Question 1

You are creating an RDS database for your production environment and it needs to be highly available and continue to function in the event of an outage to the Primary database. Which of the following options will best meet this requirement?

* Multi-region deployment
* ✓Multi-AZ deployment
* Read replicasSelected
* Cross-region deployment

Explanation:  
Multi-AZ deployment involves the creation of a standby replica in a different Availability Zone (AZ) from the primary database. A standby replica cannot serve read traffic, it is used to synchronously replicate data from the primary database. AZs are isolated from one another to prevent failure from spreading to them all. So, if the location of the primary database has issues, Amazon RDS automatically fails over to the standby replica. Read replicas are used to scale out to cater for high volumes of read requests - not automated failover. Multi-region deployment is not a valid RDS option and Cross-region deployments enable support for scaling of Read replicas and can be used for cross-region DR, but don't support the automatic failover due to a Primary DB outage.

Resources

* [Choosing the Regions and Availability Zones](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Concepts.RegionsAndAvailabilityZones.html)

Stats

* You spent **00:07** on this question

Resources

* [Choosing the Regions and Availability Zones](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Concepts.RegionsAndAvailabilityZones.html)

Stats

* You spent **00:07** on this question

Question 3

You've been tasked with the creation of a highly-available, decoupled web application. Which of the following will not aid in that effort?

* ✓IAM credentials on the primary EC2 instance that allow it to modify the SQS queue.
* An SQS queue that allows secondary EC2 instances to process jobs dropped by the primary instance.
* An Elastic Load Balancer that sends web traffic to instances with the least latency.Selected
* An AutoScaling group that ensures a self-healing application.

Explanation:  
The creation of IAM credentials does not aid this effort.

Resources

* [SQS FAQs](https://aws.amazon.com/sqs/faqs/)

Stats

* You spent **00:01** on this question

Question 5

Your business is evaluating several database technologies from AWS - one of the major requirements is the ability to withstand an Availability Zone outage within a single database cluster. Which of the following AWS Database services does NOT meet this requirement?

* MS SQL
* PostgreSQLSelected
* ✓RedShift
* MySQL

Explanation:  
A RedShift DB cluster can only be deployed in a single AZ. All other RDS Databases: MS SQL, PostgreSQL, MySQL, Oracle and MariaDB natively support Multi-AZ deployments. Although Redshift can be architected in a way that has Availability Zone level redundancy, this requires the use of multiple RedShift clusters, and manually setting up DB to DB replication across AZ’s, and therefore does not satisfy the requirement.

Resources

* [Amazon Redshift FAQs](https://aws.amazon.com/redshift/faqs/)
* [Amazon Relational Database Service](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html)

Stats

* You spent **00:01** on this question

Question 8

Over the past month the production environment made up of Classic Load Balances and an autoscaling web farm has failed to scale up resulting in massive disruption during the early morning peak load. Your engineering team do not want to be alerted about every change but agree that they should receive relevant SNS alerts for customer impacting problems. Which of the following are appropriate autoscaling SNS alerts to send?

* autoscaling:ELB\_SURGE\_QUEUE\_LENGTH\_ERROR
* autoscaling:EC2\_INSTANCE\_TERMINATE
* autoscaling:EC2\_INSTANCE\_LAUNCHSelected
* autoscaling:ELB\_SPILL\_OVER\_COUNT\_ERROR
* ✓autoscaling:EC2\_INSTANCE\_LAUNCH\_ERROR
* autoscaling:EC2\_INSTANCE\_TERMINATE\_ERROR

Explanation:  
AWS are completely transparent about he fact that systems will fail and you need to design for failures. there are four standard SNS alerts of which the LAUNCH\_ERROR is the is the most important for being aware of impending customer impacting problems. The offered ELB Errors are CloudWatch metrics not built in SNS notifications.

Resources

* [Auto Scaling Groups](https://docs.aws.amazon.com/autoscaling/latest/userguide/AutoScalingGroup.html)
* [Autoscaling SNS notifications.](https://docs.aws.amazon.com/autoscaling/ec2/userguide/ASGettingNotifications.html)
* [CloudWatch Metrics for Your Classic Load Balancer](https://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-cloudwatch-metrics.html)

Stats

* You spent **00:01** on this question

Question 14

The company you work for has been acquired and you have been tasked with the redirection of all its website traffic to the new company's website. The old one is hosted on S3 as a static website while the target is a self-hosted website. Which of the following options describes the best approach to achieve that as quickly as possible?

* Amazon S3 does not support website redirects. You will need to contact your domain registrar and ask them to update the target URL to point to the self-hosted website.
* In the Amazon S3 console, set the website redirect location in the metadata of each object in the relevant public bucket. You can do so by specifying the new domain as the value of the 'Website-Redirect-Location' key within the 'Metadata' section under the Properties tab.Selected
* Amazon S3 static website hosting supports only redirects to other AWS S3 buckets but not to external URLs. Therefore, you should set up a redirect to a new bucket with a single HTML file in it that uses client-side scripting (window.location.ref and a 'refresh' http-equiv meta tag) for the redirect to the new domain.
* ✓In the Amazon S3 console, configure a redirect to the new domain in the 'Redirect requests: Target bucket or domain' box within the 'Static website hosting' section under the Properties tab of the relevant bucket.

Explanation:  
Although other listed options are feasible, the quickest way to achieve the desired outcome is to set up a redirect at the S3 bucket level.

Resources

* [(Optional) Configuring a Webpage Redirect](https://docs.aws.amazon.com/AmazonS3/latest/dev/how-to-page-redirect.html)
* [Hosting a Static Website on Amazon S3](https://docs.aws.amazon.com/AmazonS3/latest/dev/WebsiteHosting.html)

Stats

* You spent **00:01** on this question

Question 16

Even though your company is migrating to Amazon EC2, it wants to continue using its Oracle 12c software license to comply with the contract requirements of one of its clients. Which of the following pricing models accommodates this goal?

* On Demand
* ✓Dedicated Hosts
* SpotSelected
* Reserved

Explanation:  
Consisting of an actual physical EC2 server, the Dedicated Hosts plan will allow the company to use its eligible software license from Oracle on Amazon EC2. The other choices will not work because they don’t include a physical server to address corporate compliance requirements.

Resources

* [Amazon EC2 Dedicated Hosts](https://aws.amazon.com/ec2/dedicated-hosts/)

Stats

* You spent **00:01** on this question

Question 25

You're running an application that needs to be highly available in eu-west-1. In order for this application to function correctly, 9 related EC2 instances must running at all times. Which of the following deployments provides the ability to meet the requirements should an AZ go down and is the most cost optimized solution?

* 9 EC2 instances in eu-west-1a, 9 EC2 instances in eu-west-1b, and no EC2 instances in eu-west-1c.
* ✓5 EC2 instances in eu-west-1a, 5 EC2 instances in eu-west-1b, and 5 EC2 instances in eu-west-1c.
* 6 EC2 instances in eu-west-1a, 6 EC2 instances in eu-west-1b, and 6 EC2 instances in eu-west-1c.Selected
* 3 EC2 instances in eu-west-1a, 3 EC2 instances in eu-west-1b, and 3 EC2 instances in eu-west-1c.

Explanation:  
Should an AZ go down, only the answers of 5,5,5 or 6,6,6 or 9,9,0 would meet the requirement of having 9 EC2 instances up, with the most cost optimized being the answer with 15 total EC2 instances.

Resources

* [Cost Optimization Pillar - AWS Well-Architected Framework](https://d1.awsstatic.com/whitepapers/architecture/AWS-Cost-Optimization-Pillar.pdf)
* [Reliability Pillar - AWS Well-Architected Framework](https://d1.awsstatic.com/whitepapers/architecture/AWS-Reliability-Pillar.pdf)

Stats

* You spent **00:01** on this question

Question 28

A three-tier application is hosted on Amazon EC2 instances inside a VPC. User-facing web application servers are hosted in a public subnet. Backend application servers and database servers are hosted in private subnets. Backend applications must communicate with third party service providers for software updates. Which option follows best practice for enabling communication with third party service providers?

* Create a Bastion instance in the public subnet.
* Create an Internet Gateway in the public subnet.Selected
* Create a NAT instance in the public subnet.
* ✓Create a NAT Gateway in the public subnet.

Explanation:  
A network address translation (NAT) gateway is used to enable instances in a private subnet to connect to the internet, but prevent the internet from initiating a connection with those instances. NAT Gateway is a highly-available and redundant service managed by AWS and optimized for handling NAT traffic. On the other hand, high-availability, redundancy, maintenance, and performance optimization must all be managed by the client for NAT instances. For this reason, a NAT Gateway is the preferred solution. Bastion hosts are used to provide inbound traffic from the internet to servers inside a private subnet. Internet Gateway is a VPC component that enables communication between EC2 instances inside a VPC and the internet.

Resources

* [NAT Gateways](https://docs.aws.amazon.com/vpc/latest/userguide/vpc-nat-gateway.html)

Stats

* You spent **00:01** on this question

Question 33

Which of the following is true with regards to a private IP address of an EC2 instance?

* A secondary private IPv4 address cannot be detached or reassigned from the primary network interface to another network interface
* Private IP address remains associated with the Network Interface when the instance is restarted, and is released when the instance is stopped or terminated
* ✓A secondary private IPv4 address can be reassigned from the primary network interface to another network interfaceSelected
* ✓Private IP address remains associated with the Network Interface when the instance is stopped and restarted, and is released when the instance is terminated

Explanation:  
Multiple IP addresses (IPv4 or IPv6) can be specified for an Instance depending upon Instance Types. Multiple IP addresses can be assigned and unassigned to network interfaces attached to running or stopped instances. An instance receives a static private IPv4 address from the address range within a VPC. Private IP address remains associated with the Network Interface when the instance is stopped and restarted, and is released when the instance is terminated. A secondary private IPv4 address can be assigned to any network interface. The network interface need not be attached to the instance. A secondary private IPv4 address that is assigned to a network interface can be reassigned to another one if you explicitly allow it. Although the primary network interface cannot be detached from an instance, the secondary private IPv4 address of the primary network interface can be reassigned to another network interface.

Resources

* [Instance IP Addressing](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/MultipleIP.html)

Stats

* You spent **00:01** on this question

Question 36

You are a system administrator and you need to take a consistent snapshot of your EC2 instance. Your application holds large amounts of data in cache that is not written to disk automatically. What would be the best approach to taking an application consistent snapshot?

* ✓Shut down the EC2 instance and detach the EBS volume, then take the snapshot.
* Take a snapshot using the AWS CLI.
* In the AWS console, take a snapshot and ensure that the 'application consistent' check box is ticked.Selected
* Take a snapshot in real time using the EC2 API.

Explanation:  
As you need an application consistent snapshot, your best option would be to shutdown the EC2 instance and detach the EBS volume, then take the snapshot.

Resources

* [Creating an EBS Snapshot](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-creating-snapshot.html)

Stats

* You spent **00:01** on this question

Question 38

The customer service organization at your company just told you that a client purchase from your website was processed twice. Your order process involves EC2 instances processing messages from an SQS queue. What changes might you make to ensure this does not happen again?

* Increase the visibility timeout on the SQS queue.
* Switch to long-polling.
* Manually delete the order after processing.Selected
* ✓Rewrite the order-processing workflow to use SWF, rather than SQS.

Explanation:  
An SWF workflow ensures that actions are executed only once.

Resources

* [SWF Doc0umentation](https://aws.amazon.com/documentation/swf/)

Stats

* You spent **00:01** on this question

Question 47

You have chosen to use S3 - OneZone-IA with your cloud application. Which limitations have you considered in doing so?

* 1Zone-IA has a 3 - 5 hour data recovery windows.
* 1Zone-IA is available only in the US-STANDARD region.
* 1Zone-IA offers only 99.50% durability. Therefore you have to design your application to re-create any objects that may be lost.Selected
* 1Zone-IA requires supplementary Access Control Lists.
* ✓1Zone-IA offers only 99.50% availability. Therefore you have to design your application to re-create any objects that may be temporally unavailable.

Explanation:  
In exchange for a significant cost savings, 1Zone-IA has the same Durability as S3, but a lower Availability SLA.

Resources

* [S3 Storage Classes](https://aws.amazon.com/s3/storage-classes/?nc=sn&loc=3)

Stats

* You spent **00:01** on this question

Question 48

You recently got hired by a sole proprietor specializing in baking and selling oatcakes within the state of Maryland, which is in the East Coast of the United States. The sole proprietor is ready to launch a website to expand her business online and sell on a national scale. She wants assurance that the website is always available to customers throughout the United States. Using Amazon Route 53 and EC2, which of the following is the best course of action?

* ✓Set up a failover routing policy in Route 53 for the website that has an EC2 instance in the us-east-1 Availability Zone as the primary resource and another EC2 instance in the us-west-1 Availability Zone as the secondary resource.
* Set up a geolocation routing policy in Route 53 for the website that directs traffic to the EC2 instance in the us-east 1 Availability Zone as the area where the company is based. It will failover to the EC2 instance in the us-west-1 Availability Zone as the secondary resource when necessary.Selected
* Set up a failover routing policy in Route 53 for the website that has an EC2 instance in the us-east-1 Availability Zone as the primary resource and another EC2 instance in the eu-west-2 Availability Zone as the secondary resource.
* Set up a geolocation routing policy in Route 53 for the website that directs traffic to the EC2 instance in the us-east 1 Availability Zone as the area where the company is based. It will failover to the EC2 instance in the ap-southeast-1 Availability Zone as the secondary resource when necessary.
* Set up a simple routing policy in Route 53 for the website that switches between the EC2 instance launched in the us-east 1 Availability Zone and a second EC2 instance launched in the us-west-1 Availability Zone.

Explanation:  
Ideally, you should architect AWS usage to take advantage of multiple Regions and Availability Zones. Based on the client’s demands, you need an active-passive failover configuration within the United States — not between the United States and Singapore, for example. So, setting up a failover routing policy for the website with both EC2 instances in North American Regions and Availability Zones is the correct option. With Maryland falling within the US East Region, the secondary resources can be deployed in the US West Region for coast-to-coast national coverage. A simple routing policy won’t work, since it distributes web traffic randomly. And while geolocation routing can address the client’s national reach plans, it will not address the website’s resiliency.

Resources

* [Active-Passive Failover](https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/dns-failover-types.html#dns-failover-types-active-passive)

Stats

* You spent **00:01** on this question

Question 53

You are reviewing your colleagues' AWS infrastructure design to handle large distributed and replicated workloads - in this case for a Cassandra non-relational database cluster with many nodes spanning multiple AZs in the same region. It specifies the placement of instances into partitions so that these do not share underlying hardware to reduce the likelihood of correlated failures. Which of the following statements about that is incorrect?

* A partition placement group with Dedicated Instances can have a maximum of two partitions while partition placement groups for Dedicated Hosts are not supported.
* Because you have more than 7 running instances per Availability Zone per group, you cannot use a spread placement group.
* The number of instances that you can launch in a partition placement group is limited only by your account limits but also a partition placement group supports a maximum of 7 partitions per Availability Zone.Selected
* ✓You can best achieve this with a combination of a spread placement group and dedicated hosts.
* ✓You can best achieve this with the use of a cluster placement group.

Explanation:  
A cluster placement group can't span multiple Availability Zones, and a spread placement group cannot use dedicated instances or dedicated hosts. (note that you are looking for 'incorrect' answers)

Resources

* [Placement Groups](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html)
* [AWS - Partition Placement Groups announcement](https://aws.amazon.com/about-aws/whats-new/2018/12/amazon-ec2-ntroduces-partition-placement-groups/)

Stats

* You spent **00:02** on this question

Question 62

Which of the below services create entities that only exist in the region that they are created in by default?

* ✓DynamoDB
* Route 53
* CloudFront
* ✓S3
* SNSSelected
* IAM
* ✓VPC
* ✓EC2

Explanation:  
IAM, SNS, Route 53 and CloudFront are all global services, with in-built redundancy, these entities are available in all regions. VPC and DynamoDB store all their entities and data in a redundant fashion in the region they were created in, and EC2 stores the data and objects in the AZ it was created in. S3 is a little more tricky - although it can be seen as a "Global" service as data can be accessed from anywhere, that data only exists in the region that the bucket was created in by default

Resources

Stats

* You spent **00:01** on this question

Question 6

You're running an application that needs to be highly available in eu-west-1. In order for this application to function correctly, 10 related EC2 instances must running at all times. Which of the following deployments provides the ability to meet the requirements should an AZ go down?

* 4 EC2 instances in eu-west-1a, 4 EC2 instances in eu-west-1b, and 2 EC2 instances in eu-west-1c.
* ✓10 EC2 instances in eu-west-1a, 0 EC2 instances in eu-west-1b, and 10 EC2 instances in eu-west-1c.Selected
* ✓5 EC2 instances in eu-west-1a, 5 EC2 instances in eu-west-1b, and 5 EC2 instances in eu-west-1c.Selected
* 3 EC2 instances in eu-west-1a, 3 EC2 instances in eu-west-1b, and 3 EC2 instances in eu-west-1c.

Explanation:  
Should an AZ go down, only the answers of 5,5,5 or 10,0,10 EC2 instances are correct because if you take out one of those AZs, you would still have 10 EC2 instances running. Of course 10,10,10 will be more expensive, butit is still a valid answer.

Resources

* [Reliability Pillar - AWS Well-Architected Framework](https://d1.awsstatic.com/whitepapers/architecture/AWS-Reliability-Pillar.pdf)

Stats

* You spent **00:03** on this question

Question 12

As a Cloud Solutions Architect, you have been tasked to set up an enterprise-class database with six-way replication across three Availability Zones. This measure is proposed to strengthen the database’s fault tolerance to disk failures. Which of the following engines will enable you to do that?

* MySQL
* ✓Amazon AuroraSelected
* Oracle
* MariaDB

Explanation:  
Aurora is the database engine that provides six-way replication of each database volume across three Availability Zones. The other responses are just like Aurora in that they are relational database engines that offer Multi-AZ deployments. However, Oracle, MariaDB, and MySQL do not have this specific ability.

Resources

* [Amazon Aurora FAQs](https://aws.amazon.com/rds/aurora/faqs/)

Stats

* You spent **00:01** on this question

Question 30

You need to create a load balancer for your application. Which AWS service will enable you to do so?

* Lightsail
* Relational Database Service (RDS)
* ✓Elastic Compute Cloud (EC2)Selected
* Elastic Block Store (EBS)

Explanation:  
To create a load balancer for your application, you will have to go to EC2—which is what you used to launch the virtual server for the application—and click 'Load Balancers' under the Load Balancing section in the left sidebar. Like load balancing, EBS is integrated into the EC2 service for high-performance block storage, if needed. RDS is where you go to if you need a database server for your application. And Lightsail is ideal for simplifying the process of launching your application.

Resources

* [What Is Amazon EC2?](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/concepts.html)

Stats

* You spent **00:02** on this question

Question 57

You have a customer hosting their website on a cluster of web servers behind a internet facing load balancer. The web application interfaces with an RDS database. The management team has specified that the database service continue to function even in the event of failures on the primary database server. A secondary database needs to be available as quickly as possible. Which would provide that capability best?

* Increase the RDS instance size.
* Create a read replica.
* ✓Create a Multi-AZ database.Selected
* Take a snapshot fo the database and stand up from that.

Explanation:  
When you provision a Multi-AZ RDB Instance, AWS automatically creates a primary DB Instance and synchronously replicates the data to a standby instance in a different Availability Zone (AZ). Each AZ runs on its own physical infrastructure. In case of an infrastructure failure, AWS performs an automatic failover to the standby instance, so that you can resume database operations as soon as the failover is complete. Because the endpoint name for your DB Instance does not change, your application can resume database operation without the need for manual administrative intervention.

Resources

* [Amazon RDS Multi-AZ Deployments](https://aws.amazon.com/rds/details/multi-az/)

Stats

* You spent **00:01** on this question

Question 2

The company you work for is considering a move to AWS, but they are concerned that their current, 50Mbps connection will not be able to handle the 100 TB of data that need to be migrated without causing unacceptable downtime. As their solutions architect, which AWS service would you recommend to move this data?

* AWS Storage Gateway
* DirectConnectSelected
* ✓Snowball
* S3 with Transfer Acceleration

Explanation:  
Given the amount of data to be moved and the speed of the connection, Snowball would be the fastest and most economical solution.

Resources

* [Transferring Data With Snowball](https://docs.aws.amazon.com/snowball/latest/ug/using-appliance.html#snowball-data-transfer)

Stats

* You spent **00:02** on this question

Question 9

Which of the following are true about Amazon S3 - OneZone-IA?

* ✓S3 - OneZone-IA is designed for 99.50% availability.
* S3 - OneZone-IA is designed for 99.99% durability
* ✓S3 - OneZone-IA is designed for 99.999999999% durability.
* ✓S3 - OneZone-IA is most often used with objects that are easy to re-create.
* S3 - OneZone-IA is designed for 99.90% availability.Selected

Explanation:  
S3 - OneZone-IA enables customers to reduce their costs by storing non-critical, reproducible data at lower levels of availability than Amazon S3’s standard storage.

Resources

* [S3 - Storage Classes Overview](https://aws.amazon.com/s3/storage-classes/?nc=sn&loc=3)

Stats

* You spent **00:03** on this question

Question 15

You have an extremely high performance compute application that you need to deploy to AWS. You will need extremely low-latency network performance to allow node-to-node communication between your EC2 instances. You will also need a minimum network speed of 10 Gbps in order for your application to work. How should you deploy your instances?

* ✓By creating a cluster placement group
* By using CloudFront to cache static assets so as to increase performance
* Using a private VPCSelected
* By deploying in multiple availability zones

Explanation:  
Amazon EC2 cluster placement group functionality allows users to group Cluster Compute Instances in clusters – allowing applications to get the low-latency network performance necessary for tightly-coupled node-to-node communication typical of many HPC applications.

Resources

* [About Placement Groups](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/placement-groups.html)

Stats

* You spent **00:02** on this question

Question 19

Which of the following services can stream configuration changes and notifications recorded by AWS Config and use email as the endpoint?

* Amazon CloudWatch
* Amazon Simple Email Service (SES)
* Amazon Simple Queue Service (SQS)Selected
* ✓Amazon Simple Notification Service (SNS)

Explanation:  
AWS Config records configuration changes in resources, and it streams those changes and notifications to an SNS topic. Users subscribed to the topic receive email notifications of the changes. Although SES is an email service, Config does not use it to send email notifications. CloudWatch is for monitoring resources, not for recording their configuration changes. SQS is a message queuing service and is not used with Config.

Resources

* [Notifications that AWS Config Sends to an Amazon SNS Topic](https://docs.aws.amazon.com/config/latest/developerguide/notifications-for-AWS-Config.html)

Stats

* You spent **00:01** on this question

Question 22

Your business is evaluating several database technologies from AWS. It is expected that you will need to scale out the performance for read operations using read replicas. The business has decided to reduce management overheads as much as possible by using RDS for the database. Which of the following RDS Database engines would NOT be suitable in this scenario?

* MariaDB
* ✓MS SQL
* PostgreSQLSelected
* MySQL

Explanation:  
MS SQL Server does not support Read Replicas when using RDS. MySQL, PostgreSQL, MariaDB and Aurora support Read Replicas to improve performance for Read Heavy applications.

Resources

* [Amazon RDS Read Replicas](https://aws.amazon.com/rds/details/read-replicas)

Stats

* You spent **00:01** on this question

Question 24

Which of the following protocols is not supported with an Classic Load Balancer?

* HTTP
* ✓FTP
* ✓SSHSelected
* HTTPS

Explanation:  
Amazon's Classic ELB supports the following protocols: HTTP, HTTPS, TCP, and SSL.

Resources

* [Listeners for Your Classic Load Balancer](https://docs.aws.amazon.com/elasticloadbalancing/latest/classic/elb-listener-config.html)

Stats

* You spent **00:01** on this question

Question 32

John from the marketing department enquires about the unusually high bounce rate for his latest email campaign for which you've used Amazon SES for the first time. What are NOT possible reasons for this?

* ✓There was a temporary problem at one of the large ISPs and SES had to retry for an extended period of time before the ISP was eventually able to deliver the emails to the recipients.
* You've sent emails to quite a few new addresses that were only recently added. Amazon SES rejected some of these because they were on the SES suppression list. This list is managed by Amazon and contains email addresses that recently caused a hard bounce for any Amazon SES customer.
* ✓The message contained a virus.Selected
* ✓Your email-sending request to Amazon SES was not formatted properly.

Explanation:  
If Amazon SES accepts the sender's request and then determines that the message contains a virus, Amazon SES stops processing the message and doesn't attempt to deliver it to the recipient's mail server. If the sender's email-sending request to Amazon SES fails because the request is not formatted properly, Amazon SES responds to the sender with an error and drops the email. A soft bounce is a situation where the ISP cannot deliver the email to the recipient because of a temporary condition, such as the ISP is too busy to handle the request. Amazon SES retries the email for an extended period of time. Soft bounces are only included in the (hard) bounces email sending event when Amazon SES fails to deliver the email after retrying for a period of time.

Resources

* [Monitoring Your Amazon SES Sending Activity](https://docs.aws.amazon.com/ses/latest/DeveloperGuide/monitor-sending-activity.html)
* [Amazon SES Email-Sending Process](https://docs.aws.amazon.com/ses/latest/DeveloperGuide/sending-email-with-ses.html)

Stats

* You spent **00:01** on this question

Question 35

You have a application that is running in an EC2 instance that performs some heavy processing on sales data stored in S3. This sales data is first loaded into memory and numerous operations are performed on it before it is written back to S3. During the processing phase, a large amount of temporary data is created which is not needed once processing completes. This data needs to be stored on as low-latency storage as possible - which of the below storage types should you use?

* EBS
* S3 Intelligent TieringSelected
* Provisioned IOPS SSD
* ✓Instance Store

Explanation:  
Although all 4 options would work, Instance Store has the lowest latency as it is located on the same physical infrastructure as the EC2 instance. As data permanency is not required, Instance Store is the best choice.

Resources

* [AWS Instance Store](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html)

Stats

* You spent **00:01** on this question

Question 46

What is the availability of S3 - IA?

* 99.99%Selected
* 99%
* ✓99.9%
* 99.999999999%

Explanation:  
S3 - IA is 99.9% available. Do not confuse availability with durability.

Resources

* [S3 Availability](https://aws.amazon.com/s3/faqs/#How_reliable_is_Amazon_S3)

Stats

* You spent **00:11** on this question

Question 50

You have an RDS database that has high performance OLTP workloads. Which storage medium would be best to accommodate these requirements?

* Amazon RDS Magnetic Storage
* ✓Amazon RDS Provisioned IOPS (SSD) Storage
* Amazon RDS Cold StorageSelected
* Amazon RDS General Purpose (SSD) Storage

Explanation:  
Amazon RDS Provisioned IOPS (SSD) Storage would be the most suitable.

Resources

* [RDS Provisioned IOPS for OLTP Workloads](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Storage.html#USER_PIOPS)

Stats

* You spent **00:01** on this question

Question 52

You have a set of read only data on an EBS st1 volume which needs to be referenced by all the EC2 instances in an autoscaling groups. Which of these are valid options ?

* ✓Create an EFS volume and migrate the data to the EFS instance. Then mount the EFS volume to the EC2 instances as they are brought on-line by autoscaling.
* ✓Create the a Snapshot of the Master copy at regular intervals. Then restore and mount the latest snapshot to the EC2 instances as they are brought on-line by autoscaling.
* Create a copy of the data set in an S3 bucket from time to time. Then use the script 'aws S3 cp <LocalPath> <S3Uri> --recursive' to copy the files onto the EC2 instances as they are brought on-line by autoscaling.Selected
* Mount the EBS volume to all the EC2 instances using 'Multi-Attach for EBS'.

Explanation:  
Not all types of EBS volumes can be mounted to more than one instance at a time. However Snapshots can be used to create copies. The better option would probably be EFS. Storing the data set on S3 would also work, however the CLI script offered is not valid as the source and destination are reversed.

Resources

* [EBS Volumes: Data Availability](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSVolumes.html#EBSFeatures)
* [AWS S3 CLI cp](https://docs.aws.amazon.com/cli/latest/reference/s3/cp.html)
* [Multi-Attach for Amazon EBS Volumes](https://aws.amazon.com/blogs/aws/new-multi-attach-for-provisioned-iops-io1-amazon-ebs-volumes/)
* [Restore and mount a snapshot](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-restoring-volume.html)

Stats

* You spent **00:01** on this question

Question 60

You want to create a new company Website using WordPress. You have initially installed and configured the WordPress code on an EBS volume mounted on a single Linux EC2 instance and this appears to work. To add redundancy, you have created another EC2 instance and you wish to mount the EBS volume on this server as well. However, when you try to carry out this operation, the action is not available in the console. Why is this option unavailable?

* Attaching an EBS volume to multiple EC2 instances is only available via a CLI command, not via the console
* ✓You should install WordPress on an EFS File System and mount this on both EC2 instances
* You should install WordPress on an Amazon FSx volume and mount this on both EC2 instancesSelected
* You should enable the 'File System Read Sharing' option on the EBS volume before you can mount it on both servers

Explanation:  
The only option that would work in this scenario is installing WordPress on an EFS File System and mounting that on both EC2 instances.

Resources

* [Amazon EBS FAQs](https://aws.amazon.com/ebs/faqs/)
* [Amazon EFS FAQs](https://aws.amazon.com/efs/faq/)

Stats

* You spent **00:01** on this question

Question 23

Your project manager (PM) tasked you with launching two Amazon EC2 instances for an issue-tracking application. One of them will serve as the proxy server, which will act as an intermediary for requests by users seeking access to the application installed on the other EC2 instance. The PM expects the instance for the proxy server to be a balance of compute, memory, and network resources, with low-to-moderate network performance. Which of the following instance types would be appropriate to use?

* ✓t2.mediumSelected
* c5.large
* r5.xlarge
* ✓t2.2xlargeSelected

Explanation:  
c5.large and r5.xlarge do not provide a balance of compute, memory, and network resources, since the former is a compute-optimized instance type and the latter is memory-optimized. That leaves t2.2xlarge and t2.medium. t2.medium does specifically fulfill the low-to-moderate network performance range that the PM requested. However, since t2.2xlarge offers moderate network performance, in addition to twice the number of vCPUs and four times the RAM, you can choose this instance type instead to avoid having to scale vertically in the future if you believe you need greater capability. Ultimately, either t2.2xlarge or t2.medium would do.

Resources

* [Amazon EC2 Instance Types](https://aws.amazon.com/ec2/instance-types/)
* [Architecting for the Cloud](https://d1.awsstatic.com/whitepapers/AWS_Cloud_Best_Practices.pdf)

Stats

* You spent **00:08** on this question

Question 26

You have an active NoSQL database which is hosted in DynamoDB. The DynamoDB table is queried by a Lambda function which is responding to requests made by individual users via API-Gateway. Your application peaks at 4pm each day with literally 100,000’s of requests per second. During this time your application becomes sluggish. Which step below may help to improve your applications performance.

* Re-architect the application to use a Network Load Balancer and a 3 EC2 instances in 3 different Availability Zones.
* ✓Enable DynamoDB Accelerator to deliver an in memory cache to increase performance.Selected
* Migrate the database from DynamoDB to Amazon Aurora and provision 15 read replicas. Update the application to send all read traffic to the cluster endpoint.
* Host the web front end on S3 using static website hosting. Use a combination of CloudFront and Elasticache to help distribute the load.

Explanation:  
DAX is an obvious solution if the queries are hitting the same data frequently and the total set of re-read data does not exceed the size of the DAX. Re platforming is possible but will add complication. The Aurora answer refers to the 'cluster endpoint'. This would focus all traffic on the single Write node not the multiple Read replicas.

Resources

* [DynamoDB Accelerator (DAX)](https://aws.amazon.com/dynamodb/dax/)
* [Types of Aurora Endpoints](https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/Aurora.Overview.Endpoints.html#Aurora.Overview.Endpoints.Types)

Stats

* You spent **00:01** on this question

Question 44

Which of the following are types of virtualization available on AWS?

* Cloud Virtual Machine (CVM)
* Physical Virtual Machine (PVM)
* ✓Hardware Virtual Machine (HVM)Selected
* ✓Paravirtual Machine (PV)Selected

Explanation:  
The two different types of virtualization available are Hardware Virtual Machine (HVM) & Paravirtual Machine (PVM)

Resources

* [EC2 Virtualization Types](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/instance-types.html#instance-virtualization-type)

Stats

* You spent **00:02** on this question

Question 45

By default, how many S3 buckets can you have with a new AWS account?

* 200
* ✓100Selected
* 50
* 25

Explanation:  
By default, customers can provision up to 100 buckets per AWS account. However, you can increase your Amazon S3 bucket limit by visiting AWS Service Limits.

Resources

* [S3 Bucket Restrictions and Limits](https://docs.aws.amazon.com/AmazonS3/latest/dev/BucketRestrictions.html)

Stats

* You spent **00:02** on this question

Question 64

EC2 includes instances like i3.xlarge, which are designed to provide high sequential read and write access to very large data sets on local storage. Which of the following EC2 instance types does i3.xlarge fall under?

* General Purpose
* Accelerated Computing
* ✓Storage OptimizedSelected
* Memory Optimized
* Compute Optimized

Explanation:  
An EC2 instance like i3.xlarge delivers high sequential read and write access, a characteristic that is ideal for large data sets. Data is stored in the instance’s solid-state drive, a type of storage renowned for quick access time and low latency. As a result, i3.xlarge is classified as a storage optimized instance.

Resources

* [Amazon EC2 Instance Types](https://aws.amazon.com/ec2/instance-types/)

Stats

* You spent **00:01** on this question

Question 65

You have an RDS database that has moderate I/O requirements. Which storage medium would be best to accommodate these requirements?

* Amazon RDS Cold Storage
* Amazon RDS Magnetic Storage
* ✓Amazon RDS General Purpose (SSD) StorageSelected
* Amazon RDS Elastic Storage

Explanation:  
Amazon RDS General Purpose (SSD) Storage would be the most suitable. It offers cost-effective storage that is ideal for a broad range of workloads.

Resources

* [RDS Storage Types](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/CHAP_Storage.html)

Stats

* You spent **00:01** on this question

Question 7

You wish to set up a WordPress website consisting of 4 webpages for your client, who recently founded a logo creation business. Based on the client’s specifications, you will create one webpage that gives a summary of the company and its services, a second one that provides a brief professional biography of the founder, a third one that showcases the business owner’s portfolio, and a fourth one that serves as the contact information page and simply contains an email and phone number. Three of the four webpages will include images which the client doesn’t expect will change much, if at all. Using the EC2 service to set up the website, which of the following instance types would be the most cost-effective choice?

* ✓General purpose
* Compute optimizedSelected
* Storage optimized
* Accelerated computing
* Memory optimized

Explanation:  
Based on the client’s specifications, it doesn’t seem like this website requires an elevated level of compute, memory, storage, or networking power. So, a general purpose instance would be the most cost-effective choice.

Resources

* [EC2 Instance Types](https://aws.amazon.com/ec2/instance-types/)

Stats

* You spent **00:01** on this questi

Question 13

You are a small business startup and wanted to host a website for your business. You purchased a Reserved EC2 instance with all upfront payment with one year commitment. Because of difficulties, the website hosting is given to a third party provider to host the website. As the reserved EC2 instance is not required anymore, what are the options available?

* The reserved instance can be transferred to another account owned by your friend for a cheaper rate.
* Terminate the EC2 instance so that there will not be any running cost. Submit a request to AWS to refund the cost for remaining tenure.Selected
* The reserved instance purchase can be cancelled so that AWS will refund the EC2 instance cost for the remaining tenure.
* ✓Reserved instance purchases cannot be cancelled. But if the business need changes, these reserved instances may be sold in the Reserved Instance Marketplace.

Explanation:  
Reserved instances provide significant savings on Amazon EC2 costs compared to on-demand instance pricing. Reserved instances are not physical instances, but rather a billing discount applied to the use of on-demand instances in AWS account. The Reserved instance applies to a single instance type, platform, scope, and tenancy over a term. Reserved instances once purchased cannot be cancelled. But the unused reserved instances can be sold in the Reserved Instance Marketplace if the eligibility criteria are met. The Reserved Instance Marketplace is a platform that supports the sale of third-party and AWS customers' unused Standard Reserved Instances, which vary in term lengths and pricing options.

Resources

* [Reserved Instance Marketplace](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ri-market-general.html)

Stats

* You spent **00:01** on this question

Question 39

You want to set up 2 CloudWatch alarms in addition to the 6 you already have to monitor your cloud environment. It has been 13 months since you created your AWS account, and you want to avoid being charged for creating the alarms. What should you do?

* ✓Go ahead and create the alarms; you can have up to 10 CloudWatch alarms without being charged.
* Go ahead and create the alarms; CloudWatch alarms are always free of charge, regardless of number.
* Contact AWS Support for a service increase limit.Selected
* Do not create the alarms; you will be charged, since you get a maximum of 10 alarms with CloudWatch for the first 12 months after your account sign-up.

Explanation:  
Upon signing up for an AWS account, you will get a range of service usage that will never cost you anything. Such offers include 10 alarms with CloudWatch. That’s why creating the alarms is the correct answer. Contacting support is wrong because it’s not necessary to request a service increase limit. Avoiding creating new alarms is also wrong because there’s no term limits on the CloudWatch alarm offer; it’s always free. Creating more alarms in this case is still free of charge because the free offer is limited to 10 CloudWatch alarms.

Resources

* [AWS Free Tier](https://aws.amazon.com/free/?all-free-tier.sort-by=item.additionalFields.SortRank&all-free-tier.sort-order=asc&awsf.Free%20Tier%20Types=*all&awsm.page-all-free-tier=1)

Stats

* You spent **00:01** on this question

Question 41

What is the minimum billable object size for S3 - IA?

* 0 Bytes
* 1 KB
* 1 ByteSelected
* ✓128 KB

Explanation:  
The minimum object size is 0 bytes, however you will be billed for 128 KB. Objects smaller that 128 can still be stored, but will be billed as if they are 128KB.

Resources

* [S3 Standard - IA Object Size (table)](https://aws.amazon.com/s3/storage-classes/)
* [S3 Standard - IA minimums](https://aws.amazon.com/s3/faqs/?nc=sn&loc=6)

Stats

* You spent **00:02** on this question

Question 55

Comma-delimited files with information about how customers navigate your company website arrive from a third party on a nightly basis. The data is pre-sorted by the third party for concurrent access by multiple compute instances running in the AWS cloud. Which storage service will provide the highest cost optimization for the solution?

* ✓Amazon Elastic File System
* Amazon Elastic Block Store
* Amazon RDS for SQL ServerSelected
* Amazon ElastiCache

Explanation:  
Since the data is pre-sorted by the third-party, a relational database is unnecessary. Amazon Elastic File System provides a more cost-effective solution. Amazon Elastic Block Store storage cannot be shared across multiple instances, and Amazon ElastiCache will be a higher cost solution.

Resources

* [Amazon Elastic File System](https://aws.amazon.com/efs/)

Stats

* You spent **00:01** on this question

Question 59

The volume of transactions coming into your online trading application fluctuates each day depending on market events. Log analyses indicate that on the heaviest volume days, compute demand comes in triple that of the average volume days. These heavy volume days occur about 15 days per year. You also have some workloads that need to process before close of business to provide input to daily reporting functions. How would you structure your mix of EC2 General Purpose Linux instances to obtain the highest cost efficiency?

* 3-Year Term Standard Reserved Instances for 100% of the average volume days and the reporting workloads, On-Demand instances to handle the spikes from the heavy volume days
* 3-Year Term Standard Reserved Instances for 100% of the average and heavy volume days, and the reporting workloadsSelected
* ✓3-Year Term Standard Reserved Instances for 100% of the average volume days, On-Demand instances to handle the spikes from the heavy volume days, and Spot Instances to handle the reporting workloads
* 1-Year Term Standard Reserved Instances for 100% of the average and heavy volume days, and Spot Instances to handle the reporting workloads

Explanation:  
The most cost effective pricing for EC2 General Purpose Linux instances will usually involve a mix of pricing models. In this scenario, since the number of heavy volume days is limited, using a combination of reserved instances sized for the average volume days, on-demand instances to handle transaction volume increases on the heavy volume days, and spot instances to handle workloads that just need to complete by a certain time is the best option. Spot instances for reporting workloads will cost less than using reserved instances and capacity doesn't need to be guaranteed. 3-year reserved instances are more cost-effective than one-year-term reserved instances. Over-provisioning for all but the 15 heavy volume days each year by using RI to cover heaviest load leaves a lot of underutilised capacity.

Resources

* [Amazon EC2 Pricing](https://aws.amazon.com/ec2/pricing/)

Stats

* You spent **00:01** on this questio

Question 61

When deploying a NAT gateway, which of the following will you be billed for?

* ✓All traffic processed, regardless of it's direction
* Only inbound traffic
* The instance that the NAT Gateway is running on
* ✓A cost per hour that the NAT Gateway is activeSelected
* Only outbound traffic

Explanation:  
With NAT Gateways, you are billed a flat fee for every hour that the gateway is active, plus an amount per GB processed by the gateway no matter the source or destination. Note that you will also have to pay the standard bandwidth charges for the traffic once it has passed through the gateway, in addition to the gateway costs.

Resources

* [AWS VPC Pricing](https://aws.amazon.com/vpc/pricing/)

Stats

* You spent **00:01** on this question

Question 4

Your company is moving their entire 20 TB data warehouse to the cloud. With your current bandwidth, it would take 2 months to transfer the data. Which service would you use to quickly get your data into AWS?

* Multipart Upload
* S3 with Transfer Acceleration
* DirectConnect
* ✓SnowballSelected

Explanation:  
At that amount of data and those bandwidth restrictions, Snowball would be the most expedient choice.

Resources

* [When to Use Snowball](https://aws.amazon.com/snowball/faqs/#when-to-use)

Stats

* You spent **00:01** on this question

Question 20

You have a static HTML website that requires inexpensive, highly available hosting solution that scales automatically to meet traffic demands. Which AWS service would best suit this requirement?

* EC2 with EBS behind and Autoscaling Group with a minimum configuration of 1 instance
* EC2 with CloudFront
* ✓S3 - Static Website HostingSelected
* EC2 with EBS behind and Autoscaling Group with a minimum configuration of 2 instances

Explanation:  
S3 Static Website Hosting offers the best solution here: it is highly-available, scales automatically, and is cost-effective.

Resources

* [S3 Static Website Hosting](https://docs.aws.amazon.com/AmazonS3/latest/dev/WebsiteHosting.html)

Stats

* You spent **00:01** on this question

Question 29

You have three AWS payer accounts consolidated under an AWS Organization . Which of the below statements is TRUE for purposes of volume discounts?

* Usage across the three accounts will be aggregated in determining the volume discount your Organization is entitled to only if Consolidated Billing is enabled at the Organisation level
* Usage across the three accounts will be aggregated in determining the volume discount your Organization is entitled to only if Consolidated Billing is enabled in each account
* ✓Usage across the three accounts will be aggregated in determining the volume discount your Organization is entitled toSelected
* Usage in each account will be evaluated individually to determine the volume discount it is individually entitled to

Explanation:  
If you have multiple accounts, your charges will decrease because AWS combines usage from all accounts in the organization to qualify you for volume pricing discounts.

Resources

* [Consolidated Billing for Organizations](https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/consolidated-billing.html)

Stats

* You spent **00:01** on this question

Question 40

You need to automatically migrate objects from one S3 storage class to another based on the age of the data. Which S3 service can you use to achieve this?

* Glacier
* Infrequent Access
* ✓Lifecycle ManagementSelected
* Reduced Redundancy

Explanation:  
S3 Lifecycle management provides the ability to define the lifecycle of your object with a predefined policy and reduce your cost of storage. You can set lifecycle transition policy to automatically migrate Amazon S3 objects to Standard - Infrequent Access (Standard - IA) and/or Amazon Glacier based on the age of the data.

Resources

* [S3 Object Lifecycle Management](https://docs.aws.amazon.com/AmazonS3/latest/dev/object-lifecycle-mgmt.html)

Stats

* You spent **00:01** on this question

Question 51

Your SQL server requires a specific type of collation and some unique third party tools installed on it. You will need access to the underlying operating system for management and monitoring of these third party tools. However, you'd like to keep the overall amount of management to a minimum. Which AWS service would best suit your needs?

* DynamoDB
* RDS with SQL Server
* ✓SQL server installed on EC2 with EBSSelected
* ElasticCache

Explanation:  
With all services you are trading control of underlying processes for cost saving and ease of management. In the case of RDS, AWS has exclusive control of the DB engine and underlying processes. If you need to have access to these, building a bespoke DB server on an EC2 instance is the correct technical choice.

Resources

* [SQL Server on AWS](https://aws.amazon.com/sql/)

Stats

* You spent **00:01** on this question

Question 63

You want to track the amount of money you ideally want your company to spend for EC2 data transfers every month. Which of the following actions will accomplish that?

* Create a Cost budget with AWS Budgets.
* Create a Reservation budget with AWS Budgets.
* ✓Create a Usage budget with AWS Budgets.Selected
* Enable AWS Cost Explorer

Explanation:  
AWS Cost Explorer is for providing information that you can use to track and manage costs, but it doesn’t enable the creation of budgets; that’s what AWS Budgets is for. If the question was strictly addressing cost, then creating a Cost budget with AWS Budgets would have been the correct answer. However, your concern is specifically with a usage type, which is EC2 data transfers. In this case, you would need to create a Usage budget with AWS Budgets and receive alerts when your defined threshold is met.

Resources

* [Managing Your Costs with Budgets](https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/budgets-managing-costs.html)

Stats

* You spent **00:01** on this question

Question 10

You have an EC2 instance with a Security Group attached. This security group is configured to only allow traffic to/from 10.0.0.0/16. A collegue has also configured a NACL on the private subnet that the instance resides on, and this NACL is configured to block all traffic, except where the destination is in 10.0.1.0/24. What will happen when the instance attempts to access IP 192.168.0.12 on port 80?

* The traffic will be blocked simultaneously by the Security Group and NACL
* ✓The security group will block the traffic before it is evaluated by the NACL
* The NACL will block the traffic before it is evaluated by the security groupSelected
* The traffic will be allowed as it is still within a private range

Explanation:  
With outbound traffic, Security Groups are evaluated first, then NACLs. The security group is configured to only allow traffic where the destination is 10.0.0.0/16, and as 192.168.0.12 does not fall within this range it will be blocked by the security group before it reaches the NACL.

Resources

* [VPC Security](https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Security.html)

Stats

* You spent **00:01** on this question

Question 11

Which of the following layers of DDoS attacks does AWS automatically address?

* Layer 7
* ✓Layer 4
* ✓Layer 3Selected
* Layer 1

Explanation:  
AWS automatically addresses DDoS attacks at the network and transport layers, which are Layer 3 and Layer 4, respectively.

Resources

* [Responding to DDoS Attacks](https://docs.aws.amazon.com/waf/latest/developerguide/ddos-responding.html)

Stats

* You spent **00:01** on this question

Question 17

You have an EC2 instance with a Security Group attached. This security group is configured to only allow traffic to/from 10.0.0.0/16. A colleague has also configured a NACL on the private subnet that the instance resides on, and this NACL is configured to block all traffic, except where the destination is in 10.0.1.0/24. What will happen when the instance attempts to access IP 192.168.0.12 on port 80?

* The NACL will block the traffic before it is evaluated by the security groupSelected
* ✓The security group will block the traffic before it is evaluated by the NACL
* The traffic will be blocked simultaneously by the Security Group and NACL
* The traffic will be allowed as it is still within a private range

Explanation:  
With outbound traffic, Security Groups are evaluated first, then NACLs. The security group is configured to only allow traffic where the destination is 10.0.0.0/16, and as 192.168.0.12 does not fall within this range it will be blocked by the security group before it reaches the NACL.

Resources

* [VPC Security](https://docs.aws.amazon.com/vpc/latest/userguide/VPC_Security.html)

Stats

* You spent **00:01** on this question

Question 18

You need to restore an object from S3-Glacier. Which of the following will help you do that?

* ✓Using the Glacier API
* Using the AWS s3-Glacier Console
* Using the S3 REST APISelected
* Using the S3 sub-command from the AWS CLI

Explanation:  
When discussing GLACIER it is important to distinguish between the storage-class 'Glacier' use by S3, and the 'S3-Glacier' service. The 1st is managed via the 'S3' console & API, and the 2nd the 'S3-Glacier' console & API. The Amazon 'S3' service maintains the mapping between your user-defined object name and Amazon Glacier system-defined identifier. These objects are not accessible via the 'S3-Glacier' service. Objects that are stored using the 'S3-Glacier' service are only accessible through the Amazon 'S3' CLI or APIs.

Resources

* [What Is Amazon S3 Glacier?](https://docs.aws.amazon.com/amazonglacier/latest/dev/introduction.html)
* [Restoring S3-Glacier objects with CLI (glacier)](https://docs.aws.amazon.com/cli/latest/reference/glacier/initiate-job.html)
* [Restoring S3-Glacier objects with API (POST)](https://docs.aws.amazon.com/amazonglacier/latest/dev/api-initiate-job-post.html)

Stats

* You spent **00:01** on this question

Question 21

One of your junior developers needs access to an Elastic Load Balancer in your custom VPC. This is the first and only time he will need access to AWS services. Which of the following choices is the most secure way to grant this access?

* ✓Create a new IAM user with only the required credentials.
* Add that developer to a Group with the requisite access.
* None of theseSelected
* Let them log in with Admin credentials and change the Admin password when he is finished.

Explanation:  
It's always best practice to grant users access via IAM roles and groups. In this case, there's no sense in adding him to a group that may have more permissions than he requires to do his job. Add an individual user with the minimum permissions required.

Resources

* [Creating an IAM User](https://docs.aws.amazon.com/IAM/latest/UserGuide/id_users_create.html)

Stats

* You spent **00:01** on this question

Question 27

You need to configure a new subnet in your VPC for a database cluster you are building. The subnet will never need more than six IP addresses. Which of the following is the best choice for this subnet?

* ✓A /28 private subnet
* A /16 private subnet
* A /28 public subnetSelected
* A /16 public subnet

Explanation:  
Databases generally do not require public access from the Internet, so a private subnet is the better choice from a security perspective. /28 is the smallest possible subnet in an AWS VPC.

Resources

* [Working with Database Instances in a VPC](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_VPC.WorkingWithRDSInstanceinaVPC.html)

Stats

* You spent **00:01** on this question

Question 31

You are about to delete the second snapshot of an EBS volume which had 10 GiB of data at the time when the very first snapshot was taken. 6 GiB of that data has changed before the second snapshot was created. An additional 2 GiB of data have been added before the third and final snapshot was taken. Which of the following statements about that is correct?

* Snapshots are incremental backups, which means that only the blocks on the device that have changed after your most recent snapshot are saved. Therefore, you can only delete them in reverse chronological order, i.e. starting with the third snapshot and then the second one.
* After deletion, the total storage required for the two remaining snapshots is 12 GiB; 10 GiB for the first and 2 GiB for the last snapshot.Selected
* ✓Before deletion, the total storage required for the three snapshots was 18 GiB of which the second one had 6 GiB of data. After the deletion of that second snapshot, you are still charged for storing 18 GiB of data - 10 GiB from the very first snapshot and 8 GiB (6 + 2) of data from the last snapshot.
* Each EBS volume snapshot is a full backup of the complete data and independent of other snapshots. You can go ahead and delete the second snapshot to save costs. After that, you are charged for only 22 GiB of data for the two remaining snapshots.

Explanation:  
When you delete a snapshot, only the data unique to that snapshot is removed. Each snapshot contains or references all of the information needed to restore your data (from the moment when the snapshot was taken) to a new EBS volume.

Resources

* [Amazon EBS Snapshots](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/EBSSnapshots.html)
* [Deleting an Amazon EBS Snapshot](https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebs-deleting-snapshot.html)

Stats

* You spent **00:01** on this question

Question 37

You have a legacy web application that is using an RDS MySQL 5.5 back end. A recent vulnerability scan of you infrastructure has highlighted that this particular application is vulnerable to SQL Injection attacks. Unfortunately, due to it being a legacy application, none of the developers in your team have the ability to make any changes to the application. What can you do to help remediate this security concern?

* Do nothing - by default AWS Shield Standard protects against SQL Injection attacks
* Deploy an Application Load Balancer with SQL Injection Filtering enabled
* Upgrade MYSQL to version 8, which has protections built in against SQL Injection attacksSelected
* ✓Deploy AWS WAF with SQL injection match conditions

Explanation:  
One of the use cases for WAF is an extra layer of protection for applications which are susceptible to common known attacks, including SQL Injection, making this the correct answer. A load balancer cannot help here, and AWS Shield Standard does not include protection against this type of attack. Similarly, updating MYSQL will not help as it does not offer built in protection for SQL Injection.

Resources

* [Working with SQL Injection Match Conditions](https://docs.aws.amazon.com/waf/latest/developerguide/web-acl-sql-conditions.html/)
* [Blocking common attacks with WAF](https://aws.amazon.com/premiumsupport/knowledge-center/waf-block-common-attacks/)

Stats

* You spent **00:01** on this question

Question 43

Which of the following DNS record types does Route 53 not support?

* SPF
* AAAA
* CNAMESelected
* ✓DNSKEY

Explanation:  
Route 53 is a scalable and highly available DNS service and it currently supports 13 different DNS record types including; AAAA, CNAME and SPF. However, Route 53 does not support DNSSEC (other than during domain registration) and therefore any DNSSEC related records, such as DNSKEY, are also not supported.

Resources

* [Amazon Route 53 FAQs](https://aws.amazon.com/route53/faqs/)

Stats

* You spent **00:01** on this question

Question 49

Your Tech Lead asked you to establish a connection between your company’s office and the virtual private cloud (VPC) of the corporate headquarters to access its database servers. Which of the following services should you use to establish this secure connection?

* ✓AWS Direct Connect
* AWS Storage Gateway
* Amazon Elastic Compute Cloud (EC2)Selected
* AWS CloudTrail

Explanation:  
You need a Networking & Content Delivery service to establish a connection. Not only is Direct Connect the only one listed here, it is what you need to link your company’s internal network to the headquarters’ AWS Cloud environment over a standard Ethernet fiber-optic cable. Amazon EC2 is for launching applications, not for linking networks. AWS CloudTrail is not a networking tool, but a management and governance one used for tracking user activity and API usage in the cloud. AWS Storage Gateway is a hybrid cloud storage service, not a network one.

Resources

* [AWS Documentation](https://docs.aws.amazon.com/)
* [What Is AWS Direct Connect?](https://docs.aws.amazon.com/directconnect/latest/UserGuide/Welcome.html)

Stats

* You spent **00:01** on this question

Question 54

You are creating a trail in CloudTrail to track all API calls to an application that provides news and tips on safely handling and storing food. You specifically want to track unusual activity associated with WRITE API calls. Which of the following selections in CloudTrail will enable you to do so?

* Select the 'Yes' option for applying the trail to all AWS Regions.
* ✓Select the 'Yes' option for logging Insights events for trails.
* Select the 'All' option for Read/Write events.Selected
* Select the 'Write-only' option for Read/Write events.

Explanation:  
AWS CloudTrail Insights helps you identify and respond to WRITE API calls to your application that you might find unusual. To enable this feature, you will need to select the 'Yes' option next to 'Log Insights events'. Selecting the 'Write-only' option for 'Read/Write events' is only going to record the WRITE API calls, not monitor them for any unusual activity. Applying the trail to all AWS Regions and selecting ALL read/write events are invalid.

Resources

* [Logging Insights Events for Trails](https://docs.aws.amazon.com/awscloudtrail/latest/userguide/logging-insights-events-with-cloudtrail.html)

Stats

* You spent **00:01** on this question

Question 56

You work for a security company that stores highly sensitive documents on S3. One of your customers has had a security breach and, as a precaution, they have asked you to remove a sensitive PDF from their S3 bucket. You log in to the AWS console using your account and attempt to delete the object. You notice that versioning is turned on, and when you dig a little deeper you discover that you cannot delete the object. What may be the cause of this?

* You can never permanently delete an object on S3 after versioning is enabled.
* You must be logged in as a Super User to delete objects.
* S3 server-side encryption is preventing you from doing this.Selected
* ✓You cannot delete the object because you are not the bucket owner.

Explanation:  
Only the owner of an Amazon S3 bucket can permanently delete a version.

Resources

* [Deleting and Emptying S3 Buckets](https://docs.aws.amazon.com/AmazonS3/latest/dev/delete-or-empty-bucket.html)

Stats

* You spent **00:01** on this question

Question 58

You want to encrypt the data in your S3 buckets. You intend on managing the encryption keys and using Amazon S3 to manage the encryption itself. Which of the following S3 encryption types support your requirements?

* Server-Side Encryption
* Server-Side Encryption with AWS Key Management Service (SSE-KMS)
* ✓Server-Side Encryption with Customer-Provided Keys (SSE-C)
* Server-Side Encryption with Amazon S3-Managed Keys (SSE-S3)Selected

Explanation:  
Although Response A is correct in a general sense, the question is asking for a specific type of server-side encryption. SSE-C is what you need if you want to manage the encryption keys and have Amazon manage the encryption. Both SSE-S3 and SSE-KMS support the management of keys, which does not match the requirements of this application.

Resources

* [Protecting Data Using Server-Side Encryption](https://docs.aws.amazon.com/AmazonS3/latest/dev/serv-side-encryption.html)

Stats

* You spent **00:01** on this question

Question 34

To protect S3 data from accidental overwrites and deletes, which of the following should you do first?

* Use a bucket policy to disable deletes from S3
* Access S3 only from signed URLs.
* ✓Enable versioning on the bucket.Selected
* Allow only MFA access

Explanation:  
The first thing you should do is enable versioning.

Resources

* [S3 Object Versioning](https://docs.aws.amazon.com/AmazonS3/latest/dev/ObjectVersioning.html)

Stats

* You spent **00:01** on this question

Question 42

The insurance company you work for is implementing new IT security policies for all RDS instances. In the future, you will need to perform both security analyses and operational troubleshooting on your RDS estate. As such, you will need a history of all RDS API calls made on your account. What AWS service should you use to achieve this?

* CloudFront
* ✓CloudTrailSelected
* CloudWatch
* CloudAudit

Explanation:  
AWS CloudTrail is a web service that records AWS API calls for your account and delivers log files to you. The AWS API call history produced by CloudTrail enables security analysis, resource change tracking, and compliance auditing.

Resources

* [CloudTrail and API Calls](https://docs.aws.amazon.com/awscloudtrail/latest/APIReference/Welcome.html)

Stats

* You spent **00:01** on this question