

## AWS-Solution-Architect-Associate Dumps

### Amazon AWS Certified Solutions Architect - Associate

<https://www.certleader.com/AWS-Solution-Architect-Associate-dumps.html>



#### NEW QUESTION 1

In the context of AWS support, why must an EC2 instance be unreachable for 20 minutes rather than allowing customers to open tickets immediately?

- A. Because most reachability issues are resolved by automated processes in less than 20 minutes
- B. Because all EC2 instances are unreachable for 20 minutes every day when AWS does routine maintenance
- C. Because all EC2 instances are unreachable for 20 minutes when first launched
- D. Because of all the reasons listed here

**Answer: A**

#### Explanation:

An EC2 instance must be unreachable for 20 minutes before opening a ticket, because most reachability issues are resolved by automated processes in less than 20 minutes and will not require any action on the part of the customer. If the instance is still unreachable after this time frame has passed, then you should open a case with support.

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

#### NEW QUESTION 2

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

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

**Answer: B**

#### Explanation:

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

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

#### NEW QUESTION 3

You are looking at ways to improve some existing infrastructure as it seems a lot of engineering resources are being taken up with basic management and monitoring tasks and the costs seem to be excessive.

You are thinking of deploying Amazon ElastiCache to help. Which of the following statements is true in regards to ElastiCache?

- A. You can improve load and response times to user actions and queries however the cost associated with scaling web applications will be more.
- B. You can't improve load and response times to user actions and queries but you can reduce the cost associated with scaling web applications.
- C. You can improve load and response times to user actions and queries however the cost associated with scaling web applications will remain the same.
- D. You can improve load and response times to user actions and queries and also reduce the cost associated with scaling web applications.

**Answer: D**

#### Explanation:

Amazon ElastiCache is a web service that makes it easy to deploy and run Memcached or Redis protocol-compliant server nodes in the cloud. Amazon ElastiCache improves the performance of web applications by allowing you to retrieve information from a fast, managed, in-memory caching system, instead of relying entirely on slower disk-based databases. The service simplifies and offloads the management, monitoring and operation of in-memory cache environments, enabling your engineering resources to focus on developing applications.

Using Amazon ElastiCache, you can not only improve load and response times to user actions and queries, but also reduce the cost associated with scaling web applications.

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

#### NEW QUESTION 4

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

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

**Answer: D**

#### Explanation:

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

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

#### NEW QUESTION 5

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 6**

Does DynamoDB support in-place atomic updates?

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

**Answer:** A

**Explanation:**

DynamoDB supports in-place atomic updates.

Reference:

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

**NEW QUESTION 7**

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

- A. Amazon CloudFront
- B. AWS Direct Connect
- C. AWS CloudHSM
- D. AWS VPN CloudHub

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 8**

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 9**

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**

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

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

D. It can Import to Amazon EBS

**Answer:** C

**Explanation:**

AWS Import/Export supports: Import to Amazon S3

Export from Amazon S3 Import to Amazon EBS Import to Amazon Glacier

AWS Import/Export does not currently support export from Amazon EBS or Amazon Glacier. Reference:

<https://docs.aws.amazon.com/AWSImportExport/latest/DG/whatisdisk.html>

**NEW QUESTION 10**

In Amazon EC2, partial instance-hours are billed .

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

**Answer:** D

**Explanation:**

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

**NEW QUESTION 15**

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

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

**Answer:** B

**Explanation:**

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

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

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

**NEW QUESTION 18**

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 20**

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 doing 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 25

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

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

**Answer: C**

#### Explanation:

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

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

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

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

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

#### NEW QUESTION 27

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 31

is a fast, filexible, fully managed push messaging service.

- A. Amazon SNS
- B. Amazon SES
- C. Amazon SQS
- D. Amazon FPS

**Answer: A**

#### Explanation:

Amazon Simple Notification Service (Amazon SNS) is a fast, filexible, 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/?nc1=h\\_l2\\_as](http://aws.amazon.com/sns/?nc1=h_l2_as)

#### NEW QUESTION 36

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

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

**Answer: C**

#### Explanation:

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

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

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

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

#### NEW QUESTION 41

In Amazon RDS, security groups are ideally used to:

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

**Answer:** D

**Explanation:**

In Amazon RDS, security groups are used to control what IP addresses or EC2 instances can connect to your databases on a DB instance. When you first create a DB instance, its firewall prevents any database access except through rules specified by an associated security group. Reference: <http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/UsingWithRDS.html>

**NEW QUESTION 46**

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

**NEW QUESTION 49**

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

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 53**

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

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

**Answer:** D

**Explanation:**

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

Reference:

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

**NEW QUESTION 56**

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

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

**Answer:** C

**Explanation:**

Amazon Glacier supports various vault operations.

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

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

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

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

#### NEW QUESTION 61

A customer enquires about whether all his data is secure on AWS and is especially concerned about Elastic Map Reduce (EMR) so you need to inform him of some of the security features in place for AWS. Which of the below statements would be an incorrect response to your customers enquiry?

- A. Amazon EMR customers can choose to send data to Amazon S3 using the HTTPS protocol for secure transmission.
- B. Amazon S3 provides authentication mechanisms to ensure that stored data is secured against unauthorized access.
- C. Every packet sent in the AWS network uses Internet Protocol Security (IPsec).
- D. Customers may encrypt the input data before they upload it to Amazon S3.

**Answer: C**

#### Explanation:

Amazon S3 provides authentication mechanisms to ensure that stored data is secured against unauthorized access. Unless the customer who is uploading the data specifies otherwise, only that customer can access the data. Amazon EMR customers can also choose to send data to Amazon S3 using the HTTPS protocol for secure transmission. In addition, Amazon EMR always uses HTTPS to send data between Amazon S3 and Amazon EC2. For added security, customers may encrypt the input data before they upload it to Amazon S3 (using any common data compression tool); they then need to add a decryption step to the beginning of their cluster when Amazon EMR fetches the data from Amazon S3. Reference: <https://aws.amazon.com/elasticmapreduce/faqs/>

#### NEW QUESTION 65

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://d36cz9buwru1t.cloudfront.net/AWS\\_Disaster\\_Recovery.pdf](http://d36cz9buwru1t.cloudfront.net/AWS_Disaster_Recovery.pdf)

#### NEW QUESTION 69

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

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

**Answer: A**

#### Explanation:

You can set up a variety of failover configurations using Amazon Route 53 alias: weighted, latency, geolocation routing, and failover resource record sets. Active-active failover: Use this failover configuration when you want all of your resources to be available the majority of the time. When a resource becomes unavailable, Amazon Route 53 can detect that it's unhealthy and stop including it when responding to queries.

Active-passive failover: Use this failover configuration when you want a primary group of resources to be available the majority of the time and you want a secondary group of resources to be on standby in case all of the primary resources become unavailable. When responding to queries, Amazon Route 53 includes only the healthy primary resources. If all of the primary resources are unhealthy, Amazon Route 53 begins to include only the healthy secondary resources in response to DNS queries.

Active-active-passive and other mixed configurations: You can combine alias and non-alias resource record sets to produce a variety of Amazon Route 53 behaviors.

Reference: <http://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover.html>

#### NEW QUESTION 70

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

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

**Answer:** C

**Explanation:**

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

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

**NEW QUESTION 72**

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

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

**Answer:** B

**Explanation:**

Amazon Elastic Compute Cloud (Amazon EC2) provides scalable computing capacity in the Amazon Web Services (AWS) cloud. Using Amazon EC2 eliminates your need to invest in hardware up front, so you can develop and deploy applications faster. You can use Amazon EC2 to launch as many or as few virtual servers as you need, configure security and networking, and manage storage. Amazon EC2 enables you to scale up or down to handle changes in requirements or spikes in popularity, reducing your need to forecast traffic.

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

**NEW QUESTION 76**

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 80**

Does AWS CloudFormation support Amazon EC2 tagging?

- A. Yes, AWS CloudFormation supports Amazon EC2 tagging
- B. No, CloudFormation doesn't support any tagging
- C. No, it doesn't support Amazon EC2 tagging.
- D. It depends if the Amazon EC2 tagging has been defined in the template

**Answer:** A

**Explanation:**

In AWS CloudFormation, Amazon EC2 resources that support the tagging feature can also be tagged in an AWS template. The tag values can refer to template parameters, other resource names, resource attribute values (e.g. addresses), or values computed by simple functions (e.g., a concatenated list of strings).

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

**NEW QUESTION 84**

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 89**

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 94**

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

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

**Answer: D**

**Explanation:**

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

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

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

**NEW QUESTION 96**

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 101**

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 access
- 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 103**

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

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

**Answer: C**

**Explanation:**

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

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

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

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

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

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

**NEW QUESTION 107**

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

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

**Answer: D**

**Explanation:**

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

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

**NEW QUESTION 112**

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 113**

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

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

**Answer: C**

**Explanation:**

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

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

**NEW QUESTION 115**

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

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

**Answer: C**

**Explanation:**

The user cannot authorize an Amazon EC2 security group if it is in a different AWS Region than the RDS DB instance. The user can authorize an IP range or specify an Amazon EC2 security group in the same region that refers to an IP address in another region. In this case allow IP of US West inside US East's security group and open the RDS security group for US East region.  
Reference: [http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\\_WorkingWithSecurityGroups.html](http://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_WorkingWithSecurityGroups.html)

**NEW QUESTION 117**

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 119**

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 121**

A user is running a batch process which runs for 1 hour every day. Which of the below mentioned options is the right instance type and costing model in this case if the user performs the same task for the whole year?

- A. EBS backed instance with on-demand instance pricing.
- B. EBS backed instance with heavy utilized reserved instance pricing.
- C. EBS backed instance with low utilized reserved instance pricing.
- D. Instance store backed instance with spot instance pricing

**Answer: A**

**Explanation:**

For Amazon Web Services, the reserved instance helps the user save money if the user is going to run the same instance for a longer period. Generally if the user uses the instances around 30-40% annually it is recommended to use RI. Here as the instance runs only for 1 hour daily it is not recommended to have RI as it will be costlier. The user should use on-demand with EBS in this case.  
Reference: <http://aws.amazon.com/ec2/purchasing-options/reserved-instances/>

**NEW QUESTION 125**

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 130**

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

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

**Answer:** C

**Explanation:**

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

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

**NEW QUESTION 131**

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

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

**Answer:** A

**Explanation:**

With IAM, you can centrally manage users, security credentials such as access keys, and permissions that control which AWS resources users can access. In some cases, you might have an IAM user with full access to IAM and Amazon S3. If the IAM user assigns a bucket policy to an Amazon S3 bucket and doesn't specify the root user as a principal, the root user is denied access to that bucket. However, as the root user, you can still access the bucket by modifying the bucket policy to allow root user access.

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

**NEW QUESTION 133**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 136**

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 141**

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 144**

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

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

**Answer: B**

**Explanation:**

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

Reference: <http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/AMIs.htm>

**NEW QUESTION 147**

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

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

**Answer: A**

**Explanation:**

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

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

**NEW QUESTION 151**

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

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

**Answer: D**

**Explanation:**

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

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

**NEW QUESTION 153**

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

- A. You don't need to specify the resource identifier while terminating a resource.

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

**Answer: C**

**Explanation:**

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

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

**NEW QUESTION 156**

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

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

**Answer: C**

**Explanation:**

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

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

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

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

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

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

**NEW QUESTION 161**

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

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

**Answer: B**

**Explanation:**

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

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

**NEW QUESTION 162**

You have just set up your first Elastic Load Balancer (ELB) but it does not seem to be configured properly. You discover that before you start using ELB, you have to configure the listeners for your load balancer. Which protocols does ELB use to support the load balancing of applications?

- A. HTTP and HTTPS
- B. HTTP, HTTPS, TCP, SSL and SSH
- C. HTTP, HTTPS, TCP, and SSL
- D. HTTP, HTTPS, TCP, SSL and SFTP

**Answer: C**

**Explanation:**

Before you start using Elastic Load Balancing (ELB), you have to configure the listeners for your load balancer. A listener is a process that listens for connection requests. It is configured with a protocol and a port number for front-end (client to load balancer) and back-end (load balancer to back-end instance) connections. Elastic Load Balancing supports the load balancing of applications using HTTP, HTTPS (secure HTTP), TCP, and SSL (secure TCP) protocols. The HTTPS uses the SSL protocol to establish secure connections over the HTTP layer. You can also use SSL protocol to establish secure connections over the TCP layer.

The acceptable ports for both HTTPS/SSL and HTTP/TCP connections are 25, 80, 443, 465, 587, and 1024-65535.

Reference:

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

**NEW QUESTION 165**

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 169**

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 174**

Mike is appointed as Cloud Consultant in Netcrak Inc. Netcrak has the following VPCs set-up in the US East Region:

A VPC with CIDR block 10.10.0.0/16, a subnet in that VPC with CIDR block 10.10.1.0/24 A VPC with CIDR block 10.40.0.0/16, a subnet in that VPC with CIDR block 10.40.1.0/24

Netcrak Inc is trying to establish network connection between two subnets, a subnet with CIDR block 10.10.1.0/24 and another subnet with CIDR block 10.40.1.0/24. Which one of the following solutions should Mke recommend to Netcrak Inc?

- A. Create 2 Virtual Private Gateways and configure one with each VPC.
- B. Create one EC2 instance in each subnet, assign Elastic IPs to both instances, and configure a set up Site-to-Site VPN connection between both EC2 instances.
- C. Create a VPC Peering connection between both VPCs.
- D. Create 2 Internet Gateways, and attach one to each VP

**Answer:** C

**Explanation:**

A VPC peering connection is a networking connection between two VPCs that enables you to route traffic between them using private IP addresses. EC2 instances in either VPC can communicate with each other as if they are within the same network. You can create a VPC peering connection between your own VPCs, or with a VPC in another AWS account within a single region.

AWS uses the existing infrastructure of a VPC to create a VPC peering connection; it is neither a gateway nor a VPN connection, and does not rely on a separate piece of physical hardware.

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

**NEW QUESTION 176**

A favored client needs you to quickly deploy a database that is a relational database service with minimal administration as he wants to spend the least amount of time administering it. Which database would be the best option?

- A. Amazon SimpleDB
- B. Your choice of relational AMs on Amazon EC2 and EBS.
- C. Amazon RDS
- D. Amazon Redshift

**Answer:** C

**Explanation:**

Amazon Relational Database Service (Amazon RDS) is a web 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.

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: [https://aws.amazon.com/running\\_databases/#rds\\_anchor](https://aws.amazon.com/running_databases/#rds_anchor)

**NEW QUESTION 181**

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.htm>

**NEW QUESTION 182**

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

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

**Answer:** C

**Explanation:**

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

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

**NEW QUESTION 187**

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

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

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

**Answer:** A

**Explanation:**

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

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

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

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

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

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

**NEW QUESTION 188**

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 190**

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 193**

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 194**

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

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

**Answer:** C

**Explanation:**

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

1-minute periods

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

**NEW QUESTION 197**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 201**

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 205**

You are setting up your first Amazon Virtual Private Cloud (Amazon VPC) network so you decide you should probably use the AWS Management Console and the

VPC Wizard. Which of the following is not an option for network architectures after launching the "Start VPC Wizard" in Amazon VPC page on the AWS Management Console?

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

**Answer: B**

**Explanation:**

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

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

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

The four options are:

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

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

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

**NEW QUESTION 207**

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 209**

A user is trying to launch a similar EC2 instance from an existing instance with the option "Launch More like this". The AMI of the selected instance is deleted. What will happen in this case?

- A. AWS does not need an AMI for the "Launch more like this" option
- B. AWS will launch the instance but will not create a new AMI
- C. AWS will create a new AMI and launch the instance
- D. AWS will throw an error saying that the AMI is deregistered

**Answer: D**

**Explanation:**

If the user has deregistered the AMI of an EC2 instance and is trying to launch a similar instance with the option "Launch more like this", AWS will throw an error saying that the AMI is deregistered or not available.

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

**NEW QUESTION 214**

Your company has multiple IT departments, each with their own VPC. Some VPCs are located within the same AWS account, and others in a different AWS account. You want to peer together all VPCs to enable the IT departments to have full access to each others' resources. There are certain limitations placed on VPC peering. Which of the following statements is incorrect in relation to VPC peering?

- A. Private DNS values cannot be resolved between instances in peered VPCs.
- B. You can have up to 3 VPC peering connections between the same two VPCs at the same time.
- C. You cannot create a VPC peering connection between VPCs in different regions.
- D. You have a limit on the number active and pending VPC peering connections that you can have per VPC.

**Answer: B**

**Explanation:**

To create a VPC peering connection with another VPC, you need to be aware of the following limitations and rules:

You cannot create a VPC peering connection between VPCs that have matching or overlapping CIDR blocks.

You cannot create a VPC peering connection between VPCs in different regions.

You have a limit on the number active and pending VPC peering connections that you can have per VPC. VPC peering does not support transitive peering relationships; in a VPC peering connection, your VPC will not have access to any other VPCs that the peer VPC may be peered with. This includes VPC peering connections that are established entirely within your own AWS account.

You cannot have more than one VPC peering connection between the same two VPCs at the same time. The Maximum Transmission Unit (MTU) across a VPC peering connection is 1500 bytes.

A placement group can span peered VPCs; however, you will not get full-bisection bandwidth between instances in peered VPCs.

Unicast reverse path forwarding in VPC peering connections is not supported.

You cannot reference a security group from the peer VPC as a source or destination for ingress or egress rules in your security group. Instead, reference CIDR

blocks of the peer VPC as the source or destination of your security group's ingress or egress rules.  
Private DNS values cannot be resolved between instances in peered VPCs. Reference:  
<http://docs.aws.amazon.com/AmazonVPC/latest/PeeringGuide/vpc-peering-overview.html#vpc-peering-limitations>

**NEW QUESTION 219**

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

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

**Answer: C**

**Explanation:**

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

Reference:

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

**NEW QUESTION 220**

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

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

**Answer: D**

**Explanation:**

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

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

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

**NEW QUESTION 224**

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

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

**Answer: A**

**Explanation:**

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

You can generate and download a credential report that lists all users in your account and the status of their various credentials, including passwords, access keys, MFA devices, and signing certificates. You can get a credential report using the AWS Management Console, the AWS CLI, or the IAM API.

You can use credential reports to assist in your auditing and compliance efforts. You can use the report to audit the effects of credential lifecycle requirements, such as password rotation. You can provide the report to an external auditor, or grant permissions to an auditor so that he or she can download the report directly. You can generate a credential report as often as once every four hours. When you request a report, IAM first checks whether a report for the account has been generated within the past four hours. If so, the most recent report is downloaded. If the most recent report for the account is more than four hours old, or if there are no previous reports for the account, IAM generates and downloads a new report.

Credential reports are downloaded as comma-separated values (CSV) files.

You can open CSV files with common spreadsheet software to perform analysis, or you can build an application that consumes the CSV files programmatically and performs custom analysis. Reference: <http://docs.aws.amazon.com/IAM/latest/UserGuide/credential-reports.html>

**NEW QUESTION 226**

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 227**

After deploying a new website for a client on AWS, he asks if you can set it up so that if it fails it can be automatically redirected to a backup website that he has stored on a dedicated server elsewhere. You are wondering whether Amazon Route 53 can do this. Which statement below is correct in regards to Amazon Route 53?

- A. Amazon Route 53 can't help detect an outage
- B. You need to use another service.
- C. Amazon Route 53 can help detect an outage of your website and redirect your end users to alternate locations.
- D. Amazon Route 53 can help detect an outage of your website but can't redirect your end users to alternate locations.
- E. Amazon Route 53 can't help detect an outage of your website, but can redirect your end users to alternate locations.

**Answer:** B

**Explanation:**

With DNS Failover, Amazon Route 53 can help detect an outage of your website and redirect your end users to alternate locations where your application is operating properly.

Reference:

<http://aws.amazon.com/about-aws/whats-new/2013/02/11/announcing-dns-failover-for-route-53/>

**NEW QUESTION 231**

Which DNS name can only be resolved within Amazon EC2?

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

**Answer:** B

**Explanation:**

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

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

**NEW QUESTION 235**

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

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

**Answer:** D

**Explanation:**

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

Reference:

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

**NEW QUESTION 236**

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

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

**Answer:** D

**Explanation:**

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

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

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

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

Simplicity

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

**NEW QUESTION 240**

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 243**

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 246**

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

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

**Answer:** C

**Explanation:**

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

**NEW QUESTION 247**

You have written a CloudFormation template that creates 1 Elastic Load Balancer fronting 2 EC2 Instances. Which section of the template should you edit so that the DNS of the load balancer is returned upon creation of the stack?

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

**Answer:** B

**Explanation:**

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

**NEW QUESTION 251**

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

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

**Answer:** D

**Explanation:**

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

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

**NEW QUESTION 255**

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 257**

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 261**

A user has launched one EC2 instance in the US West region. The user wants to access the RDS instance launched in the US East region from that EC2 instance. How can the user configure the access for that EC2 instance?

- A. Configure the IP range of the US West region instance as the ingress security rule of RDS
- B. It is not possible to access RDS of the US East region from the US West region
- C. Open the security group of the US West region in the RDS security group's ingress rule
- D. Create an IAM role which has access to RDS and launch an instance in the US West region with it

**Answer:** A

**Explanation:**

The user cannot authorize an Amazon EC2 security group if it is in a different AWS Region than the RDS DB instance. The user can authorize an IP range or specify an Amazon EC2 security group in the same region that refers to an IP address in another region.

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

**NEW QUESTION 262**

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

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

**Answer:** A

**Explanation:**

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

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

**NEW QUESTION 263**

You have launched an EC2 instance with four (4) 500GB EBS Provisioned IOPS volumes attached. The EC2 Instance is EBS-Optimized and supports 500 Mbps throughput between EC2 and EBS. The two EBS volumes are configured as a single RAID 0 device, and each Provisioned IOPS volume is provisioned with 4,000 IOPS (4,000 16KB reads or writes) for a total of 16,000 random IOPS on the instance. The EC2 Instance initially delivers the expected 16,000 IOPS random read and write performance. Sometime later in order to increase the total random I/O performance of the instance, you add an additional two 500 GB EBS Provisioned IOPS volumes to the RAID. Each volume is provisioned to 4,000 IOPS like the original four for a total of 24,000 IOPS on the EC2 instance. Monitoring shows that the EC2 instance CPU utilization increased from 50% to 70%, but the total random IOPS measured at the instance level does not increase at all. What is the problem and a valid solution?

- A. Larger storage volumes support higher Provisioned IOPS rates: increase the provisioned volume storage of each of the 6 EBS volumes to 1TB
- B. The EBS-Optimized throughput limits the total IOPS that can be utilized: use an EBS-Optimized instance that provides larger throughput.
- C. Small block sizes cause performance degradation, limiting the I/O throughput, configure the instance device driver and file system to use 64KB blocks to increase throughput.
- D. RAID 0 only scales linearly to about 4 devices, use RAID 0 with 4 EBS Provisioned IOPS volumes but increase each Provisioned IOPS EBS volume to 6,000 IOPS.
- E. The standard EBS instance root volume limits the total IOPS rate, change the instance root volume to also be a 500GB 4,000 Provisioned IOPS volume.

**Answer: E**

**NEW QUESTION 265**

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 1,000 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 267**

You have been asked to design the storage layer for an application. The application requires disk performance of at least 100,000 IOPS in addition, the storage layer must be able to survive the loss of an individual disk. EC2 instance, or Availability Zone without any data loss. The volume you provide must have a capacity of at least 3 TB. Which of the following designs will meet these objectives?

- A. Instantiate a c3.8xlarge instance in us-east-1. Provision 4x1TB EBS volumes, attach them to the instance, and configure them as a single RAID 5 volume
- B. Ensure that EBS snapshots are performed every 15 minutes.
- C. Instantiate a c3.8xlarge instance in us-east-1. Provision 3x1TB EBS volumes, attach them to the instance, and configure them as a single RAID 0 volume
- D. Ensure that EBS snapshots are performed every 15 minutes.
- E. Instantiate an i2.8xlarge instance in us-east-1
- F. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance
- G. Provision 3x1TB EBS volumes, attach them to the instance, and configure them as a second RAID 0 volume
- H. Configure synchronous, block-level replication from the ephemeral-backed volume to the EBS-backed volume.
- I. Instantiate a c3.8xlarge instance in us-east-1. Provision an AWS Storage Gateway and configure it for 3 TB of storage and 100,000 IOPS
- J. Attach the volume to the instance
- K. Instantiate an i2.8xlarge instance in us-east-1
- L. Create a RAID 0 volume using the four 800GB SSD ephemeral disks provided with the instance
- M. Configure synchronous, block-level replication to an identically configured instance in us-east-1

**Answer: C**

**NEW QUESTION 269**

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

What DR strategy could be used to achieve this RTO and RPO in the event of this kind of failure?

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

**Answer: A**

**NEW QUESTION 274**

Your company hosts a social media site supporting users in multiple countries. You have been asked to provide a highly available design for the application that leverages multiple regions for the most recently accessed content and latency sensitive portions of the website. The most latency sensitive component of the application involves reading user preferences to support website personalization and ad selection. In addition to running your application in multiple regions, which option will support this application's requirements?

- A. Serve user content from S3. CloudFront and use Route53 latency-based routing between ELBs in each region. Retrieve user preferences from a local DynamoDB table in each region and leverage SQS to capture changes to user preferences with 500 workers for propagating updates to each table.

- B. Use the 53 Copy API to copy recently accessed content to multiple regions and serve user content from 53. CloudFront with dynamic content and an ELB in each region Retrieve user preferences from an ElasticCache cluster in each region and leverage SNS notifications to propagate user preference changes to a worker node in each region.
- C. Use the 53 Copy API to copy recently accessed content to multiple regions and serve user content from 53 CloudFront and Route53 latency-based routing Between ELBs In each region Retrieve user preferences from a DynamoDB table and leverage SQS to capture changes to user preferences with 505 workers for propagating DynamoDB updates.
- D. Serve user content from 53. CloudFront with dynamic content, and an ELB in each region Retrieve user preferences from an ElasticCache cluster in each region and leverage Simple Workflow (SWF) to manage the propagation of user preferences from a centralized OB to each ElasticCache cluster.

**Answer: A**

#### NEW QUESTION 277

A web company is looking to implement an external payment service into their highly available application deployed in a VPC Their application EC2 instances are behind a public facing ELB Auto scaling is used to add additional instances as traffic increases under normal load the application runs 2 instances in the Auto Scaling group but at peak it can scale 3x in size. The application instances need to communicate with the payment service over the Internet which requires whitelisting of all public IP addresses used to communicate with it. A maximum of 4 whitelisting IP addresses are allowed at a time and can be added through an API.

How should they architect their solution?

- A. Route payment requests through two NAT instances setup for High Availability and whitelist the Elastic IP addresses attached to the MAT instances.
- B. Whitelist the VPC Internet Gateway Public IP and route payment requests through the Internet Gateway.
- C. Whitelist the ELB IP addresses and route payment requests from the Application servers through the ELB.
- D. Automatically assign public IP addresses to the application instances in the Auto Scaling group and run a script on boot that adds each instances public IP address to the payment validation whitelist API.

**Answer: D**

#### NEW QUESTION 281

You are designing the network infrastructure for an application sewer in Amazon VPC Users will access all the application instances from the Internet as well as from an on-premises network The on-premises network is connected to your VPC over an AWS Direct Connect link.

How would you design routing to meet the above requirements?

- A. Configure a single routing Table with a default route via the Internet gateway Propagate a default route via BGP on the AWS Direct Connect customer route
- B. Associate the routing table with all VPC subnets.
- C. Configure a single routing table with a default route via the internet gateway Propagate specific routes for the on-premises networks via BGP on the AWS Direct Connect customer router Associate the routing table with all VPC subnets.
- D. Configure a single routing table with two default routes: one to the internet via an Internet gateway the other to the on-premises network via the VPN gateway use this routing table across all subnets in your VPC,
- E. Configure two routing tables one that has a default route via the Internet gateway and another that has a default route via the VPN gateway Associate both routing tables with each VPC subnet.

**Answer: A**

#### NEW QUESTION 285

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

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

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

**Answer: C**

#### NEW QUESTION 288

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

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

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

**Answer: CE**

### NEW QUESTION 293

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

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

**Answer:** ADF

#### Explanation:

AWS Direct Connect

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

AWS Direct Connect lets you establish a dedicated network connection between your network and one of the AWS Direct Connect locations. Using industry standard 802.1Q VLANs, this dedicated connection can be partitioned into multiple virtual interfaces. This allows you to use the same connection to access public resources such as objects stored in Amazon S3 using public IP address space, and private resources such as Amazon EC2 instances running within an Amazon Virtual Private Cloud (VPC) using private IP space, while maintaining network separation between the public and private environments. Virtual interfaces can be reconfigured at any time to meet your changing needs.

What is AWS Direct Connect?

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

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

Requirements

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

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

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

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

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

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

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

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

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

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

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

The public routes that you will advertise over BGP.

### NEW QUESTION 295

A newspaper organization has a on-premises application which allows the public to search its back catalogue and retrieve individual newspaper pages via a website written in Java. They have scanned the old newspapers into JPEGs (approx 17TB) and used Optical Character Recognition (OCR) to populate a commercial search product. The hosting platform and software are now end of life and the organization wants to migrate its archive to AWS and produce a cost-efficient architecture and still be designed for availability and durability. Which is the most appropriate?

- A. Use S3 with reduced redundancy to store and serve the scanned files, install the commercial search application on EC2 instances and configure with auto-scaling and an Elastic Load Balancer.
- B. Model the environment using CloudFormation, use an EC2 instance running Apache webserver and an open source search application, stripe multiple standard EB5 volumes together to store the JPEGs and search index.
- C. Use S3 with standard redundancy to store and serve the scanned files, use CloudSearch for query processing, and use Elastic Beanstalk to host the website across multiple availability zones.
- D. Use a single-AZ RD5 My5QL instance to store the search index and the JPEG images, use an EC2 instance to serve the website and translate user queries into SQL.
- E. Use a CloudFront download distribution to serve the JPEGs to the end users and install the current commercial search product, along with a Java Container on the website on EC2 instances and use Route53 with DNS round-robin.

**Answer:** C

#### Explanation:

There is no such thing as "most appropriate" without knowing all your goals. I find your scenarios very fuzzy, since you can obviously mix-n-match between them. I think you should decide by layers instead: Load Balancer Layer: ELB or just DNS, or roll-your-own. (Using DNS+EIPs is slightly cheaper, but less reliable than ELB.)

Storage Layer for 17TB of Images: This is the perfect use case for S3. Off-load all the web requests directly to the relevant JPEGs in S3. Your EC2 boxes just generate links to them.

If your app already serves its own images (not links to images), you might start with EFS. But more than likely, you can just setup a web server to re-write or re-direct all JPEG links to S3 pretty easily.

If you use S3, don't serve directly from the bucket- Serve via a CNAME in domain you control. That way, you can switch in CloudFront easily.

EBS will be way more expensive, and you'll need 2x the drives if you need 2 boxes. Yuck. Consider a smaller storage format. For example, JPEG200 or WebP or other tools might make for smaller images. There is also the DejaVu format from a while back.

Cache Layer: Adding Cloud Front in front of S3 will help people on the other side of the world-- well, possibly. Typical archives follow a power law. The long tail of requests means that most JPEGs won't be requested enough to be in the cache. So you are only speeding up the most popular objects. You can always wait, and switch in CF later after you know your costs better. (In some cases, it can actually lower costs.)

You can also put CloudFront in front of your app, since your archive search results should be fairly static. This will also allow you to run with a smaller instance type, since CF will handle much of the load if you do it right.

Database Layer: A few options:

Use whatever your current server does for now, and replace with something else down the road. Don't under-estimate this approach, sometimes it's better to start now and optimize later.

Use RDS to run MySQL/ Postgres

I'm not as familiar with Elasticsearch | Cloudsearch, but obviously Cloudsearch will be less maintenance+setup.

App Layer:

When creating the app layer from scratch, consider Cloud Formation and/or OpsWorks. It's extra stuff to learn, but helps down the road.

Java+ Tomcat is right up the alley of ElasticBeanstalk. (Basically EC2 + Autoscale + ELB).

Preventing Abuse: When you put something in a public S3 bucket, people will hot-link it from their web pages. If you want to prevent that, your app on the EC2 box can generate signed links to S3 that expire in a few hours. Now everyone will be forced to go thru the app, and the app can apply rate limiting, etc. Saving money: If you don't mind having downtime: run everything in one AZ (both DBs and EC2s). You can always add servers and AZs down the road, as long as it's architected to be stateless. In fact, you should use multiple regions if you want it to be really robust.

use Reduced Redundancy in S3 to save a few hundred bucks per month (Someone will have to "go fix it" every time it breaks, including having an off-line copy to repair S3.)

Buy Reserved Instances on your EC2 boxes to make them cheaper. (Start with the RI market and buy a partially used one to get started.) It's just a coupon saying "if you run this type of box in this AZ, you will save on the per-hour costs." You can get 1/2 to 1/3 off easily.

Rewrite the application to use less memory and CPU -that way you can run on fewer/ smaller boxes. (May or may not be worth the investment.)

If your app will be used very infrequently, you will save a lot of money by using Lambda. I'd be worried that it would be quite slow if you tried to run a Java application on it though ..

We're missing some information like load, latency expectations from search, indexing speed, size of the search index, etc. But with what you've given us, I would go with S3 as the storage for the files (S3 rocks. It is really, really awesome). If you're stuck with the commercial search application, then on EC2 instances with autoscaling and an ELB. If you are allowed an alternative search engine, Elasticsearch is probably your best bet. I'd run it on EC2 instead of the AWS Elasticsearch service, as IMHO it's not ready yet. Don't autoscale Elasticsearch automatically though, it'll cause all sorts of issues. I have zero experience with CloudSearch so I can't comment on that. Regardless of which option, I'd use Cloud Formation for all of it.

**NEW QUESTION 298**

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