AWS Certified Solutions Architect - Associate Exam-2

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Name *

Answerkey

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QUESTION 1   * 10 points
You have a secure web application hosted on AWS using Application Load Balancers, Auto Scaling, and a fleet of EC2 instances connected to an RDS database. You need to ensure that your RDS database can only be accessed using the profile credentials specific to your EC2 instances (via an authentication token). How can you achieve this?

○ Using Active Directory federation via Amazon Inspector

⦿ Using IAM database authentication

○ Using IAM roles

○ Using Amazon Cognito

QUESTION 2   * 10 points

You use AWS Route53 as your DNS service and you have updated your domain, hello.acloud.guru, to point to a new Elastic Load Balancer (ELB). However, when you check the update it looks like users are still redirected to the old ELB. What could be the problem?

○ The A record needs to be changed to a CNAME.

○ The CNAME needs to be changed to an A record.

○ Your Application Load Balancer needs to be a Network Load Balancer to interface with Route53.

◉ The TTL needs to expire. After that, the record will be updated.

QUESTION 3   * 10 points

You are working for a startup that is designing a mobile gaming platform. It is being launched by a very famous celebrity, and the frontend servers will experience a lot of heavy traffic during the initial launch. You need to store the users' login and gaming details in memory, and you need caching capability that is compatible with Redis API. Which service should you use?

○ Amazon RDS

○ Elasticsearch

○ Amazon DynamoDB

◉ Amazon Elasticache

QUESTION 4   * 10 points

You have started a network design for a large pharmaceutical company to migrate their on-premises environment to AWS. The network will be highly complex with over 1,000 VPCs (all of which will need to communicate to each other) as well as having transitive peering between some on-premises data centers while all supporting IP Multicast. What VPC Network Solution should you recommend?

○ VPN CloudHub

○ AWS Private Link

⦿ Transit Gateway

○ Direct Connect

QUESTION 5   * 10 points

You work for an automotive company that has a small estate on AWS, but the majority of their assets are hosted in-house at their own data center. They are now looking to save money by moving more and more real estate to AWS and have started creating multiple AWS accounts in the same Region. As part of their expansion strategy, they plan to deploy multiple VPCs across these AWS accounts. They currently have one Direct Connect connection installed between their on-premises data center and AWS. Now that they have multiple production accounts and a growing number of VPCs, they will need to connect these to the on-premises data center using a dedicated connection. What is the most cost-effective way of doing this?

○ Use a VPN concentrator to connect the AWS accounts back to the on-premises data center.

⦿ Create a new Direct Connect gateway and set this up with the existing Direct Connect connection. Set up a transit gateway between the AWS accounts and connect the transit gateway to the Direct Connect gateway.

○ Provision an AWS VPN CloudHub and connect the AWS accounts directly back to the Direct Connect connection via a VPN connection.

○ Provision a new Direct Connect connection for each AWS account and connect it back to your on-premises data center.

QUESTION 6

* 10 points

You have a web application that is hosted on a series of EC2 instances that have an Application Load Balancer in front of them. You have created a new CloudFront distribution. You then set up its origin to point to your ALB. You need to provide access to hundreds of private files served by your CloudFront distribution. What should you use?

(•) CloudFront signed cookies

( ) CloudFront Origin Access Identity

( ) CloudFront HTTPS encryption

( ) CloudFront Signed URLS

QUESTION 7

* 10 points

A small startup is beginning to configure IAM for their organization. The user logins have been created and now the focus will shift to the permissions to grant to those users. An admin starts creating identity-based policies. To which item can an identity-based policy not be attached?

( ) roles

( ) groups

( ) users

(•) resources

QUESTION 8   * 10 points

You have a subscription website that stores private images and videos in S3. You need to distribute that content globally, so you have set up a CloudFront distribution and configured your S3 bucket to only allow the distribution's Origin Access Identity to have access to the data. You want to distribute private content to users for a limited amount of time. Which CloudFront feature allows you to securely distribute this private content?

○ Origin Access Identity

⦿ CloudFront Signed URLS

○ CloudFront Forward Distributors

○ S3 Public Access

QUESTION 9   * 10 points

A pharmaceutical company has created a hybrid cloud that connects their on-premises data center and cloud infrastructure in AWS. They need to back up their storage to AWS. The backups must be stored and retrieved from AWS using the Server Message Block (SMB) protocol. The backups must be immediately accessible within minutes for three months. What is the best solution?

○ Create a Direct Connect connection and store the backups in DynamoDB.

○ Use AWS Tape Gateway.

○ Create a Direct Connect connection and store the backups using Route 53.

⦿ Use AWS File Gateway.

QUESTION 10   * 10 points

You work at a mortgage brokerage firm in New York City. An intern has recently joined the company and you discover that they have been storing customer data in public S3 buckets. Because the company uses so many different S3 buckets, you need to identify a quick and efficient way to discover what personally identifiable information (PII) is being stored in S3. Which AWS service should you use?

○ AWS Trusted Advisor

○ Amazon Inspector

○ Amazon Athena

◉ Amazon Macie

QUESTION 11   * 10 points

You work for an insurance company that uses an AWS web application to look up customers' credit scores. For security purposes, this web application cannot traverse the internet or leave the Amazon network. It needs to communicate to Amazon DynamoDB and Amazon S3 in a custom VPC. What networking technology should you implement to achieve this?

○ Use AWS VPN CloudHub to connect the web application to Amazon DynamoDB and Amazon S3.

○ Use AWS Direct Connect to connect directly to Amazon DynamoDB and Amazon S3.

○ Use AWS WAF to connect the web application to Amazon DynamoDB and Amazon S3.

◉ Use VPC endpoints to connect the AWS web application to Amazon DynamoDB and Amazon S3.

QUESTION 12   * 10 points

You work for an online bank that is migrating a customer portal to AWS. Because of the legislative requirements, you need a threat detection service that continuously monitors your AWS accounts and workloads for malicious activity and delivers detailed security findings for visibility and remediation. Which service should you use?

◯ AWS CloudTrail

◯ Amazon Inspector

🔘 Amazon GuardDuty

◯ AWS Shield

QUESTION 13   * 10 points

You are a database administrator working for a small start up that has just secured Venture Capital (VC) funding. As part of the new investment the VC's have asked you to ensure that your application has minimum downtime. Currently, your backend is hosted on a dedicated cluster running MongoDB. You spend a lot of time managing the cluster, configuring backups, and trying to ensure there is no downtime. You would like to migrate your MongoDB database to the AWS cloud. What service should you use for your backend database, assuming you don't want to make any changes to your database and application?

◯ DynamoDB

◯ AWS RDS

🔘 Amazon DocumentDB

◯ Aurora Serverless

QUESTION 14   * 10 points

You work for a Fintech company that is migrating its application to AWS. You have a small team of six developers who need varying levels of access to the AWS platform. Using IAM, what is the most secure way to achieve this?

○ Create the appropriate groups with the appropriate permissions and then create an IAM user account per developer. Assign the accounts to the appropriate groups.

○ Give each developer a root level AWS account and join each of these accounts to AWS Organizations.

○ Create six IAM user accounts and add them to the administrator group, giving them full access to AWS.

○ Create one IAM user account with a user name and password and then share the login details with the six developers.

QUESTION 15   * 10 points

You work for a large advertising company that is moving its videos and photos to AWS. The size of the migration is 70 terabytes, and it needs to be completed as quickly and cost-effectively as possible. What is the best way to achieve this?

○ An AWS Snowball Edge Storage Optimized device

○ AWS Direct Connect

○ AWS File Gateway

○ AWS Storage Gateway

QUESTION 16   * 10 points

You run an online platform that specializes in five different dream vacations. The platform allows customers to submit queries about their five different experiences. You need to ensure that all queries are answered within 24 hours, either by a person or by a bot. You decide to create five separate SQS queues for each experience request. You need to automatically publish messages to their respective SQS queues as soon as customers submit their queries. Which architecture would be best suited to achieve this?

○ Create five SNS topics and configure the five SQS queues to subscribe to those five topics. Publish the messages to the dedicated queue depending on the experience request.

○ Use AWS Lex and AWS Polly to respond automatically to the SQS queues.

○ Create 10 SNS topics and configure the five SQS queues to subscribe to two topics each. Publish the messages to the dedicated queue depending on the experience request.

◉ Create one SNS topic and configure the five SQS queues to subscribe to that topic. Configure the filter policies in the SNS subscription to publish the response to the designated SQS queue based on the experience request type.

QUESTION 17   * 10 points

You have launched an EC2 instance that will host a PHP application. You install all the required software such as PHP and MySQL. You make a note of the EC2 public IPv4 address and then you stop and restart your EC2 instance. You notice that after the restart, you can't access the EC2 instance and that the instance's public IPv4 has been changed. What should you do to make sure your IPv4 address does not change?

◉ Create an elastic IP address and assign it to your EC2 instance.

○ Install the PHP application on an S3 bucket and configure the bucket to have a fixed IP address.

○ Raise a support request with AWS Support and ask them to issue you a permanent IPv4 address.

○ Create an Application Load Balancer with a fixed IP address and place the EC2 behind this.

QUESTION 18   * 10 points

You work for a popular streaming service that runs its NoSQL backend in-house on large Cassandra clusters. You recently had a major outage and realize you need to migrate your Cassandra workload on to something more reliable, such as the AWS Cloud. You do a cost analysis and realize that, in the long run, this will probably save the company a lot of overhead fees. You need to select a Cassandra-compatible service on which to run your workloads. Which service should you select?

- ⦿ Amazon Keyspaces
- ◯ Amazon Keystone
- ◯ Amazon DocumentDB
- ◯ Neptune

QUESTION 19   * 10 points

You are migrating your automotive company's customer-facing systems to AWS. One of the backend systems requires a database that is scalable globally and that can handle frequent updates to the database schema. You need to ensure there is no downtime or performance issues every time there is a schema change. You always require low-latency responses to high-traffic queries. What database would best suit this requirement?

- ◯ RDS SQL Server with read replicas
- ◯ Amazon Aurora Database with read replicas enabled
- ⦿ DynamoDB
- ◯ Redshift

QUESTION 20   * 10 points

You work for a large investment bank that is migrating its applications to the cloud. The
bank is developing a custom fraud detection system using Python in Jupyter Notebook.
They then build and train their models and put them into production. They want to
migrate to the AWS Cloud and are looking for a service that would meet these
requirements. Which AWS service would you recommend they use?

○ Amazon Comprehend

◉ Amazon SageMaker

○ Amazon Forecast

○ Amazon Fraud Detector

QUESTION 21   * 10 points

You host a web application on Amazon EC2 that contains a large number of files that
are infrequently accessed. Currently, the files are hosted on provisioned IOPS; however,
due to budget cuts, your manager asks you to move the files to a more cost-effective
solution. What storage solution should you choose?

○ Use a Throughput Optimized HDD (st1).

○ Use a Cold HDD (sc1).

○ Use an Elastic Block Storage General Purpose SSD (gp3).

◉ Use an S3 Infrequent Access storage bucket. Create a role in IAM granting S3 access and attach
   this role to your EC2 instance.

QUESTION 22   * 10 points

You are planning to migrate a complex big data application to AWS using EC2. The application requires complex software to be installed, which typically takes a couple of hours. You need this application to be behind an Auto Scaling group so that it can react in a scaling event. How do you recommend speeding up the installation process when there's a scale-out event?

🔘 Create a golden AMI with the software pre-installed.

○ Pre-deploy the software on an Application Load Balancer so when there's a scaling event it will automatically be installed on the EC2 instance.

○ Create a bootstrap script to automatically install the software.

○ Create an EBS volume with PIOPS for faster installation performance.

QUESTION 23   * 10 points

You work for a Fintech company that is launching a new cryptocurrency trading platform hosted on AWS. Because of the nature of the cryptocurrency industry, you have been asked to implement a Cloud Security Posture Management (CSPM) service that performs security best practice checks, aggregates alerts, and enables automated remediation. Which AWS service would meet this requirement?

○ Amazon GuardDuty

🔘 AWS Security Hub

○ Amazon Inspector

○ AWS Trusted Advisor

QUESTION 24   * 10 points

You work for a small startup that has a shoestring budget. You accidentally leave a large EC2 instance running over a few days and are hit with a huge bill. You need to prevent this from happening in the future. What should you do?

○ Enable AWS CloudTrail to terminate any EC2 instance that has been running for more than 24 hours.

○ Enable CloudFormation to alert you when any EC2 instance has been running for more than 24 hours.

◉ Create a billing alarm to monitor your AWS charges for when they go above a certain threshold.

○ Use AWS Trusted Advisor to notify you whenever an EC2 instance has been running for more than 24 hours.

QUESTION 25   * 10 points

A small financial company is running workloads on AWS using multiple Amazon EC2 Auto Scaling groups and Amazon RDS. The Auto Scaling groups are used to execute a manually driven ETL process on large datasets within Amazon RDS.

The next application feature they want to introduce is the ability to store the output within Amazon S3, and then ingest that stored data into an Amazon Redshift table. They would like to leverage a managed service for executing and tracking the ETL process instead of manually doing so.

Which solution would be the best for their requirements?

◉ AWS Data Pipeline

○ Amazon MQ

○ AWS Lambda

○ Amazon EventBridge

QUESTION 26   * 10 points

You work for a company that sequences genetics and they run a high performance computing (HPC) application that does things such as batch processing, ad serving, scientific modeling, and CPU-based machine learning inference. They are migrating to AWS and would like to create a fleet of EC2 instances to meet this requirement. What EC2 instance type should you recommend?

○ Amazon EC2 R6g

○ Amazon EC2 M6g

○ Amazon EC2 T4g instances

⦿ Amazon EC2 C7g

QUESTION 27   * 10 points

You have a serverless image-sharing website that utilizes S3 to store high-quality images. Unfortunately, your competitors start linking to your website and borrowing your photos. How can you best prevent unauthorized access?

⦿ Restrict public access to the bucket and turn on presigned URLs with expiry dates.

○ Block the IP addresses of the websites using AWS WAF.

○ Enable CloudFront on the website.

○ Store the images in an RDS database and restrict access.

QUESTION 28   * 10 points

You are a solutions architect for an online gambling company. You notice a series of web-layer DDoS attacks. This is coming from a large number of multiple IP addresses. In order to mitigate these web-layer DDoS attacks, you have been asked to implement a rule capable of blocking all IPs that have more than 2,000 requests in the last 5 minute interval. What should you do?

○ Create a standard rule on your AWS WAF and associate the web access control list (ACL) to the Application Load Balancer

◉ Create a rate-based rule on your AWS WAF and associate the web access control list (ACL) to the Application Load Balancer

○ Update your VPC's network access control list (NACL) and block access to the IP addresses as and when they come in

○ Use AWS Trusted Advisor to filter the traffic

QUESTION 29   * 10 points

You are working as a Solutions Architect for an online travel company. Your application is going to use an Auto Scaling group of EC2 instances but you need to have some decoupling to store messages because of high volume. Which AWS service can be added to the solution to meet this requirement?

○ Elasticache

○ AWS Simple Workflow Service

◉ AWS SQS

○ RDS read replicas

QUESTION 30   * 10 points
A large fintech company is using a web application that stores its data on Amazon RDS.
As a solutions architect, you have been asked to upgrade the web application so that
users around the world can access it using an API. The application will need to be able
to handle large bursts of traffic in seconds from time to time. What would an ideal
solution look like?

○ Create an API using API Gateway and use EC2 with Auto Scaling to quickly handle the sudden burst
   of traffic.

⦿ Create an API using API Gateway and use Lambda to process the requests and Lambda functions to
   push the requests to an SQS queue, consume messages from the queue, and interact with RDS.

○ Create an API using API Gateway and use Route 53 to route traffic to CloudFront.

○ Create an API using API Gateway and use RDS Auto Scaling to handle the bursts in traffic.

QUESTION 31   * 10 points
You start work for a government agency that is creating a new intranet for internal
employees. The department has a sprawl of information across multiple AWS accounts
and services, and you need to find a way to make this information searchable. Which
AWS service should you consider using?

○ Amazon Textract

⦿ Amazon Kendra

○ Amazon Comprehend

○ Amazon Polly

QUESTION 32   * 10 points

A junior intern just started working at your company. During the course of the day, they accidentally delete a critical encryption key that you had stored securely in S3. You need to prevent this from happening in the future. Which two steps should you take to prevent this from happening again in the future?
(Choose 2)

☑ Enable multi-factor authentication (MFA) delete

☐ Enable Amazon CloudWatch

☑ Turn on versioning

☐ Enable AWS CloudTrail

QUESTION 33   * 10 points

You run a popular retro gaming merchandise retail platform on AWS. Over the past year and a half, you've noticed that your traffic has distinct daily and weekly patterns. For example, there's a surge in traffic during weekday business hours and a huge drop during the weekends. To add to the issues, your application takes a considerable amount of time to initialize, causing a noticeable latency impact during scale-out events. You need to ensure that your infrastructure scales in anticipation of these patterns. Which AWS Auto Scaling feature would best address this scenario?

◯ Scheduled scaling

◯ Manual scaling

⦿ Predictive scaling

◯ Dynamic scaling

QUESTION 34   * 10 points

You have been tasked with designing a strategy for backing up EBS volumes attached to an instance-store-backed EC2 instance. You have been asked for an executive summary on your design, and the executive summary should include an answer to the question, "What can an EBS volume do when snapshotting the volume is in progress"?

(◉) The volume can be used normally while the snapshot is in progress.

(○) The volume can only accommodate writes while a snapshot is in progress.

(○) The volume can only accommodate reads while a snapshot is in progress.

(○) The volume cannot be used while a snapshot is in progress.

QUESTION 35   * 10 points

A recent audit of IT services deployed within many of the AWS Organization member accounts in your company has caused numerous remediation tasks for the SecOps team, as well as the member account owners. Post-remediation efforts, the CISO has asked you to identify a solution within AWS for preventing this from repeating. They would like you to instead find a way to allow end users in the accounts to deploy preapproved services within AWS to avoid them accidentally using the offending services. Which of the following is the optimal approach for this solution?

(◉) Create approved CloudFormation templates containing the required services that can be used throughout the organization. Load the templates to a shared catalog within AWS Service Catalog. List the templates as products, and then share the catalog with your Organization.

(○) Create approved Terraform templates containing the required services that are used throughout the organization. Create a shared catalog within AWS Service Catalog, list the templates as products, and then share the catalog with your Organization.

(○) Create a CloudFormation Stack Set for each approved IT service. Have an organization administrator manually deploy these templates to the targeted accounts after approval.

(○) Create approved CloudFormation templates containing the required services that are used throughout the organization. Send email templates out to the account owners, so they can reference them as needed.

QUESTION 36   * 10 points

You manage 12 EC2 instances and you need to have a central file repository that these EC2 instances can access. What would be the best possible solutions for this?
(Choose 2)

☑ Attach a volume to multiple instances with Amazon EBS Multi-Attach.

☑ Create an EFS volume and attach this to the EC2 instances.

☐ Create a Route53 EBS storage record and create a network mount on your EC2 instances pointing at the Route53 alias record.

☐ Create a custom Lambda function behind API Gateway. Point your EC2 instances to the Lambda function when they need to access the centralized storage system.

QUESTION 37   * 10 points

You are a solutions architect working for a biotech company that has a large private cloud deployment using VMware. You have been tasked to setup their disaster recovery solution on AWS. What is the simplest way to achieve this?

○ Use the VMware landing page on AWS to provision a EC2 instance with VMware vCenter installed on it

○ Deploy an EC2 instance into a private subnet and install vCenter on it

○ Deploy an EC2 instance into a public subnet and install vCenter on it

⦿ Purchase VMware Cloud on AWS, leveraging VMware disaster recovery technologies and the speed of AWS cloud to protect your virtual machines

QUESTION 38 * 10 points

You work for a large chip manufacturer in Taiwan who has a large dedicated cluster running MongoDB. Unfortunately, they have a large period of downtime and would now like to migrate their MongoDB instance to the AWS cloud. They do not want to make any changes to their application architecture. What AWS service would you recommend to use for MongoDB?

○ Amazon Neptune

○ Amazon QLDB

◉ Amazon DocumentDB

○ Aurora Serverless

QUESTION 39 * 10 points

You have a custom VPC hosted in the AWS cloud that contains your secure web application. During routine analysis, you notice some port scans coming in from unrecognizable IP addresses. You are suspicious, and decide to block these IP addresses for the next 48 hours. What is the best way to achieve this?

◉ Modify your network access control list (NACL) for all public IP addresses and block traffic to the suspicious IP addresses.

○ Modify your VPC control list and block access to the IP addresses.

○ Modify your security group for all public IP addresses and block traffic to the suspicious IP addresses.

○ Modify your internet gateway for all private IP addresses and block traffic to the suspicious IP addresses.

QUESTION 40   * 10 points

You work for an insurance company that has just been merged with two other insurance companies. All companies have production workloads on AWS using multiple AWS accounts. Which of the following is something you could recommend to your boss to immediately start saving money?

◯ Run Amazon Macie to identify where you can save costs.

◯ Migrate all AWS accounts to a single AWS account and close the migrated accounts.

◯ Use AWS CloudTrail to start keeping track of what you are spending.

⦿ Create a root AWS account using AWS Organizations and connect all subsequent AWS accounts to the Organization. You can then take advantage of consolidated billing.

QUESTION 41   * 10 points

A financial institution has begun using AWS services and plans to migrate as much of their IT infrastructure and applications to AWS as possible. The nature of the business dictates that strict compliance practices be in place. The AWS team has configured AWS CloudTrail to help meet compliance requirements and be ready for any upcoming audits. Which item is not a feature of AWS CloudTrail?

◯ Track changes to resources.

◯ Answer simple questions about user activity.

⦿ Monitor Auto Scaling Groups and optimize resource utilization.

◯ Enables compliance.

QUESTION 42   * 10 points

Your company has a small web application hosted on an EC2 instance. The application has just been deployed but no one is able to connect to the web application from a browser. You had recently ssh'd into this EC2 instance to perform a small update, but you also cannot browse to the application from Google Chrome. You have checked and there is an internet gateway attached to the VPC and a route in the route table to the internet gateway. Which situation most likely exists?

🔘 The instance security group has ingress on port 22 but not port 80.

⚪ The instance security group has no ingress on port 22 or port 80.

⚪ The instance security group has ingress on port 443 but not port 22.

⚪ The instance security group has ingress on port 80 but not port 22.

QUESTION 43   * 10 points

You have an online store and you are preparing for the week before Christmas, which is your busiest period of the year. You estimate that your traffic will increase by 50% during this period. Your website is using an SQS standard queue, and you're running a fleet of EC2 instances configured in an Auto Scaling group which then consumes the SQS messages. What should you do to prepare your SQS queue for the 50% increase in traffic?

⚪ Create multiple SQS queues and deploy these behind an SQS Load Balancer.

🔘 Nothing. SQS scales automatically.

⚪ Increase the size of your SQS queue.

⚪ Create additional EC2 instances to help query the SQS queue.

QUESTION 44

* 10 points

You have a steady application serving around 3,000 customers that needs to be migrated to AWS. Based on historical data, traffic and usage has not grown very much in the past 24 months and you expect the application to remain steady for the next 3 years. You need to run the application on EC2. What is the most cost-effective EC2 instance type to use?

- ⦿ Reserved Instances
- ◯ On-Demand Instances
- ◯ Spot Instances
- ◯ Dedicated Instances

QUESTION 45

* 10 points

You work for a pharmaceutical company that recently had a major outage due to a sophisticated DDoS attack. They need you to implement DDoS mitigation to prevent this from happening again. They require you to have near real-time visibility into attacks, as well as 24/7 access to a dedicated team who can help mitigate this in the future. Which AWS service should you recommend?

- ◯ AWS Shield
- ◯ AWS DDoS Prevention Standard
- ◯ AWS DDoS Prevention Advanced
- ⦿ AWS Shield Advanced

QUESTION 46

* 10 points

You have landed a job with a major insurance firm that is moving their AWS estate to the cloud. They use artificial intelligence and machine learning using custom models built via Jupyter notebooks. Your boss would like to do the Jupyter Notebook development in the AWS Cloud from now on. Which AWS service would allow you to do this?

○ Amazon Comprehend

◉ Amazon SageMaker

○ Amazon Fraud Detector

○ AmAmazon Forecastazon Forecast

QUESTION 47   * 10 points

Janelle works as a cloud solutions architect for a large enterprise that has begun the
process of migrating to AWS for all of their application needs. The CTO and CISO have
already decided that AWS Organizations is a required service for the multi-account
environment that will be put into place. Janelle has been brought in to help solve the
primary concern of member AWS accounts not following the required compliance rules
set forth by the company. They want to both send alerts on configuration changes and
prevent specific actions from occurring. Which solution would be the most efficient in
solving this projected problem?

○ Create new AWS accounts using AWS Control Tower. Leverage the preventative and detective
guardrails that come with it to prevent governance drift as well as send alerts on suspicious
activities.

○ Install third-party SIEM software on Amazon EC2 instances in each account. Attach to them a Read-
Only IAM instance profile within the respective account. Have them generate alerts for each flagged
activity.

○ Create a set of Global AWS Config rules that can cover all Regions in the management account that
apply to the member accounts. Set up an AWS Lambda function in the management AWS account
to alert an administrator when drift is detected.

○ Create individual AWS Config rules in each AWS account. Set up AWS Lambda functions in each
AWS account to remediate any suspected drift.

QUESTION 48   * 10 points

You are working for a small startup that wants to design a content management system (CMS). The company wants to architect the CMS so that the company only incurs a charge when someone tries to access their content. They want to try and keep costs as low as possible and remain in the AWS Free Tier if possible. Which of the following options is the most cost-effective architecture?

◉ API Gateway > Lambda > DynamoDB > S3

◯ API Gateway > EC2 > DynamoDB

◯ Elastic Load Balancer > EC2 > DynamoDB

◯ Application Load Balancer > EC2 > RDS

QUESTION 49   * 10 points

You are a solutions architect at an insurance company. Someone on a previous shift has deployed an EC2 instance using a bootstrap script. However, the EC2 instance does not have the required software installed on it. You do not have access to the bootstrap script that they used. However, you do have admin access to the EC2 instance that was provisioned. How can you review the bootstrap script used to deploy the EC2 instance?

◯ Run the command curl http://254.169.254.169/latest/meta-data/.

◯ Run the command curl http://254.169.254.169/latest/user-data/.

◉ Run the command curl http://169.254.169.254/latest/user-data/.

◯ Run the command curl http://169.254.169.254/latest/meta-data/.

QUESTION 50   * 10 points

You have developed an AI-powered app that is used to predict the prices of cryptocurrency in real time. The app requires low latency and high throughput storage performance for processing training sets. You need to archive the completed processed training sets on storage that is as cost effective as possible, but can still maintain immediate access. What two storage solutions should you use?
(Choose 2)

☐ Amazon Elastic File System for archiving completed processed training sets

☐ AWS Storage Gateway for processing training sets

☑ Amazon FSx for Lustre for processing training sets

☑ Amazon S3 Glacier Instant Retrieval for archiving completed processed training sets

QUESTION 51   * 10 points

You are database administrator for a security company using a large graph database used to build graph queries for near real-time identity fraud pattern detection in financial and purchase transactions. You recently experienced an outage and you want to migrate this database to somewhere more secure and stable such as AWS. What AWS service would you recommend to the business to handle graph queries?

○ Amazon Keyspaces

○ Aurora Serverless

○ Amazon DocumentDB

◉ Neptune

QUESTION 52   * 10 points

You run a popular online store that specializes in Christmas decorations. You are about to enter the Christmas period and the traffic to your website is expected to increase by 10x. Your website uses API Gateway, Lambda, and DynamoDB on the background. Last year during the sale, you got the following exception from DynamoDB: *ProvisionedThroughputExceededException*. You need to prevent this from happening again this year. What would you do to prevent this?

○ Use Aurora Serverless NoSQL as an alternative.

○ Create an Auto Scaling group in front of DynamoDB and create DynamoDB read replicas to spread the load of the queries.

◉ Create a DAX Cluster.

○ Create an autoscaling group in front of your Lambda function so that the queries are dealt with in parallel.

QUESTION 53   * 10 points

Your company has a local content management system (CMS) using Microsoft
Sharepoint that is hosted on-premises. Due to a recent acquisition of another company,
you expect traffic to the CMS to more than double in the coming week, so you have
decided to migrate the SharePoint server to AWS. You need high performance using
Windows shared file storage. You also need a high-performing cloud storage solution
that is highly available and that can be integrated with Active Directory. What would be
the best storage option?

- ◉ Make an Amazon FSx for Windows File System and join this to an Active Directory Domain
  Controller hosted in AWS.

- ○ Create a file system using Amazon EFS and connect this file system to an Active Directory Domain
  Controller hosted in AWS.

- ○ Create an EC2 Instance and mount an S3 bucket as the shared file repository. Connect the bucket to
  an Active Directory Domain Controller hosted in AWS.

- ○ Create a file system using Amazon NFS and connect this file system to an Active Directory Domain
  Controller hosted in AWS.

QUESTION 54   * 10 points

You have an image sharing website that sits on EC2 and uses EBS as the backend
storage. Unfortunately, you keep running out of space and you are forced to mount
additional EBS volumes. Your boss asks if there are any other services on AWS you can
use to store images or videos. What service would you suggest?

- ○ CloudWatch
- ○ RDS
- ◉ S3
- ○ Route53

QUESTION 55   * 10 points

You need to design a stateless web application tier. Which of the following would NOT
help you achieve this?

○ Store the session data in Elasticache.

○ Save your session data in Amazon RDS.

○ Store the session data in cookies saved to the users' browsers.

⦿ Save your session data on an EBS volume shared by EC2 instances running across different
Availability Zones.

QUESTION 56   * 10 points

You need to be able to perform vulnerability scans on your large fleet of EC2 instances.
Which AWS service should you choose?

○ AWS Trusted Advisor

○ Amazon Macie

○ Amazon Athena

⦿ Amazon Inspector

QUESTION 57   * 10 points

You work for an insurance company that stores a lot of confidential medical data. They are migrating to AWS and have an encryption requirement where you need to manage the hardware security modules (HSMs) that generate and store the encryption keys. You also create the symmetric keys and asymmetric key pairs that the HSM stores. Which AWS service should you use to meet these requirements?

○ AWS Trusted Key Advisor

○ AWS Key Management Service (KMS)

◉ AWS CloudHSM

○ AWS CloudTrail

QUESTION 58   * 10 points

You have a large number of files in S3 and you have been asked to build an index of these files. In order to do this, you need to read the the first 250 bytes of each object in S3. This data contains some metadata about the content of the file itself. Unfortunately, there are over 10,000,000 files in your S3 bucket, and this is about 100 TB of data. The data will then need to be stored in an Aurora Database. How can you build this index in the fastest way possible?

◉ Create a program to use a byte range fetch for the first 250 Bytes of data and then store this in the Aurora Database.

○ Create a program to use Macie to select the first 250 Bytes of data and then store this in Aurora Database.

○ Use AWS Athena to query the S3 bucket for the first 250 bytes of data. Take the result of the query and build an Aurora Database.

○ Use the index bucket function in AWS Macie to query the S3 bucket and then load this data in to the Aurora Database.

QUESTION 59   * 10 points

A small biotech company has finalized their decision to begin deploying their
application to the AWS cloud. They expect to have a handful of AWS accounts to begin
with, but expect to grow to over 100 by the end of the year. The security engineer on the
project has stressed that they want to have a centralized method of storing AWS
CloudTrail logs for all accounts and alert on any notifications regarding compliance
violations with AWS services in the member accounts. What solution would be the best
fit for this scenario?

○ AWS Config with AWS Lambda can deploy AWS Config rules throughout the organizations and use
   AWS Lambda to remediate or notify the security team.

◉ AWS Control Tower can deploy a Log Archive account for centralized security logs and an Audit
   account for any SNS notifications around compliance violations.

○ AWS Organization Service Control Policies can be used to create new accounts. Then deploy the
   policies to each AWS account and use them to notify security on any violations.

○ Deploy an SIEM application on Amazon EC2 in the management account. Grant the EC2 instances
   permissions to assume cross-account roles into each member account with Read-Only permissions.
   Use them to notify security of any violations.

QUESTION 60   * 10 points

As a car manufacturing enterprise, you're using Amazon RDS to store data from a web-based application. The application typically experiences low RDS usage. However, sporadic bursts of high, ready-heavy traffic to RDS will occur in response to the launch of new marketing campaigns. Additionally, you're tasked with developing an API that allows third-party database queries. Given these conditions, which architecture would be most optimal?

○ Create an API using Amazon API Gateway. Use CloudFront to handle the scaling of read traffic.

○ Create an API using Amazon API Gateway. Configure S3 to handle the traffic.

● Create an API using Amazon API Gateway. Configure a read replica to handle the additional traffic.

○ Create an API using Amazon API Gateway. Use Auto Scaling with EC2 to increase the load on your database.

QUESTION 61   * 10 points

What is the most cost-effective architecture for a front-facing website, assuming a peak load of 500 users per hour will be accessing the site?

○ An Elastic Kubernetes Service cluster

○ An Elastic Beanstalk configuration using Auto Scaling and EC2

○ A fleet of EC2 instances behind a Network Load Balancer connected to an RDS instance with multiple read nodes

● A serverless website using API Gateway, Lambda, and DynamoDB

QUESTION 62   * 10 points

You work for a private library that is digitizing its collection of ancient books. The library wants to store scans of each book in the cloud at the cheapest rate possible. The files will be accessed only occasionally, but will need to be retrieved instantly. What is the most cost-effective way to achieve this?

○ S3 Standard

○ Elastic File System (EFS)

○ Elastic Block Storage (EBS)

◉ S3 Infrequent Access

QUESTION 63   * 10 points

A Fintech startup has a small application that receives intermittent and random traffic. At some points, it may not receive any traffic at all; at other times, it might receive tens of thousand of queries at once. You need to rearchitect the application for the AWS cloud using a relational database. What database technology would best suit your needs while keeping costs at a minimum?

○ NeptuneDB

○ RDS for MySQL

○ DynamoDB

◉ Aurora Serverless

QUESTION 64   * 10 points

A developer is working for a medium-sized biotech company. The developer has been tasked with building an application with stateless web servers and needs fast access to session data. Which AWS service would accomplish this?

○ EKS

○ Route53

○ Glacier

◉ Elasticache

QUESTION 65   * 10 points

You work for a startup that has recently been acquired by a large insurance company. As per the insurance company's internal security controls, you need to be able to monitor and record all API calls made in your AWS infrastructure. What AWS service should you use to achieve this?

○ AWS Trusted Advisor

○ Amazon CloudWatch

○ AWS Cloud Audit

◉ AWS CloudTrail

Google Forms