

# Exam Questions AWS-Solution-Architect-Associate

Amazon AWS Certified Solutions Architect - Associate

<https://www.2passeasy.com/dumps/AWS-Solution-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

Can a user get a notification of each instance start / terminate configured with Auto Scaling?

- A. Yes, if configured with the Launch Config
- B. Yes, always
- C. Yes, if configured with the Auto Scaling group
- D. No

**Answer:** C

#### Explanation:

The user can get notifications using SNS if he has configured the notifications while creating the Auto Scaling group.

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

#### NEW QUESTION 3

Amazon EBS provides the ability to create backups of any Amazon EC2 volume into what is known as

- A. snapshots
- B. images
- C. instance backups
- D. mirrors

**Answer:** A

#### Explanation:

Amazon allows you to make backups of the data stored in your EBS volumes through snapshots that can later be used to create a new EBS volume.

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

#### NEW QUESTION 4

One of the criteria for a new deployment is that the customer wants to use AWS Storage Gateway. However you are not sure whether you should use gateway-cached volumes or gateway-stored volumes or even what the differences are. Which statement below best describes those differences?

- A. Gateway-cached lets you store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets locally
- B. Gateway-stored enables you to configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3.
- C. Gateway-cached is free whilst gateway-stored is not.
- D. Gateway-cached is up to 10 times faster than gateway-stored.
- E. Gateway-stored lets you store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets locally
- F. Gateway-cached enables you to configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3.

**Answer:** A

#### Explanation:

Volume gateways provide cloud-backed storage volumes that you can mount as Internet Small Computer System Interface (iSCSI) devices from your on-premises application servers. The gateway supports the following volume configurations:

Gateway-cached volumes — You store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets locally. Gateway-cached volumes offer a substantial cost savings on primary storage and minimize the need to scale your storage on-premises. You also retain low-latency access to your frequently accessed data.

Gateway-stored volumes — If you need low-latency access to your entire data set, you can configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3. This configuration provides durable and inexpensive off-site backups that you can recover to your local data center or Amazon EC2. For example, if you need replacement capacity for disaster recovery, you can recover the backups to Amazon EC2.

Reference: <http://docs.aws.amazon.com/storagegateway/latest/userguide/volume-gateway.html>

#### NEW QUESTION 5

After setting up a Virtual Private Cloud (VPC) network, a more experienced cloud engineer suggests that to achieve low network latency and high network throughput you should look into setting up a placement group. You know nothing about this, but begin to do some research about it and are especially curious about its limitations. Which of the below statements is wrong in describing the limitations of a placement group?

- A. Although launching multiple instance types into a placement group is possible, this reduces the likelihood that the required capacity will be available for your launch to succeed.
- B. A placement group can span multiple Availability Zones.
- C. You can't move an existing instance into a placement group.
- D. A placement group can span peered VPCs

**Answer:** B

**Explanation:**

A placement group is a logical grouping of instances within a single Availability Zone. Using placement groups enables applications to participate in a low-latency, 10 Gbps network. Placement groups are recommended for applications that benefit from low network latency, high network throughput, or both. To provide the lowest latency, and the highest packet-per-second network performance for your placement group, choose an instance type that supports enhanced networking. Placement groups have the following limitations:

The name you specify for a placement group a name must be unique within your AWS account. A placement group can't span multiple Availability Zones.

Although launching multiple instance types into a placement group is possible, this reduces the likelihood that the required capacity will be available for your launch to succeed. We recommend using the same instance type for all instances in a placement group.

You can't merge placement groups. Instead, you must terminate the instances in one placement group, and then relaunch those instances into the other placement group.

A placement group can span peered VPCs; however, you will not get full-bisection bandwidth between instances in peered VPCs. For more information about VPC peering connections, see VPC Peering in the Amazon VPC User Guide.

You can't move an existing instance into a placement group. You can create an AM from your existing instance, and then launch a new instance from the AMI into a placement group.

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

**NEW QUESTION 6**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 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**

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

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

**Answer:** A

**Explanation:**

File change notifications can be sent via email to users following the resource with Amazon Simple Email Service (Amazon SES), an easy-to-use, cost-effective email solution.

Reference: [http://media.amazonwebservices.com/architecturecenter/AWS\\_ac\\_ra\\_filesync\\_08.pdf](http://media.amazonwebservices.com/architecturecenter/AWS_ac_ra_filesync_08.pdf)

**NEW QUESTION 9**

Amazon EC2 provides a . It is an HTTP or HTTPS request that uses the HTTP verbs GET or POST.

- A. web database
- B. .net framework
- C. Query API
- D. C library

**Answer:** C

**Explanation:**

Amazon EC2 provides a Query API. These requests are HTTP or HTTPS requests that use the HTTP verbs GET or POST and a Query parameter named Action. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/APIReference/making-api-requests.html>

**NEW QUESTION 10**

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

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

**Answer:** B

**Explanation:**

Key pairs consist of a public and private key, where you use the private key to create a digital signature, and then AWS uses the corresponding public key to validate the signature. Key pairs are used only for Amazon EC2 and Amazon CloudFront. Reference: <http://docs.aws.amazon.com/general/latest/gr/aws-sec-cred-types.html>

**NEW QUESTION 10**

An organization has three separate AWS accounts, one each for development, testing, and production. The organization wants the testing team to have access to certain AWS resources in the production account. How can the organization achieve this?

- A. It is not possible to access resources of one account with another account.
- B. Create the IAM roles with cross account access.
- C. Create the IAM user in a test account, and allow it access to the production environment with the IAM policy.
- D. Create the IAM users with cross account acces

**Answer:** B

**Explanation:**

An organization has multiple AWS accounts to isolate a development environment from a testing or production environment. At times the users from one account need to access resources in the other account, such as promoting an update from the development environment to the production environment. In this case the IAM role with cross account access will provide a solution. Cross account access lets one account share access to their resources with users in the other AWS accounts. Reference: [http://media.amazonwebservices.com/AWS\\_Security\\_Best\\_Practices.pdf](http://media.amazonwebservices.com/AWS_Security_Best_Practices.pdf)

**NEW QUESTION 11**

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/whatdisk.html>

**NEW QUESTION 12**

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

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

**Answer:** D

**Explanation:**

A security group acts as a virtual firewall that controls the traffic for one or more instances. When you launch an instance, you associate one or more security groups with the instance. You add rules to each security group that allow traffic to or from its associated instances. You can modify the rules for a security group at any time; the new rules are automatically applied to all instances that are associated with the security group. Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/using-network-security.html>



#### NEW QUESTION 15

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

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

**Answer: B**

#### Explanation:

By default, all AWS accounts are limited to 5 Elastic IP addresses per region for each AWS account, because public (IPv4) Internet addresses are a scarce public resource. AWS strongly encourages you to use an EIP primarily for load balancing use cases, and use DNS hostnames for all other inter-node communication. If you feel your architecture warrants additional EIPs, you would need to complete the Amazon EC2 Elastic IP Address Request Form and give reasons as to your need for additional addresses. Reference:

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

#### NEW QUESTION 16

You are setting up a VPC and you need to set up a public subnet within that VPC. Which following requirement must be met for this subnet to be considered a public subnet?

- A. Subnet's traffic is not routed to an internet gateway but has its traffic routed to a virtual private gateway.
- B. Subnet's traffic is routed to an internet gateway.
- C. Subnet's traffic is not routed to an internet gateway.
- D. None of these answers can be considered a public subnet

**Answer: B**

#### Explanation:

A virtual private cloud (VPC) is a virtual network dedicated to your AWS account. It is logically isolated from other virtual networks in the AWS cloud. You can launch your AWS resources, such as Amazon EC2 instances, into your VPC. You can configure your VPC: you can select its IP address range, create subnets, and configure route tables, network gateways, and security settings.

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

If a subnet's traffic is routed to an internet gateway, the subnet is known as a public subnet.

If a subnet doesn't have a route to the internet gateway, the subnet is known as a private subnet.

If a subnet doesn't have a route to the internet gateway, but has its traffic routed to a virtual private gateway, the subnet is known as a VPN-only subnet.

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

#### NEW QUESTION 18

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 19

Which of the below mentioned options is not available when an instance is launched by Auto Scaling with EC2 Classic?

- A. Public IP
- B. Elastic IP
- C. Private DNS
- D. Private IP

**Answer: B**

#### Explanation:

Auto Scaling supports both EC2 classic and EC2-VPC. When an instance is launched as a part of EC2 classic, it will have the public IP and DNS as well as the private IP and DNS.

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

#### NEW QUESTION 22

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

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

**Answer:** A

#### Explanation:

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

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

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

#### NEW QUESTION 23

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

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

**Answer:** C

#### Explanation:

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

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

#### NEW QUESTION 24

You need to set up a complex network infrastructure for your organization that will be reasonably easy to deploy, replicate, control, and track changes on. Which AWS service would be best to use to help you accomplish this?

- A. AWS Import/Export
- B. AWS CloudFormation
- C. Amazon Route 53
- D. Amazon CloudWatch

**Answer:** B

#### Explanation:

AWS CloudFormation is a service that helps you model and set up your Amazon Web Services resources so that you can spend less time managing those resources and more time focusing on your applications that run in AWS. You create a template that describes all the AWS resources that you want (like Amazon EC2 instances or Amazon RDS DB instances), and AWS CloudFormation takes care of provisioning and configuring those resources for you. You don't need to indMdually create and configure AWS resources and figure out what's dependent on what. AWS CloudFormation handles all of that.

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

#### NEW QUESTION 25

In an experiment, if the minimum size for an Auto Scaling group is 1 instance, which of the following statements holds true when you terminate the running instance?

- A. Auto Scaling must launch a new instance to replace it.
- B. Auto Scaling will raise an alarm and send a notification to the user for action.
- C. Auto Scaling must configure the schedule actMty that terminates the instance after 5 days.
- D. Auto Scaling will terminate the experimen

**Answer:** A

#### Explanation:

If the minimum size for an Auto Scaling group is 1 instance, when you terminate the running instance, Auto Scaling must launch a new instance to replace it.

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

#### NEW QUESTION 30

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

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

**Answer:** C

**Explanation:**

Snapshots with AWS Marketplace product codes can't be made public. Reference:

<http://docs.amazonwebservices.com/AWSEC2/latest/UserGuide/ebs-modifying-snapshot-permissions.html>

**NEW QUESTION 33**

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 35**

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

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

**Answer:** B

**Explanation:**

Amazon Simple Queue Service (Amazon SQS) is a messaging queue service that handles message or workflows between other components in a system.

Amazon SQS supports an unlimited number of queues and unlimited number of messages per queue for each user. Please be aware that Amazon SQS automatically deletes messages that have been in the queue for more than 4 days.

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

**NEW QUESTION 36**

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

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

**Answer:** C

**Explanation:**

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

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

**NEW QUESTION 38**

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

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

**Answer:** B

**Explanation:**

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

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

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

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

### NEW QUESTION 39

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

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

**Answer:** C

#### Explanation:

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

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

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

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

### NEW QUESTION 41

What would be the best way to retrieve the public IP address of your EC2 instance using the CLI?

- A. Using tags
- B. Using traceroute
- C. Using ipconfig
- D. Using instance metadata

**Answer:** D

#### Explanation:

To determine your instance's public IP address from within the instance, you can use instance metadata. Use the following command to access the public IP address: For Linux use, \$ curl

<http://169.254.169.254/latest/meta-data/public-ipv4>, and for Windows use, \$ wget <http://169.254.169.254/latest/meta-data/public-ipv4>.

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

### NEW QUESTION 43

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 44

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

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

**Answer:** B

#### Explanation:

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

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

### NEW QUESTION 49

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

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

**Answer:**



D

**Explanation:**

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

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

**NEW QUESTION 53**

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 56**

Which of the following statements is true of creating a launch configuration using an EC2 instance?

- A. The launch configuration can be created only using the Query APIs.
- B. Auto Scaling automatically creates a launch configuration directly from an EC2 instance.
- C. A user should manually create a launch configuration before creating an Auto Scaling group.
- D. The launch configuration should be created manually from the AWS CL

**Answer: B**

**Explanation:**

You can create an Auto Scaling group directly from an EC2 instance. When you use this feature, Auto Scaling automatically creates a launch configuration for you as well.

Reference:

<http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/create-lc-with-instanceID.html>

**NEW QUESTION 61**

You need to set up a high level of security for an Amazon Relational Database Service (RDS) you have just built in order to protect the confidential information stored in it. What are all the possible security groups that RDS uses?

- A. DB security groups, VPC security groups, and EC2 security groups.
- B. DB security groups only.
- C. EC2 security groups only.
- D. VPC security groups, and EC2 security group

**Answer: A**

**Explanation:**

A security group controls the access to a DB instance. It does so by allowing access to IP address ranges or Amazon EC2 instances that you specify.

Amazon RDS uses DB security groups, VPC security groups, and EC2 security groups. In simple terms, a DB security group controls access to a DB instance that is not in a VPC, a VPC security group controls access to a DB instance inside a VPC, and an Amazon EC2 security group controls access to an EC2 instance and can be used with a DB instance.

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

**NEW QUESTION 62**

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

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

**Answer: A**

**Explanation:**

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

#### NEW QUESTION 63

A user has created an application which will be hosted on EC2. The application makes calls to DynamoDB to fetch certain data. The application is using the DynamoDB SDK to connect with from the EC2 instance. Which of the below mentioned statements is true with respect to the best practice for security in this scenario?

- A. The user should create an IAM user with DynamoDB access and use its credentials within the application to connect with DynamoDB
- B. The user should attach an IAM role with DynamoDB access to the EC2 instance
- C. The user should create an IAM role, which has EC2 access so that it will allow deploying the application
- D. The user should create an IAM user with DynamoDB and EC2 acces
- E. Attach the user with the application so that it does not use the root account credentials

**Answer: B**

#### Explanation:

With AWS IAM a user is creating an application which runs on an EC2 instance and makes requests to AWS, such as DynamoDB or S3 calls. Here it is recommended that the user should not create an IAM user and pass the user's credentials to the application or embed those credentials inside the application. Instead, the user should use roles for EC2 and give that role access to DynamoDB /S3. When the roles are attached to EC2, it will give temporary security credentials to the application hosted on that EC2, to connect with DynamoDB / S3.  
Reference: [http://docs.aws.amazon.com/IAM/latest/UserGuide/Using\\_WorkingWithGroupsAndUsers.html](http://docs.aws.amazon.com/IAM/latest/UserGuide/Using_WorkingWithGroupsAndUsers.html)

#### NEW QUESTION 64

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

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

**Answer: A**

#### Explanation:

The user can join multiple provisioned IOPS volumes together in a RAID 1 configuration to achieve better fault tolerance. RAID 1 does not provide a write performance improvement; it requires more bandwidth than non-RAID configurations since the data is written simultaneously to multiple volumes.  
Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/raid-config.html>

#### NEW QUESTION 65

Which one of the following answers is not a possible state of Amazon CloudWatch Alarm?

- A. INSUFFICIENT\_DATA
- B. ALARM
- C. OK
- D. STATUS\_CHECK\_FAILED

**Answer: D**

#### Explanation:

Amazon CloudWatch Alarms have three possible states: OK: The metric is within the defined threshold ALARM: The metric is outside of the defined threshold INSUFFICIENT\_DATA: The alarm has just started, the metric is not available, or not enough data is available for the metric to determine the alarm state  
Reference: <http://docs.aws.amazon.com/AmazonCloudWatch/latest/DeveloperGuide/AlarmThatSendsEmail.html>

#### NEW QUESTION 68

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

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

**Answer: A**

#### Explanation:

You can choose between three EBS volume types to best meet the needs of their workloads: General Purpose (SSD), Provisioned IOPS (SSD), and Magnetic. General Purpose (SSD) is the new, SSD-backed, general purpose EBS volume type that we recommend as the default choice for customers. General Purpose (SSD) volumes are suitable for a broad range of workloads, including small to medium sized databases, development and test environments, and boot volumes. Provisioned IOPS (SSD) volumes offer storage with consistent and low-latency performance, and are designed for I/O intensive applications such as large relational or NoSQL databases. Magnetic volumes provide the lowest cost per gigabyte of all EBS volume types. Magnetic volumes are ideal for workloads where data is accessed infrequently, and applications where the lowest storage cost is important.  
Reference: <https://aws.amazon.com/ec2/faqs/>

#### NEW QUESTION 73

Do you need to shutdown your EC2 instance when you create a snapshot of EBS volumes that serve as root devices?

- A. No, you only need to shutdown an instance before deleting it.
- B. Yes
- C. No, the snapshot would turn off your instance automatically.
- D. No

**Answer:** B

**Explanation:**

Yes, to create a snapshot for Amazon EBS volumes that serve as root devices, you should stop the instance before taking the snapshot.

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

**NEW QUESTION 77**

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 82**

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

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

**Answer:** C

**Explanation:**

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

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

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

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

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

**NEW QUESTION 87**

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

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

**Answer:** A

**Explanation:**

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

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

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

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

**NEW QUESTION 91**

Name the disk storage supported by Amazon Elastic Compute Cloud (EC2).

- A. None of these
- B. Amazon AppStream store
- C. Amazon SNS store
- D. Amazon Instance Store

**Answer:** D

**Explanation:**

Amazon EC2 supports the following storage options: Amazon Elastic Block Store (Amazon EBS) Amazon EC2 Instance Store Amazon Simple Storage Service (Amazon S3)

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

**NEW QUESTION 96**

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 98**

Select the correct statement: Within Amazon EC2, when using Linux instances, the device name /dev/sda1 is .

- A. reserved for EBS volumes
- B. recommended for EBS volumes
- C. recommended for instance store volumes
- D. reserved for the root device

**Answer:** D

**Explanation:**

Within Amazon EC2, when using a Linux instance, the device name /dev/sda1 is reserved for the root device.

Reference: [http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/device\\_naming.html](http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/device_naming.html)

**NEW QUESTION 99**

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 100**

Which one of the below is not an AWS Storage Service?

- A. Amazon S3
- B. Amazon Glacier
- C. Amazon CloudFront
- D. Amazon EBS

**Answer:** C

**Explanation:**

AWS Storage Services are: Amazon S3

Amazon Glacier Amazon EBS

AWS Storage Gateway



Reference: <https://console.aws.amazon.com/console>

#### NEW QUESTION 105

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

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

**Answer:** A

#### Explanation:

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

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

#### NEW QUESTION 110

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

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

**Answer:** B

#### Explanation:

Amazon S3 is storage for the internet. It's a simple storage service that offers software developers a highly-scalable, reliable, and low-latency data storage infrastructure at very low costs.

AWS charges less where their costs are less.

For example, their costs are lower in the US Standard Region than in the US West (Northern California) Region.

Reference: <https://aws.amazon.com/s3/faqs/>

#### NEW QUESTION 111

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

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

**Answer:** C

#### Explanation:

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

Reference: <http://docs.aws.amazon.com/gettingstarted/latest/swf/website-hosting-intro.html>

#### NEW QUESTION 115

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

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

**Answer:** C

#### Explanation:

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

A template is a JSON-formatted text file that describes your AWS infrastructure. Templates include several major sections.

The Resources section is the only section that is required.

The first character in the template must be an open brace ({), and the last character must be a closed brace (}). The following template fragment shows the template structure and sections.

Reference: <http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/template-anatomy.html>

#### NEW QUESTION 118

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 120

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

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

**Answer: A**

#### Explanation:

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

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

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

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

#### NEW QUESTION 124

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 126

What is the data model of DynamoDB?

- A. Since DynamoDB is schema-less, there is no data model.
- B. "Items", with Keys and one or more Attribute; and "Attribute", with Name and Value.
- C. "Table", a collection of Items; "Items", with Keys and one or more Attribute; and "Attribute", with Name and Value.
- D. "Database", which is a set of "Tables", which is a set of "Items", which is a set of "Attributes".

**Answer: C**

#### Explanation:

The data model of DynamoDB is: "Table", a collection of Items;

"Items", with Keys and one or more Attribute; "Attribute", with Name and Value.

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

#### NEW QUESTION 127

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

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

**Answer:** C

**Explanation:**

You can list AWS Import/Export jobs with the ListJobs command using the command line client or REST API.

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

**NEW QUESTION 129**

You're trying to delete an SSL certificate from the IAM certificate store, and you're getting the message "Certificate: <certificate-id> is being used by CloudFront."

Which of the following statements is probably the reason why you are getting this error?

- A. Before you can delete an SSL certificate, you need to either rotate SSL certificates or revert from using a custom SSL certificate to using the default CloudFront certificate.
- B. You can't delete SSL certificates . You need to request it from AWS.
- C. Before you can delete an SSL certificate, you need to set up the appropriate access level in IAM
- D. Before you can delete an SSL certificate you need to set up https on your serve

**Answer:** A

**Explanation:**

CloudFront is a web service that speeds up distribution of your static and dynamic web content, for example, .html, .css, .php, and image files, to end users.

Every CloudFront web distribution must be associated either with the default CloudFront certificate or with a custom SSL certificate. Before you can delete an SSL certificate, you need to either rotate SSL certificates (replace the current custom SSL certificate with another custom SSL certificate) or revert from using a custom SSL certificate to using the default CloudFront certificate.

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

**NEW QUESTION 130**

You are setting up some IAM user policies and have also become aware that some services support resource-based permissions, which let you attach policies to the service's resources instead of to IAM users or groups. Which of the below statements is true in regards to resource-level permissions?

- A. All services support resource-level permissions for all actions.
- B. Resource-level permissions are supported by Amazon CloudFront
- C. All services support resource-level permissions only for some actions.
- D. Some services support resource-level permissions only for some action

**Answer:** D

**Explanation:**

AWS Identity and Access Management is a web service that enables Amazon Web Services (AWS) customers to manage users and user permissions in AWS. The service is targeted at organizations with multiple users or systems that use AWS products such as Amazon EC2, Amazon RDS, and the AWS Management Console. With IAM, you can centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access.

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

The resource-level permissions service supports IAM policies in which you can specify individual resources using Amazon Resource Names (ARNs) in the policy's Resource element.

Some services support resource-level permissions only for some actions.

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

**NEW QUESTION 132**

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 a 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 135

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 typ

**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 140

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 142

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

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

**Answer: C**

#### Explanation:

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

Volume gateways Gateway-cached volumes Gateway-stored volumes

Gateway-virtual tape library (VTL)

Reference:

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

#### NEW QUESTION 145

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

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

**Answer: D**

#### Explanation:

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

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

#### NEW QUESTION 146

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

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



D. Yes, they are allowed but only with approval.

**Answer:** D

**Explanation:**

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

**NEW QUESTION 151**

A user has created an ELB with the availability zone US-East-1A. The user wants to add more zones to ELB to achieve High Availability. How can the user add more zones to the existing ELB?

- A. The user should stop the ELB and add zones and instances as required
- B. The only option is to launch instances in different zones and add to ELB
- C. It is not possible to add more zones to the existing ELB
- D. The user can add zones on the fly from the AWS console

**Answer:** D

**Explanation:**

The user has created an Elastic Load Balancer with the availability zone and wants to add more zones to the existing ELB. The user can do so in two ways:

From the console or CLI, add new zones to ELB;

Launch instances in a separate AZ and add instances to the existing ELB. Reference:

<http://docs.aws.amazon.com/ElasticLoadBalancing/latest/DeveloperGuide/enable-disable-az.html>

**NEW QUESTION 156**

A user has launched a large EBS backed EC2 instance in the US-East-1a region. The user wants to achieve Disaster Recovery (DR) for that instance by creating another small instance in Europe. How can the user achieve DR?

- A. Copy the instance from the US East region to the EU region
- B. Use the "Launch more like this" option to copy the instance from one region to another
- C. Copy the running instance using the "Instance Copy" command to the EU region
- D. Create an AMI of the instance and copy the AMI to the EU region
- E. Then launch the instance from the EU AMI

**Answer:** D

**Explanation:**

To launch an EC2 instance it is required to have an AMI in that region. If the AMI is not available in that region, then create a new AMI or use the copy command to copy the AMI from one region to the other region.

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

**NEW QUESTION 158**

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 161**

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.htm>

#### NEW QUESTION 166

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 167

A user has defined an AutoScaling termination policy to first delete the instance with the nearest billing hour. AutoScaling has launched 3 instances in the US-East-1A region and 2 instances in the US-East-1 B region. One of the instances in the US-East-1B region is running nearest to the billing hour. Which instance will AutoScaling terminate first while executing the termination action?

- A. Random Instance from US-East-1A
- B. Instance with the nearest billing hour in US-East-1 B
- C. Instance with the nearest billing hour in US-East-1A
- D. Random instance from US-East-1B

**Answer:** C

#### Explanation:

Even though the user has configured the termination policy, before AutoScaling selects an instance to terminate, it first identifies the Availability Zone that has more instances than the other Availability Zones used by the group. Within the selected Availability Zone, it identifies the instance that matches the specified termination policy.

Reference: <http://docs.aws.amazon.com/AutoScaling/latest/DeveloperGuide/us-termination-policy.html>

#### NEW QUESTION 168

A user is planning a highly available application deployment with EC2. Which of the below mentioned options will not help to achieve HA?

- A. Elastic IP address
- B. PIOPS
- C. AMI
- D. Availability Zones

**Answer:** B

#### Explanation:

In Amazon Web Service, the user can achieve HA by deploying instances in multiple zones. The elastic IP helps the user achieve HA when one of the instances is down but still keeps the same URL. The AM helps launching the new instance. The PIOPS is for the performance of EBS and does not help for HA. Reference: [http://media.amazonwebservices.com/AWS\\_Web\\_Hosting\\_Best\\_Practices.pdf](http://media.amazonwebservices.com/AWS_Web_Hosting_Best_Practices.pdf)

#### NEW QUESTION 173

Your manager has asked you to set up a public subnet with instances that can send and receive internet traffic, and a private subnet that can't receive traffic directly from the internet, but can initiate traffic to the internet (and receive responses) through a NAT instance in the public subnet. Hence, the following 3 rules need to be allowed:

Inbound SSH traffic.

Web servers in the public subnet to read and write to MS SQL servers in the private subnet Inbound RDP traffic from the Microsoft Terminal Services gateway in the public private subnet What are the respective ports that need to be opened for this?

- A. Ports 22,1433,3389
- B. Ports 21,1433,3389
- C. Ports 25,1433,3389
- D. Ports 22,1343,3999

**Answer:** A

#### Explanation:

A network access control list (ACL) is an optional layer of security that acts as a firewall for controlling traffic in and out of a subnet. You might set up network ACLs with rules similar to your security groups in order to add an additional layer of security to your VPC.

The following ports are recommended by AWS for a single subnet with instances that can receive and send Internet traffic and a private subnet that can't receive traffic directly from the Internet. However, it can initiate traffic to the Internet (and receive responses) through a NAT instance in the public subnet. Inbound SSH traffic. Port 22

Web servers in the public subnet to read and write to MS SQL servers in the private subnet. Port 1433 Inbound RDP traffic from the Microsoft Terminal Services gateway in the public private subnet. Port 3389 Reference:

[http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC\\_Appendix\\_NACLs.html#VPC\\_Appendix\\_NACLs\\_Scenario\\_2](http://docs.aws.amazon.com/AmazonVPC/latest/UserGuide/VPC_Appendix_NACLs.html#VPC_Appendix_NACLs_Scenario_2)

#### NEW QUESTION 176

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 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 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 179

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 181

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 186

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

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

**Answer:** D

#### Explanation:

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

Reference:

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

#### NEW QUESTION 188

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

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

**Answer:** A

**Explanation:**

Amazon Simple Notification Service (Amazon SNS) is a fast, filexible, and fully managed push messaging service. Amazon SNS makes it simple and cost-effective to push to mobile devices, such as iPhone, iPad, Android, Kindle Fire, and internet connected smart devices, as well as pushing to other distributed services.  
Reference: <http://aws.amazon.com/sns>

**NEW QUESTION 192**

Which one of the following can't be used as an origin server with Amazon CloudFront?

- A. A web server running in your infrastructure
- B. Amazon S3
- C. Amazon Glacier
- D. A web server running on Amazon EC2 instances

**Answer:** C

**Explanation:**

Amazon CloudFront is designed to work with Amazon S3 as your origin server, customers can also use Amazon C|oudFront with origin sewers running on Amazon EC2 instances or with any other custom origin.  
Reference: <http://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/distribution-web.html>

**NEW QUESTION 197**

You have written a CloudFormation template that creates I Elastic Load Balancer fronting 2 EC2 Instances. Which section of the template should you edit so that the DNS of the load balancer is returned upon creation of the stack?

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

**Answer:** B

**Explanation:**

You can use AWS CloudFormation's sample templates or create your own templates to describe the AWS resources, and any associated dependencies or runtime parameters, required to run your application.  
Reference:  
<http://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/outputs-section-structure.html>

**NEW QUESTION 202**

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

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

**Answer:** A

**Explanation:**

Amazon SES is an outbound-only email-sending service that provides an easy, cost-effective way for you to send email.  
There are several ways that you can send an email by using Amazon SES. You can use the Amazon SES console, the Simple Mail Transfer Protocol (SMTP) interface, or you can call the Amazon SES API. Amazon SES console—This method is the quickest way to set up your system  
Reference: <http://docs.aws.amazon.com/ses/latest/DeveloperGuide/Welcome.html>

**NEW QUESTION 204**

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

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

**Answer:** A

**Explanation:**

On-Demand instances allow you to pay for the instances that you use by the hour, with no long-term commitments or up-front payments.  
Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/reserved-instances-offerings.html>

**NEW QUESTION 205**

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



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

**Answer:** A

**Explanation:**

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

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

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

**NEW QUESTION 206**

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

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

**Answer:** A

**Explanation:**

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

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

CloudWatch Metrics

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

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

Reference:

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

**NEW QUESTION 209**

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

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

**Answer:** C

**Explanation:**

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

Benefits

Enhanced Durability

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

Server-native Mrroring technology. Both approaches safeguard your data in the event of a DB Instance failure or loss of an Availability Zone.

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

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

#### Increased Availability

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

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

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

Unlike Single-AZ deployments, 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 213

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

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

**Answer:** A

#### Explanation:

##### Point-In-Time Recovery

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

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

##### Note

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

### NEW QUESTION 218

Company B is launching a new game app for mobile devices. Users will log into the game using their existing social media account to streamline data capture.

Company B would like to directly save player data and scoring information from the mobile app to a DynamoDB table named Score Data

When a user saves their game the progress data will be stored to the Game state S3 bucket. What is the best approach for storing data to DynamoDB and S3?

- A. Use an EC2 Instance that is launched with an EC2 role providing access to the Score Data DynamoDB table and the GameState S3 bucket that communicates with the mobile app via web services.
- B. Use temporary security credentials that assume a role providing access to the Score Data DynamoDB table and the Game State S3 bucket using web identity federation.
- C. Use Login with Amazon allowing users to sign in with an Amazon account providing the mobile app with access to the Score Data DynamoDB table and the Game State S3 bucket.
- D. Use an IAM user with access credentials assigned a role providing access to the Score Data DynamoDB table and the Game State S3 bucket for distribution with the mobile app.

**Answer:** B

#### Explanation:

##### Web Identity Federation

Imagine that you are creating a mobile app that accesses AWS resources, such as a game that runs on a mobile device and stores player and score information using Amazon S3 and DynamoDB. When you write such an app, you'll make requests to AWS services that must be signed with an AWS access key. However, we strongly recommend that you do not embed or distribute long-term AWS credentials with apps that a user downloads to a device, even in an encrypted store. Instead, build your app so that it requests temporary AWS security credentials dynamically when needed using web identity federation. The supplied temporary



credentials map to an AWS role that has only the permissions needed to perform the tasks required by the mobile app.

With web identity federation, you don't need to create custom sign-in code or manage your own user identities. Instead, users of your app can sign in using a well-known identity provider (IdP) - such as Login with Amazon, Facebook, Google, or any other OpenID Connect (OIDC)-compatible IdP, receive an authentication token, and then exchange that token for temporary security credentials in AWS that map to an IAM role with permissions to use the resources in your AWS account. Using an IdP helps you keep your AWS account secure, because you don't have to embed and distribute longterm security credentials with your application.

For most scenarios, we recommend that you use Amazon Cognito because it acts as an identity broker and does much of the federation work for you. For details, see the following section, Using Amazon Cognito for Mobile Apps.

If you don't use Amazon Cognito, then you must write code that interacts with a web IdP (Login with Amazon, Facebook, Google, or any other OIDC-compatible IdP) and then calls the Assume Role With Web Identity API to trade the authentication token you get from those IdPs for AWS temporary security credentials. If you have already used this approach for existing apps, you can continue to use it.

Using Amazon Cognito for Nlobile Apps

The preferred way to use web identity federation is to use Amazon Cognito. For example, Adele the developer is building a game for a mobile device where user data such as scores and profiles is stored in Amazon S3 and Amazon DynamoDB. Adele could also store this data locally on the device and use Amazon Cognito to keep it synchronized across devices. She knows that for security and maintenance reasons, long-term AWS security credentials should not be distributed with the game. She also knows that the game might have a large number of users. For all of these reasons, she does not want to create new user identities in IAM for each player. Instead, she builds the game so that users can sign in using an identity that they've already established with a well-known identity provider, such as Login with Amazon, Facebook, Google, or any OpenID Connect (OIDC)-compatible identity provider.

Her game can take advantage of the authentication mechanism from one of these providers to validate the user's identity.

To enable the mobile app to access her AWS resources, Adele first registers for a developer 10 with her chosen IdPs. She also configures the application with each of these providers. In her AWS account that contains the Amazon S3 bucket and DynamoDB table for the game, Adele uses Amazon Cognito to create IAM roles that precisely define permissions that the game needs. If she is using an OIDC IdP, she also creates an IAM OIDC identity provider entity to establish trust between her AWS account and the IdP.

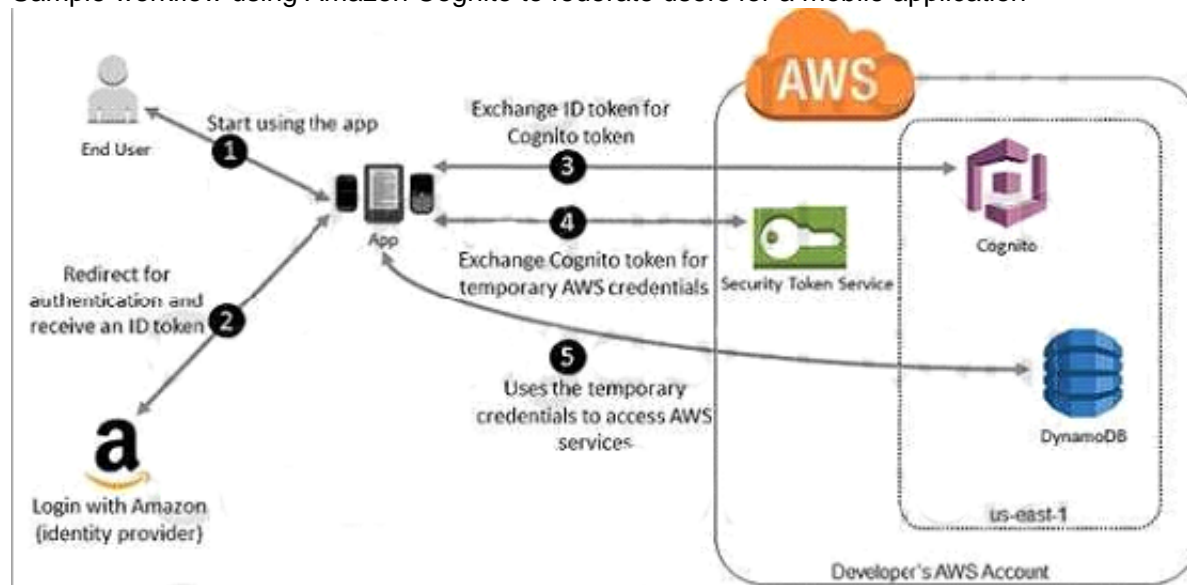
In the app's code, Adele calls the sign-in interface for the IdP that she configured previously. The IdP handles all the details of letting the user sign in, and the app gets an OAuth access token or OIDC ID token from the provider. Adele's app can trade this authentication information for a set of temporary security credentials that consist of an AWS access key ID, a secret access key, and a session token.

The app can then use these credentials to access web services offered by AWS. The app is limited to the permissions that are defined in the role that it assumes.

The following figure shows a simplified flow for how this might work, using Login with Amazon as the IdP.

For Step 2, the app can also use Facebook, Google, or any OIDC-compatible identity provider, but that's not shown here.

Sample workflow using Amazon Cognito to federate users for a mobile application



A customer starts your app on a mobile device. The app asks the user to sign in. The app uses Login with Amazon resources to accept the user's credentials. The app uses Cognito APIs to exchange the Login with Amazon ID token for a Cognito token. The app requests temporary security credentials from AWS STS, passing the Cognito token.

The temporary security credentials can be used by the app to access any AWS resources required by the app to operate. The role associated with the temporary security credentials and its assigned policies determines what can be accessed.

Use the following process to configure your app to use Amazon Cognito to authenticate users and give your app access to AWS resources. For specific steps to accomplish this scenario, consult the documentation for Amazon Cognito.

(Optional) Sign up as a developer with Login with Amazon, Facebook, Google, or any other OpenID Connect (OIDC)-compatible identity provider and configure one or more apps with the provider. This step is optional because Amazon Cognito also supports unauthenticated (guest) access for your users.

Go to Amazon Cognito in the AWS IAM Management Console. Use the Amazon Cognito wizard to create an identity pool, which is a container that Amazon Cognito uses to keep end user identities organized for your apps. You can share identity pools between apps. When you set up an identity pool, Amazon Cognito creates one or two IAM roles (one for authenticated identities, and one for unauthenticated "guest" identities) that define permissions for Amazon Cognito users.

Download and integrate the AWS SDK for iOS or the AWS SDK for Android with your app, and import the files required to use Amazon Cognito.

Create an instance of the Amazon Cognito credentials provider, passing the identity pool ID, your AWS account number, and the Amazon Resource Name (ARN) of the roles that you associated with the identity pool. The Amazon Cognito wizard in the AWS Management Console provides sample code to help you get started.

When your app accesses an AWS resource, pass the credentials provider instance to the client object, which passes temporary security credentials to the client. The permissions for the credentials are based on the role or roles that you defined earlier.

## NEW QUESTION 222

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 223

You have recently joined a startup company building sensors to measure street noise and air quality in urban areas. The company has been running a pilot deployment of around 100 sensors for 3 months each sensor uploads 1KB of sensor data every minute to a backend hosted on AWS.

During the pilot, you measured a peak of 10 IOPS on the database, and you stored an average of 3GB of sensor data per month in the database.

The current deployment consists of a load-balanced auto scaled Ingestion layer using EC2 instances and a PostgreSQL RDS database with 500GB standard storage.

The pilot is considered a success and your CEO has managed to get the attention of some potential investors. The business plan requires a deployment of at least 1000 sensors which needs to be supported by the backend. You also need to store sensor data for at least two years to be able to compare year over year Improvements.

To secure funding, you have to make sure that the platform meets these requirements and leaves room for further scaling. Which setup will meet the requirements?

- A. Add an SQS queue to the ingestion layer to buffer writes to the RDS instance
- B. Ingest data into a DynamoDB table and move old data to a Redshift cluster
- C. Replace the RDS instance with a 6 node Redshift cluster with 96TB of storage
- D. Keep the current architecture but upgrade RDS storage to 3TB and IOPS provisioned IOPS

**Answer: C**

#### NEW QUESTION 227

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 Redshift 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 S3 with Amazon Kinesis and save the results to DynamoDB.

**Answer: B**

#### NEW QUESTION 229

You are responsible for a legacy web application whose server environment is approaching end of life. You would like to migrate this application to AWS as quickly as possible, since the application environment currently has the following limitations:

The VM's single 10GB VMDK is almost full. The virtual network interface still uses the 10Mbps driver, which leaves your 100Mbps WAN connection completely underutilized.

It is currently running on a highly customized Windows VM within a VMware environment. You do not have the installation media.

This is a mission-critical application with an RTO (Recovery Time Objective) of 8 hours, RPO (Recovery Point Objective) of 1 hour. How could you best migrate this application to AWS while meeting your business continuity requirements?

- A. Use the EC2 VM Import Connector for vCenter to import the VM into EC2.
- B. Use Import/Export to import the VM as an EBS snapshot and attach to EC2.
- C. Use S3 to create a backup of the VM and restore the data into EC2.
- D. Use the ec2-bundle-instance API to import an image of the VM into EC2.

**Answer: A**

#### NEW QUESTION 233

An International company has deployed a multi-tier web application that relies on DynamoDB in a single region. For regulatory reasons, they need disaster recovery capability in a separate region with a Recovery Time Objective of 2 hours and a Recovery Point Objective of 24 hours. They should synchronize their data on a regular basis and be able to provision the web application rapidly using CloudFormation.

The objective is to minimize changes to the existing web application, control the throughput of DynamoDB used for the synchronization of data, and synchronize only the modified elements.

Which design would you choose to meet these requirements?

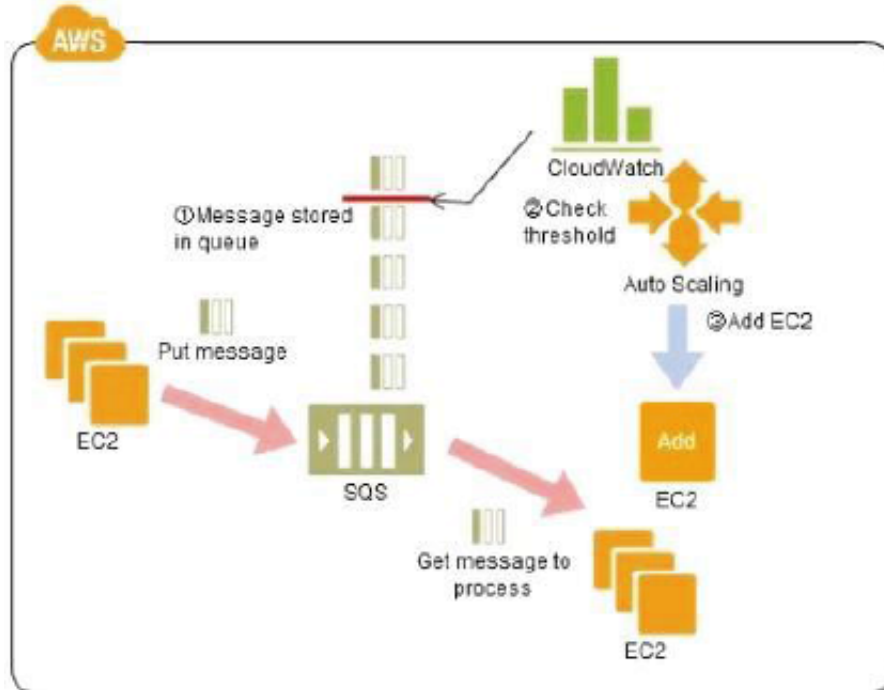
- A. Use AWS Data Pipeline to schedule a DynamoDB cross-region copy once a day.
- B. Create a 'Last updated' attribute in your DynamoDB table that would represent the timestamp of the last update and use it as a filter.
- C. Use EMR and write a custom script to retrieve data from DynamoDB in the current region using a SCAN operation and push it to DynamoDB in the second region.
- D. Use AWS Data Pipeline to schedule an export of the DynamoDB table to S3 in the current region once a day, then schedule another task immediately after it that will import data from S3 to DynamoDB in the other region.
- E. Send each item into an SQS queue in the second region; use an auto-scaling group behind the SQS queue to replay the write in the second region.



Answer: A

#### NEW QUESTION 234

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 servers 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 time 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 work can continue with recovery of EC2 instances implement fault tolerance against SQS failure by backing up messages to S3.
- 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 field 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 individual 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 individual 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 235

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

How would you do this while minimizing costs?

- A. Create an EBS backed private AMI which includes a fresh install of your application
- B. Develop a CloudFormation template which includes your AMI and the required EC2, AutoScaling, and ELB resources to support deploying the application

across Multiple- Availability-Zone

- C. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
- D. Deploy your application on EC2 instances within an Auto Scaling group across multiple availability zone
- E. Asynchronously replicate transactions from your on-premises database to a database instance in AWS across a secure VPN connection.
- F. Create an EBS backed private AMI which includes a fresh install of your 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 240**

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