if you need to recover a backup of your data. Alternatively, for snapshots up to 16 TiB in

size, you can use the snapshot as a starting point for a new Amazon EBS volume. You can then attach this new Amazon EBS volume to an Amazon EC2 instance.

All gateway-cached volume data and snapshot data is stored in Amazon S3 encrypted at rest using server-side encryption (SSE). However, you cannot access this data with the Amazon S3 API or other tools such as the Amazon S3 console.

#### NEW QUESTION 240

An administrator is using Amazon CloudFormation to deploy a three tier web application that consists of a web tier and application tier that will utilize Amazon DynamoDB for storage when creating the CloudFormation template which of the following would allow the application instance access to the DynamoDB tables without exposing API credentials?

- A. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and associate the Role to the application instances by referencing an instance profile.
- B. Use the Parameter section in the Cloud Formation template to have the user input Access and Secret Keys from an already created IAM user that has the permissions required to read and write from the required DynamoDB table.
- C. Create an Identity and Access Management Role that has the required permissions to read and write from the required DynamoDB table and reference the Role in the instance profile property of the application instance.
- D. Create an identity and Access Management user in the CloudFormation template that has permissions to read and write from the required DynamoDB table, use the GetAtt function to retrieve the Access and secret keys and pass them to the application instance through user-data.

**Answer: C**

#### NEW QUESTION 243

You are designing an S3-TLS solution that requires HTTPS clients to be authenticated by the Web server using client certificate authentication. The solution must be resilient.

Which of the following options would you consider for configuring the web server infrastructure? (Choose 2 answers)

- A. Configure ELB with TCP listeners on TCP/443. And place the Web servers behind it.
- B. Configure your Web servers with HTTPS. Place the Web servers in a Route53 Record Set and configure health checks against all Web servers.
- C. Configure ELB with HTTPS listeners, and place the Web servers behind it.
- D. Configure your web servers as the origins for a Cloud Front distribution.
- E. Use custom SSL certificates on your Cloud Front distribution.

**Answer: AB**

#### NEW QUESTION 248

You are designing a photo sharing mobile app the application will store all pictures in a single Amazon S3 bucket.

Users will upload pictures from their mobile device directly to Amazon S3 and will be able to view and download their own pictures directly from Amazon S3.

You want to configure security to handle potentially millions of users in the most secure manner possible. What should your server-side application do when a new user registers on the photo sharing mobile application?

- A. Create a set of long-term credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app and use them to access Amazon S3.
- B. Record the user's Information in Amazon RDS and create a role in IAM with appropriate permission
- C. When the user uses their mobile app create temporary credentials using the AWS Security Token Service 'Assume Role' function Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- D. Record the user's Information In Amazon DynamoDB
- E. When the user uses their mobile app create temporary credentials using AWS Security Token Service with appropriate permissions Store these credentials in the mobile app's memory and use them to access Amazon S3 Generate new credentials the next time the user runs the mobile app.
- F. Create IAM user
- G. Assign appropriate permissions to the IAM user Generate an access key and secret key for the IAM user, store them in the mobile app and use these credentials to access Amazon S3.
- H. Create an IAM user
- I. Update the bucket policy with appropriate permissions for the IAM user Generate an access Key and secret Key for the IAM user, store them In the mobile app and use these credentials to access Amazon S3.

**Answer: B**

#### NEW QUESTION 251

A benefits enrollment company is hosting a 3-tier web application running in a VPC on AWS which includes a NAT (Network Address Translation) instance in the public Web tier. There is enough provisioned capacity for the expected workload for the new fiscal year benefit enrollment period plus some extra overhead Enrollment proceeds nicely for two days and then the web tier becomes unresponsive, upon investigation using CloudWatch and other monitoring tools it is discovered that there is an extremely large and unanticipated amount of inbound traffic coming from a set of 15 specific IP addresses over port 80 from a country where the benefits company has no customers. The web tier instances are so overloaded that benefit enrollment administrators cannot even SSH into them. Which actMty would be useful in defending against this attack?

- A. Create a custom route table associated with the web tier and block the attacking IP addresses from the IGW (Internet Gateway)
- B. Change the EIP (Elastic IP Address) of the NAT instance in the web tier subnet and update the Main Route Table with the new EIP
- C. Create 15 Security Group rules to block the attacking IP addresses over port 80
- D. Create an inbound NACL (Network Access control list) associated with the web tier subnet with deny rules to block the attacking IP addresses

**Answer: D**

#### Explanation:

Use AWS Identity and Access Management (IAM) to control who in your organization has permission to create and manage security groups and network ACLs (NACL). Isolate the responsibilities and roles for better defense. For example, you can give only your network administrators or security admin the permission to manage the security groups and restrict other roles.

#### NEW QUESTION 253

An AWS customer runs a public blogging website. The site users upload two million blog entries a month. The average blog entry size is 200 KB. The access rate to blog entries drops to negligible 6 months after publication and users rarely access a blog entry 1 year after publication. Additionally, blog entries have a high update rate during the first 3 months following publication, this drops to no updates after 6 months. The customer wants to use CloudFront to improve his user's load times.

Which of the following recommendations would you make to the customer?

- A. Duplicate entries into two different buckets and create two separate CloudFront distributions where 53 access is restricted only to Cloud Front identity
- B. Create a CloudFront distribution with "US" Europe price class for US/ Europe users and a different CloudFront distribution with All Edge Locations' for the remaining users.
- C. Create a CloudFront distribution with 53 access restricted only to the CloudFront identity and partition the blog entry's location in 53 according to the month it was uploaded to be used with CloudFront behaviors.
- D. Create a CloudFront distribution with Restrict Viewer Access Forward Query string set to true and minimum TTL of 0.

**Answer: C**

#### NEW QUESTION 254

.....

## Relate Links

**100% Pass Your AWS-Solution-Architect-Associate Exam with ExamBible Prep Materials**

<https://www.exambible.com/AWS-Solution-Architect-Associate-exam/>

## Contact us

We are proud of our high-quality customer service, which serves you around the clock 24/7.

Viste - <https://www.exambible.com/>