AWS Certification Exams Example Questions

This document contains example questions for the following AWS certification exams:

AWS Cloud Practitioner Certification Example Questions

1. Under the shared responsibility model, which of the following is the customer responsible for?

A. Ensuring that disk drives are wiped after use.
B. Ensuring that firmware is updated on hardware devices.
C. Ensuring that data is encrypted at rest.
D. Ensuring that network cables are category six or higher.

2. Which allows companies to track and categorize spending on a detailed level?

A. Cost allocation tags
B. Consolidated billing
C. AWS Budgets
D. AWS Marketplace

3. Stores objects, provides real-time access to those objects, and offers versioning and lifecycle capabilities:

A. Amazon Glacier
B. AWS Storage Gateway
C. Amazon S3
D. Amazon EBS

4. What AWS team assists customers with accelerating cloud adoption through paid engagements in any of several specialty practice areas?

A. AWS Enterprise Support
B. AWS Solutions Architects
C. AWS Professional Services
D. AWS Account Managers

5. A customer would like to design and build a new workload on AWS Cloud but does not have the AWS-related software technical expertise in-house. Which of the following AWS programs can a customer take advantage of to achieve that outcome?

A. AWS Partner Network Technology Partners
B. AWS Marketplace
C. AWS Partner Network Consulting Partners
D. AWS Service Catalogue

6. Which service allows a company with multiple AWS accounts to combine its usage to obtain volume discounts?

A. AWS Server Migration Service
B. AWS Organizations
C. AWS Budgets
D. AWS Trusted Advisor
E. Amazon Quicksight

7. Which of the following services could be used to deploy an application to servers running on-premises? **(Select two choices)**

A. AWS Elastic Beanstalk
B. AWS OpsWorks
C. AWS CodeDeploy
D. AWS Batch
E. AWS X-Ray

8. Which Amazon EC2 pricing model adjusts based on supply and demand of EC2 instances?

A. On-Demand Instances
B. Reserved Instances
C. Spot Instances
D. Convertible Reserved Instances

9. Which design principles for cloud architecture are recommended when re-architecting a large monolithic application? **(Select two choices)**

A. Use manual monitoring.
B. Use fixed servers.
C. Implement loose coupling.
D. Rely on individual components.
E. Design for scalability.

10. Which is the MINIMUM AWS Support plan that allows for one-hour target response time for support cases?

A. Enterprise
B. Business
C. Developer
D. Basic

AWS Cloud Practitioner Certification Example Questions Answers

1- C
2- A
3- C
4- A
5- C
6- B
7- B-C
8- A
9- C-E
10- B

AWS Solution Architect Associate Certification Example Questions

1) A company runs a public-facing three-tier web application in a VPC across multiple Availability Zones. Amazon EC2 instances for the application tier running in private subnets need to download software patches from the internet. However, the EC2 instances cannot be directly accessible from the internet. Which actions should be taken to allow the EC2 instances to download the needed patches? **(Select two choices)**

A) Configure a NAT gateway in a public subnet.

B) Define a custom route table with a route to the NAT gateway for internet traffic and associate it with the private subnets for the application tier.

C) Assign Elastic IP addresses to the EC2 instances.

D) Define a custom route table with a route to the internet gateway for internet traffic and associate it with the private subnets for the application tier.

E) Configure a NAT instance in a private subnet.

2) A solutions architect wants to design a solution to save costs for Amazon EC2 instances that do not need to run during a 2-week company shutdown. The applications running on the EC2 instances store data in instance memory that must be present when the instances resume operation. Which approach should the solutions architect recommend to shut down and resume the EC2 instances?

A) Modify the application to store the data on instance store volumes. Reattach the volumes while restarting them.

B) Snapshot the EC2 instances before stopping them. Restore the snapshot after restarting the instances.

C) Run the applications on EC2 instances enabled for hibernation. Hibernate the instances before the 2-week company shutdown.

D) Note the Availability Zone for each EC2 instance before stopping it. Restart the instances in the same Availability Zones after the 2-week company shutdown.

3) A company plans to run a monitoring application on an Amazon EC2 instance in a VPC. Connections are made to the EC2 instance using the instance's private IPv4 address. A solutions architect needs to design a solution that will allow traffic to be quickly directed to a standby EC2 instance if the application fails and becomes unreachable. Which approach will meet these requirements? **(Select two choices)**

A) Deploy an Application Load Balancer configured with a listener for the private IP address and register the primary EC2 instance with the load balancer. Upon failure, de-register the instance and register the standby EC2 instance.

B) Configure a custom DHCP option set. Configure DHCP to assign the same private IP address to the standby EC2 instance when the primary EC2 instance fails.

C) Attach a secondary elastic network interface to the EC2 instance configured with the private IP address. Move the network interface to the standby EC2 instance if the primary EC2 instance becomes unreachable.

D) Associate an Elastic IP address with the network interface of the primary EC2 instance. Disassociate the Elastic IP from the primary instance upon failure and associate it with a standby EC2 instance.

4) An analytics company is planning to offer a web analytics service to its users. The service will require that the users' webpages include a JavaScript script that makes authenticated GET requests to the company's Amazon S3 bucket. What must a solutions architect do to ensure that the script will successfully execute?

A) Enable cross-origin resource sharing (CORS) on the S3 bucket.

B) Enable S3 Versioning on the S3 bucket.

C) Provide the users with a signed URL for the script.

D) Configure an S3 bucket policy to allow public execute privileges.

5) A company's security team requires that all data stored in the cloud be encrypted at rest at all times using encryption keys stored on premises. Which encryption options meet these requirements? **(Select two choices)**

A) Use server-side encryption with Amazon S3 managed encryption keys (SSE-S3).

B) Use server-side encryption with AWS KMS managed encryption keys (SSE-KMS).

C) Use server-side encryption with customer-provided encryption keys (SSE-C).

D) Use client-side encryption to provide at-rest encryption.

E) Use an AWS Lambda function invoked by Amazon S3 events to encrypt the data using the customer's keys.

6) A company uses Amazon EC2 Reserved Instances to run its data processing workload. The nightly job typically takes 7 hours to run and must finish within a 10-hour time window. The company anticipates temporary increases in demand at the end of each month that will cause the job to run over the time limit with the capacity of the current resources. Once started, the processing job cannot be interrupted before completion. The company wants to implement a

solution that would provide increased resource capacity as cost-effectively as possible. What should a solutions architect do to accomplish this?

A) Deploy On-Demand Instances during periods of high demand.

B) Create a second EC2 reservation for additional instances.

C) Deploy Spot Instances during periods of high demand.

D) Increase the EC2 instance size in the EC2 reservation to support the increased workload.

7) A company runs an online voting system for a weekly live television program. During broadcasts, users submit hundreds of thousands of votes within minutes to a front-end fleet of Amazon EC2 instances that run in an Auto Scaling group. The EC2 instances write the votes to an Amazon RDS database. However, the database is unable to keep up with the requests that come from the EC2 instances. A solutions architect must design a solution that processes the votes in the most efficient manner and without downtime.
Which solution meets these requirements?

A) Migrate the front-end application to AWS Lambda. Use Amazon API Gateway to route user requests to the Lambda functions.

B) Scale the database horizontally by converting it to a Multi-AZ deployment. Configure the front-end application to write to both the primary and secondary DB instances.

C) Configure the front-end application to send votes to an Amazon Simple Queue Service (Amazon SQS) queue. Provision worker instances to read the SQS queue and write the vote information to the database.

D) Use Amazon EventBridge (Amazon CloudWatch Events) to create a scheduled event to re-provision the database with larger, memory-optimized instances during voting periods. When voting ends, re-provision the database to use smaller instances.

8) A company has a two-tier application architecture that runs in public and private subnets. Amazon EC2 instances running the web application are in the public subnet and an EC2 instance for the database runs on the private subnet. The web application instances and the database are running in a single Availability Zone (AZ).
Which combination of steps should a solutions architect take to provide high availability for this architecture? **(Select two choices)**

A) Create new public and private subnets in the same AZ.

B) Create an Amazon EC2 Auto Scaling group and Application Load Balancer spanning multiple AZs for the web application instances.

C) Add the existing web application instances to an Auto Scaling group behind an Application Load Balancer.

D) Create new public and private subnets in a new AZ. Create a database using an EC2 instance in the public subnet in the new AZ. Migrate the old database contents to the new database.

E) Create new public and private subnets in the same VPC, each in a new AZ. Create an Amazon RDS Multi-AZ DB instance in the private subnets. Migrate the old database contents to the new DB instance.

9) A website runs a custom web application that receives a burst of traffic each day at noon. The users upload new pictures and content daily, but have been complaining of timeouts. The architecture uses Amazon EC2 Auto Scaling groups, and the application consistently takes 1 minute to initiate upon boot up before responding to user requests.
How should a solutions architect redesign the architecture to better respond to changing traffic?

A) Configure a Network Load Balancer with a slow start configuration.

B) Configure Amazon ElastiCache for Redis to offload direct requests from the EC2 instances.

C) Configure an Auto Scaling step scaling policy with an EC2 instance warmup condition.

D) Configure Amazon CloudFront to use an Application Load Balancer as the origin.

10) An application running on AWS uses an Amazon Aurora Multi-AZ DB cluster deployment for its database. When evaluating performance metrics, a solutions architect discovered that the database reads are causing high I/O and adding latency to the write requests against the database. What should the solutions architect do to separate the read requests from the write requests?

A) Enable read-through caching on the Aurora database.

B) Update the application to read from the Multi-AZ standby instance.

C) Create an Aurora replica and modify the application to use the appropriate endpoints.

D) Create a second Aurora database and link it to the primary database as a read replica.

AWS Solution Architect Associate Certification Example Questions Answers

1) A-B
2) C
3) C-A
4) A
5) C-D
6) A
7) C
8) B-E
9) C
10) C

AWS Developer Associate Certification Example Questions

1) A company is migrating a legacy application to Amazon EC2 instances. The application uses a user name and password that are stored in the source code to connect to a MySQL database. The company will migrate the database to an Amazon RDS for MySQL DB instance. As part of the migration, the company needs to implement a secure way to store and automatically rotate the database credentials. Which solution will meet these requirements?

A) Store the database credentials in environment variables in an Amazon Machine Image (AMI). Rotate the credentials by replacing the AMI.

B) Store the database credentials in AWS Systems Manager Parameter Store. Configure Parameter Store to automatically rotate the credentials.

C) Store the database credentials in environment variables on the EC2 instances. Rotate the credentials by relaunching the EC2 instances.

D) Store the database credentials in AWS Secrets Manager. Configure Secrets Manager to automatically rotate the credentials.

2) A developer is creating a web application that must give users the ability to post comments and receive feedback in near real time. Which solutions will meet these requirements? **(Select two choices)**

A) Create an AWS AppSync schema and corresponding APIs. Use an Amazon DynamoDB table as the data store.

B) Create a WebSocket API in Amazon API Gateway. Use an AWS Lambda function as the backend. Use an Amazon DynamoDB table as the data store.

C) Create an AWS Elastic Beanstalk application that is backed by an Amazon RDS database. Configure the application to allow long-lived TCP/IP sockets.

D) Create a GraphQL endpoint in Amazon API Gateway. Use an Amazon DynamoDB table as the data store.

E) Establish WebSocket connections to Amazon CloudFront. Use an AWS Lambda function as the CloudFront distribution's origin. Use an Amazon Aurora DB cluster as the data store.

3) A developer is adding sign-up and sign-in functionality to an application. The application must make an API call to a custom analytics solution to log user sign-in events. Which combination of actions should the developer perform to meet these requirements? **(Select two choices)**

A) Use Amazon Cognito to provide the sign-up and sign-in functionality.

B) Use AWS Identity and Access Management (IAM) to provide the sign-up and sign-in functionality.

C) Configure an AWS Config rule to make the API call when a user is authenticated.

D) Invoke an Amazon API Gateway method to make the API call when a user is authenticated.

E) Invoke an AWS Lambda function to make the API call when a user is authenticated.

4) A company is using Amazon API Gateway for its REST APIs in an AWS account. A developer wants to allow only IAM users from another AWS account to access the APIs. Which combination of steps should the developer take to meet these requirements? **(Select two choices)**

A) Create an IAM permission policy. Attach the policy to each IAM user. Set the method authorization type for the APIs to AWS_IAM. Use Signature Version 4 to sign the API requests.

B) Create an Amazon Cognito user pool. Add each IAM user to the user pool. Set the method authorization type for the APIs to COGNITO_USER_POOLS. Authenticate by using the IAM credentials in Amazon Cognito. Add the ID token to the request headers.

C) Create an Amazon Cognito identity pool. Add each IAM user to the identity pool. Set the method authorization type for the APIs to COGNITO_USER_POOLS. Authenticate by using the IAM credentials in Amazon Cognito. Add the access token to the request headers.

D) Create a resource policy for the APIs to allow access for each IAM user only. E) Create an Amazon Cognito authorizer for the APIs to allow access for each IAM user only. Set the method authorization type for the APIs to COGNITO_USER_POOLS.

5) A developer is building a new application that transforms text files to .pdf files. A separate application writes the text files to a source Amazon S3 bucket. The new application must read the files as they arrive in Amazon S3 and must convert the files to .pdf files by using an AWS Lambda function. The developer has written an IAM policy to allow access to Amazon S3 and Amazon CloudWatch Logs. What should the developer do to ensure that the Lambda function has the correct permissions?

A) Create a Lambda execution role by using AWS Identity and Access Management (IAM). Attach the IAM policy to the role. Assign the Lambda execution role to the Lambda function.

B) Create a Lambda execution user by using AWS Identity and Access Management (IAM). Attach the IAM policy to the user. Assign the Lambda execution user to the Lambda function.

C) Create a Lambda execution role by using AWS Identity and Access Management (IAM). Attach the IAM policy to the role. Store the IAM role as an environment variable in the Lambda function.

D) Create a Lambda execution user by using AWS Identity and Access Management (IAM). Attach the IAM policy to the user. Store the IAM user credentials as environment variables in the Lambda function.

6) A developer is working on an application that stores highly confidential data in a database. The developer must use AWS Key Management Service (AWS KMS) with envelope encryption to protect the data. How should the developer configure the data encryption to meet these requirements?

A) Encrypt the data by using a KMS key. Store the encrypted data in the database.

B) Encrypt the data by using a generated data key. Store the encrypted data in the database.

C) Encrypt the data by using a generated data key. Store the encrypted data and the data key ID in the database.

D) Encrypt the data by using a generated data key. Store the encrypted data and the encrypted data key in the database.

7) A developer is adding Amazon ElastiCache for Memcached to a company's existing record storage application. The developer has decided to use lazy loading based on an analysis of common record handling patterns. Which pseudocode example will correctly implement lazy loading?

A) record_value = db.query("UPDATE Records SET Details = {1} WHERE ID == {0}", record_key, record_value) cache.set (record_key, record_value)

B) record_value = cache.get(record_key) if (record_value == NULL) record_value = db.query("SELECT Details FROM Records WHERE ID == {0}", record_key) cache.set (record_key, record_value)

C) record_value = cache.get (record_key) db.query("UPDATE Records SET Details = {1} WHERE ID == {0}", record_key, record_value)

D) record_value = db.query("SELECT Details FROM Records WHERE ID == {0}", record_key) if (record_value != NULL) cache.set (record_key, record_value)

8) A developer is building a web application that uses Amazon API Gateway. The developer wants to maintain different environments for development (dev) and production (prod) workloads. The API will be backed by an AWS Lambda function with two aliases: one for dev and one for

prod. How can the developer maintain these environments with the LEAST amount of configuration?

A) Create a REST API for each environment. Integrate the APIs with the corresponding dev and prod aliases of the Lambda function. Deploy the APIs to their respective stages. Access the APIs by using the stage URLs.

B) Create one REST API. Integrate the API with the Lambda function by using a stage variable in place of an alias. Deploy the API to two different stages: dev and prod. Create a stage variable in each stage with different aliases as the values. Access the API by using the different stage URLs.

C) Create one REST API. Integrate the API with the dev alias of the Lambda function. Deploy the API to the dev environment. Configure a canary release deployment for the prod environment where the canary will integrate with the Lambda prod alias.

D) Create one REST API. Integrate the API with the prod alias of the Lambda function. Deploy the API to the prod environment. Configure a canary release deployment for the dev environment where the canary will integrate with the Lambda dev alias.

9) A developer wants to track the performance of an application that runs on a fleet of Amazon EC2 instances. The developer wants to view and track statistics, such as the average request latency and the maximum request latency, across the fleet. The developer wants to receive immediate notification if the average response time exceeds a threshold. Which solution will meet these requirements?

A) Configure a cron job on each EC2 instance to measure the response time and update a log file stored in an Amazon S3 bucket every minute. Use an Amazon S3 event notification to invoke an AWS Lambda function that reads the log file and writes new entries to an Amazon OpenSearch Service cluster. Visualize the results in OpenSearch Dashboards. Configure OpenSearch Service to send an alert to an Amazon Simple Notification Service (Amazon SNS) topic when the response time exceeds the threshold.

B) Configure the application to write the response times to the system log. Install and configure the Amazon Inspector agent on the EC2 instances to continually read the logs and send the response times to Amazon EventBridge (Amazon CloudWatch Events). View the metrics graphs in the EventBridge (CloudWatch Events) console. Configure an EventBridge (CloudWatch Events) custom rule to send an Amazon Simple Notification Service (Amazon SNS) notification when the average of the response time metric exceeds the threshold.

C) Configure the application to write the response times to a log file. Install and configure the Amazon CloudWatch agent on the EC2 instances to stream the application log to CloudWatch Logs. Create a metric filter of the response time from the log. View the metrics graphs in the

CloudWatch console. Create a CloudWatch alarm to send an Amazon Simple Notification Service (Amazon SNS) notification when the average of the response time metric exceeds the threshold.

D) Install and configure AWS Systems Manager Agent (SSM Agent) on the EC2 instances to monitor the response time and send the response time to Amazon CloudWatch as a custom metric. View the metrics graphs in Amazon QuickSight. Create a CloudWatch alarm to send an Amazon Simple Notification Service (Amazon SNS) notification when the average of the response time metric exceeds the threshold.

10) A developer is testing an application locally and has deployed the application to an AWS Lambda function. To avoid exceeding the deployment package size quota, the developer did not include the dependencies in the deployment file. When the developer tests the application remotely, the Lambda function does not run because of missing dependencies. Which solution will resolve this issue?

A) Use the Lambda console editor to update the code and include the missing dependencies.

B) Create an additional .zip file that contains the missing dependencies. Include the .zip file in the original Lambda deployment package.

C) Add references to the missing dependencies in the Lambda function's environment variables.

D) Create a layer that contains the missing dependencies. Attach the layer to the Lambda function

AWS Developer Associate Certification Example Questions Answers

1) D
2) A, B
3) A, E
4) A, D
5) A
6) D
7) B
8) B
9) C
10)D

AWS SysOps Administrator Associate Certification Example Questions

1) A company hosts a web application on an Amazon EC2 instance. Users report that the web application is occasionally unresponsive. Amazon CloudWatch metrics indicate that the CPU utilization is 100% during these times. A SysOps administrator must implement a solution to monitor for this issue. Which solution will meet this requirement?

A. Create a CloudWatch alarm that monitors AWS CloudTrail events for the EC2 instance.

B. Create a CloudWatch alarm that monitors CloudWatch metrics for EC2 instance CPU utilization.

C. Create an Amazon Simple Notification Service (Amazon SNS) topic to monitor CloudWatch metrics for EC2 instance CPU utilization.

D. Create a recurring assessment check on the EC2 instance by using Amazon Inspector to detect deviations in CPU utilization.

2) A company has an application that uses Amazon ElastiCache for Memcached to cache query responses to improve latency. However, the application's users are reporting slow response times. A SysOps administrator notices that the Amazon CloudWatch metrics for Memcached evictions are high. Which actions should the SysOps administrator take to fix this issue? **(Select two choices)**

A. Flush the contents of ElastiCache for Memcached.

B. Increase the ConnectionOverhead parameter value.

C. Increase the number of nodes in the cluster.

D. Increase the size of the nodes in the cluster.

E. Decrease the number of nodes in the cluster.

3) A company needs to ensure that an AWS Lambda function can access resources in a VPC in the company's account. The Lambda function requires access to third-party APIs that can be accessed only over the internet. Which action should a SysOps administrator take to meet these requirements?

A. Attach an Elastic IP address to the Lambda function and configure a route to the internet gateway of the VPC.

B. Connect the Lambda function to a private subnet that has a route to the virtual private gateway of the VPC.

C. Connect the Lambda function to a public subnet that has a route to the internet gateway of the VPC.

D. Connect the Lambda function to a private subnet that has a route to a NAT gateway deployed in a public subnet of the VPC.

4) A company runs an application on a large fleet of Amazon EC2 instances to process financial transactions. The EC2 instances share data by using an Amazon Elastic File System (Amazon EFS) file system. The company wants to deploy the application to a new Availability Zone and has created new subnets and a mount target in the new Availability Zone. When a SysOps administrator launches new EC2 instances in the new subnets, the EC2 instances are unable to mount the file system. What is a reason for this issue?

A. The EFS mount target has been created in a private subnet.

B. The IAM role that is associated with the EC2 instances does not allow the efs:MountFileSystem action.

C. The route tables have not been configured to route traffic to a VPC endpoint for Amazon EFS in the new Availability Zone.

D. The security group for the mount target does not allow inbound NFS connections from the security group used by the EC2 instances.

5) A company uses AWS Organizations to create and manage many AWS accounts. The company wants to deploy new IAM roles in each account. Which action should the SysOps administrator take to deploy the new roles in each of the organization's accounts?

A. Create a service control policy (SCP) in the organization to add the new IAM roles to each account.

B. Deploy an AWS CloudFormation change set to the organization with a template to create the new IAM roles.

C. Use AWS CloudFormation StackSets to deploy a template to each account to create the new IAM roles.

D. Use AWS Config to create an organization rule to add the new IAM roles to each account.

6) A company runs several production workloads on Amazon EC2 instances. A SysOps administrator discovered that a production EC2 instance failed a system health check. The SysOps administrator recovered the instance manually. The SysOps administrator wants to automate the recovery task of EC2 instances and receive notifications whenever a system health check fails. Detailed monitoring is activated for all of the company's production EC2 instances. Which of the following is the MOST operationally efficient solution that meets these requirements?

A. For each production EC2 instance, create an Amazon CloudWatch alarm for Status Check Failed: System. Set the alarm action to recover the EC2 instance. Configure the alarm notification to be published to an Amazon Simple Notification Service (Amazon SNS) topic.

B. On each production EC2 instance, create a script that monitors the system health by sending a heartbeat notification every minute to a central monitoring server. If an EC2 instance fails to send a heartbeat, run a script on the monitoring server to stop and start the EC2 instance and to publish a notification to an Amazon Simple Notification Service (Amazon SNS) topic.

C. On each production EC2 instance, create a script that sends network pings to a highly available endpoint by way of a cron job. If the script detects a network response timeout, invoke a command to reboot the EC2 instance.

D. On each production EC2 instance, configure an Amazon CloudWatch agent to collect and send logs to a log group in Amazon CloudWatch Logs. Create a CloudWatch alarm that is based on a metric filter that tracks errors. Configure the alarm to invoke an AWS Lambda function to reboot the EC2 instance and send a notification email.

7) The company uses AWS Organizations to manage its accounts. For the production account, a SysOps administrator must ensure that all data is backed up daily for all current and future Amazon EC2 instances and Amazon Elastic File System (Amazon EFS) file systems. Backups must be retained for 30 days. Which solution will meet these requirements with the LEAST amount of effort?

A. Create a backup plan in AWS Backup. Assign resources by resource ID, selecting all existing EC2 and EFS resources that are running in the account. Edit the backup plan daily to include any new resources. Schedule the backup plan to run every day with a lifecycle policy to expire backups after 30 days.

B. Create a backup plan in AWS Backup. Assign resources by tags. Ensure that all existing EC2 and EFS resources are tagged correctly. Apply a service control policy (SCP) for the production account OU that prevents instance and file system creation unless the correct tags are applied. Schedule the backup plan to run every day with a lifecycle policy to expire backups after 30 days.

C. Create a lifecycle policy in Amazon Data Lifecycle Manager (Amazon DLM). Assign all resources by resource ID, selecting all existing EC2 and EFS resources that are running in the account. Edit the lifecycle policy daily to include any new resources. Schedule the lifecycle policy to create snapshots every day with a retention period of 30 days.

D. Create a lifecycle policy in Amazon Data Lifecycle Manager (Amazon DLM). Assign all resources by tags. Ensure that all existing EC2 and EFS resources are tagged correctly. Apply a service control policy (SCP) that prevents resource creation unless the correct tags are applied. Schedule the lifecycle policy to create snapshots every day with a retention period of 30 days

8) A company is using AWS CloudTrail and wants to ensure that SysOps administrators can easily verify that the log files have not been deleted or changed. Which action should a SysOps administrator take to meet this requirement?

A. Grant administrators access to the AWS Key Management Service (AWS KMS) key used to encrypt the log files.

B. Enable CloudTrail log file integrity validation when the trail is created or updated.

C. Turn on Amazon S3 server access logging for the bucket storing the log files.

D. Configure the S3 bucket to replicate the log files to another bucket.

9) A company is running a custom database on an Amazon EC2 instance. The database stores its data on an Amazon Elastic Block Store (Amazon EBS) volume.
A SysOps administrator must set up a backup strategy for the EBS volume. What should the SysOps administrator do to meet this requirement?

A. Create an Amazon CloudWatch alarm for the VolumeIdleTime metric with an action to take a snapshot of the EBS volume.

B. Create a pipeline in AWS Data Pipeline to take a snapshot of the EBS volume on a recurring schedule.

C. Create an Amazon Data Lifecycle Manager (Amazon DLM) policy to take a snapshot of the EBS volume on a recurring schedule.

D. Create an AWS DataSync task to take a snapshot of the EBS volume on a recurring schedule.

10) A company runs a large number of Amazon EC2 instances for internal departments. The company needs to track the costs of its existing AWS resources by the department. What should a SysOps administrator do to meet this requirement?

A. Activate all of the AWS-generated cost allocation tags for the account.

B. Apply user-defined tags to the instances through Tag Editor. Activate these tags for cost allocation.

C. Schedule an AWS Lambda function to run the AWS Pricing Calculator for EC2 usage on a recurring schedule.

D. Use the AWS Trusted Advisor dashboard to export EC2 cost reports.

AWS SysOps Administrator Associate Certification Example Questions Answers

1) B
2) C, D
3) D
4) D
5) C
6) A
7) B
8) B
9) C
10) B

AWS Solution Architect Professional Certification Example Questions

1) A company has many AWS accounts that individual business groups own. One of the accounts was recently compromised. The attacker launched a large number of instances, resulting in a high bill for that account. The company addressed the security breach, but a solutions architect needs to develop a solution to prevent excessive spending in all accounts. Each business group wants to retain full control of its AWS account. Which solution should the solutions architect recommend to meet these requirements?

A) Use AWS Organizations. Add each AWS account to the management account. Create an SCP that uses the ec2:instanceType condition key to prevent the launch of high-cost instance types in each account.

B) Attach a new customer-managed IAM policy to an IAM group in each account. Configure the policy to use the ec2:instanceType condition key to prevent the launch of high-cost instance types. Place all the existing IAM users in each group.

C) Turn on billing alerts for each AWS account. Create Amazon CloudWatch alarms that send an Amazon Simple Notification Service (Amazon SNS) notification to the account administrator whenever the account exceeds a designated spending threshold.

D) Turn on AWS Cost Explorer in each account. Review the Cost Explorer reports for each account on a regular basis to ensure that spending does not exceed the desired amount.

2) A company has multiple AWS accounts in an organization in AWS Organizations. The company has integrated its on-premises Active Directory with AWS Single Sign-On (AWS SSO) to grant Active Directory users least privilege permissions to manage infrastructure across all the accounts. A solutions architect must integrate a third-party monitoring solution that requires read-only access across all AWS accounts. The monitoring solution will run in its own AWS account. What should the solutions architect do to provide the monitoring solution with the required permissions?

A) Create a user in an AWS SSO directory. Assign a read-only permissions set to the user. Assign all AWS accounts that need monitoring to the user. Provide the third-party monitoring solution with the user name and password.

B) Create an IAM role in the organization's management account. Allow the AWS account of the third-party monitoring solution to assume the role.

C) Invite the AWS account of the third-party monitoring solution to join the organization. Enable all features.

D) Create an AWS CloudFormation template that defines a new IAM role for the third-party monitoring solution. Specify the AWS account of the third-party monitoring solution in the trust policy. Create the IAM role across all linked AWS accounts by using a stack set.

3) A team is building an HTML form that is hosted in a public Amazon S3 bucket. The form uses JavaScript to post data to an Amazon API Gateway API endpoint. The API endpoint is integrated with AWS Lambda functions. The team has tested each method in the API Gateway console and has received valid responses. Which combination of steps must the team complete so that the form can successfully post to the API endpoint and receive a valid response? (Select two choices)

A) Configure the S3 bucket to allow cross-origin resource sharing (CORS).

B) Host the form on Amazon EC2 rather than on Amazon S3.

C) Request a quota increase for API Gateway.

D) Enable cross-origin resource sharing (CORS) in API Gateway. E) Configure the S3 bucket for web hosting.

4) A company runs a serverless mobile app that uses Amazon API Gateway, AWS Lambda functions, Amazon Cognito, and Amazon DynamoDB. During large surges in traffic, users report intermittent system failures. The API Gateway API endpoint is returning HTTP status code 502 (Bad Gateway) errors to valid requests. Which solution will resolve this issue?

A) Increase the concurrency quota for the Lambda functions. Configure Amazon CloudWatch to send notification alerts when the ConcurrentExecutions metric approaches the quota.

B) Configure notification alerts for the quota of transactions per second on the API Gateway API endpoint. Create a Lambda function that will increase the quota when the quota is reached.

C) Shard users to Amazon Cognito user pools in multiple AWS Regions to reduce user authentication latency.

D) Use DynamoDB strongly consistent reads to ensure that the client application always receives the most recent data.

5) A company is launching a new web service on an Amazon Elastic Container Service (Amazon ECS) cluster. The cluster consists of 100 Amazon EC2 instances. Company policy requires the security group on the cluster instances to block all inbound traffic except HTTPS (port 443). Which solution will meet these requirements?

A) Change the SSH port to 2222 on the cluster instances by using a user data script. Log in to each instance by using SSH over port 2222.

B) Change the SSH port to 2222 on the cluster instances by using a user data script. Use AWS Trusted Advisor to remotely manage the cluster instances over port 2222.

C) Launch the cluster instances with no SSH key pairs. Use AWS Systems Manager Run Command to remotely manage the cluster instances.

D) Launch the cluster instances with no SSH key pairs. Use AWS Trusted Advisor to remotely manage the cluster instances.

6) A company has two AWS accounts: one account for production workloads and one account for development workloads. A development team and an operations team create and manage these workloads. The company needs a security strategy that meets the following requirements:

• Developers need to create and delete development application infrastructure.

• Operators need to create and delete development and production application infrastructure.

• Developers must have no access to production infrastructure.

• All users must have a single set of AWS credentials.

Which strategy will meet these requirements?

A) In the production account:

• Create an operations IAM group that can create and delete application infrastructure.

• Create an IAM user for each operator. Assign these users to the operations group.

In the development account:

• Create a development IAM group that can create and delete application infrastructure.

• Create an IAM user for each operator and developer. Assign these users to the development group.

B) In the production account:

• Create an operations IAM group that can create and delete application infrastructure.

In the development account:

• Create a development IAM group that can create and delete application infrastructure.

• Create an IAM user for each developer. Assign these users to the development group.

• Create an IAM user for each operator. Assign these users to the development group and to the operations group in the production account.

C) In the development account:

• Create a shared IAM role that can create and delete application infrastructure in the production account.

• Create a development IAM group that can create and delete application infrastructure.

• Create an operations IAM group that can assume the shared role.

• Create an IAM user for each developer. Assign these users to the development group.

• Create an IAM user for each operator. Assign these users to the development group and to the operations group.

D) In the production account:

• Create a shared IAM role that can create and delete application infrastructure.

• Add the development account to the trust policy for the shared role. In the development account:

• Create a development IAM group that can create and delete application infrastructure.

• Create an operations IAM group that can assume the shared role in the production account.

• Create an IAM user for each developer. Assign these users to the development group.

• Create an IAM user for each operator. Assign these users to the development group and to the operations group.

7) A solutions architect needs to reduce costs for a big data application. The application environment consists of hundreds of devices that send events to Amazon Kinesis Data Streams. The device ID is used as the partition key, so each device gets a separate shard. Each device sends between 50 KB and 450 KB of data each second. An AWS Lambda function polls the shards, processes the data, and stores the result in Amazon S3. Every hour, another Lambda function runs an Amazon Athena query against the result data to identify outliers. This Lambda function places the outliers in an Amazon Simple Queue Service (Amazon SQS) queue. An Amazon EC2 Auto Scaling group of two EC2 instances monitors the queue and runs a 30- second process to address the outliers. The devices submit an average of 10 outlying values every hour. Which combination of changes to the application will MOST reduce costs? **(Select two choices)**

A) Change the Auto Scaling group launch configuration to use smaller instance types in the same instance family.

B) Replace the Auto Scaling group with a Lambda function that is invoked when messages arrive in the queue.

C) Reconfigure the devices and data stream to set a ratio of 10 devices to 1 data stream shard.

D) Reconfigure the devices and data stream to set a ratio of 2 devices to 1 data stream shard.

E) Change the desired capacity of the Auto Scaling group to a single EC2 instance.

8) A company operates an ecommerce application on Amazon EC2 instances behind an Application Load Balancer. The instances run in an Amazon EC2 Auto Scaling group across multiple Availability Zones. After an order is successfully processed, the application immediately posts order data to a third-party affiliate's external tracking system that pays sales commissions for order referrals. During a successful marketing promotion, the number of EC2 instances increased from 2 to 20. The application continued to work correctly during this time. However, the increased request rate overwhelmed the third-party affiliate and resulted in failed requests. Which combination of architectural changes should a solutions architect make to ensure that the entire process functions correctly under load? **(Select two choices)**

A) Move the code that calls the affiliate to a new AWS Lambda function. Modify the application to invoke the Lambda function asynchronously.

B) Move the code that calls the affiliate to a new AWS Lambda function. Modify the application to place the order data in an Amazon Simple Queue Service (Amazon SQS) queue. Invoke the Lambda function from the queue.

C) Increase the timeout of the new AWS Lambda function.

D) Decrease the reserved concurrency of the new AWS Lambda function.

E) Increase the memory of the new AWS Lambda function.

9) A company has built an online ticketing web application on AWS. The application is hosted on AWS App Runner and uses images that are stored in an Amazon Elastic Container Registry (Amazon ECR) repository. The application stores data in an Amazon Aurora MySQL DB cluster. The company has set up a domain name in Amazon Route 53. The company needs to deploy the application across two AWS Regions in an active-active configuration. Which combination of steps will meet these requirements with the LEAST change to the architecture? **(Select three choices)**

A) Set up Cross-Region Replication to the second Region for the ECR images.

B) Create a VPC endpoint from the ECR repository in the second Region.

C) Edit the App Runner configuration by adding a second deployment target to the second Region.

D) Deploy App Runner to the second Region. Set up Route 53 latency-based routing.

E) Change the database by using Amazon DynamoDB global tables in the two desired Regions.

F) Use an Aurora global database with write forwarding enabled in the second Region.

10) A company has deployed a multi-tier web application in the AWS Cloud. The application consists of the following tiers:

• A Windows-based web tier that is hosted on Amazon EC2 instances with Elastic IP addresses

• A Linux-based application tier that is hosted on EC2 instances that run behind an Application Load Balancer (ALB) that uses path-based routing

• A MySQL database that runs on a Linux EC2 instance

All the EC2 instances are using Intel-based x86 CPUs. A solutions architect needs to modernize the infrastructure to achieve better performance. The solution must minimize the operational overhead of the application. Which combination of actions should the solutions architect take to meet these requirements? **(Select two choices)**

A) Run the MySQL database on multiple EC2 instances.

B) Place the web tier instances behind an ALB.

C) Migrate the MySQL database to Amazon Aurora Serverless.

D) Migrate all EC2 instance types to Graviton2.

E) Replace the ALB for the application tier instances with a company-managed load balancer.

AWS Solution Architect Professional Certification Example Questions Answers

1) C
2) D
3) D-E
4) A
5) C
6) D
7) B-D
8) B-D
9) A-D-F
10) B-C

AWS DevOps Engineer Professional Certification Example Questions

1) A company controls the source code for an application in AWS CodeCommit. The company is creating a CI/CD pipeline for the application by using AWS CodePipeline. The pipeline must start automatically when changes occur to the main branch of the CodeCommit repository. Changes occur frequently every day, so the pipeline must be as responsive as possible. What should a DevOps engineer do to meet these requirements?

A) Configure the pipeline to periodically check the repository's main branch for changes. Start the pipeline when changes are detected.

B) Configure an Amazon EventBridge (Amazon CloudWatch Events) rule to detect changes to the repository's main branch. Configure the pipeline to start in response to the changes.

C) Configure the repository to periodically run an AWS Lambda function. Configure the function to check the repository's main branch and to start the pipeline when the function detects changes.

D) Configure the repository to publish a notification to an Amazon Simple Notification Service (Amazon SNS) topic when changes occur to the repository's main branch. Subscribe the pipeline to the SNS topic.

2) A DevOps team has an application that stores critical company assets in an existing Amazon S3 bucket. The team uses a single AWS Region. A new company policy requires the team to deploy the application to multiple Regions. The assets must always be accessible. Users must use the same endpoint to access the assets. Which combination of steps should the team take to meet these requirements in the MOST operationally efficient way? **(Select three choices)**

A) Use AWS CloudFormation StackSets to create a new S3 bucket that has versioning enabled in each required Region. Copy the assets from the existing S3 bucket to the new S3 buckets. Create an AWS Lambda function to copy files that are added to the new S3 bucket in the primary Region to the additional Regions.

B) Use AWS CloudFormation StackSets to create a new S3 bucket that has versioning enabled in each required Region. Create multiple S3 replication rules on the new S3 bucket in the primary Region to replicate all its contents to the additional Regions. Copy the assets from the existing S3 bucket to the new S3 bucket in the primary Region.

C) Create an Amazon CloudFront distribution. Configure new origins for each S3 bucket. Create an origin group that contains all the newly created origins. Update the default behavior of the distribution to use the new origin group.

D) Create an Amazon CloudFront distribution. Configure new origins for each S3 bucket. Create a Lambda@Edge function to validate the availability of the origin and to route the viewer request to an available nearby origin.

E) Create an Amazon Route 53 alias record. Configure a failover routing policy that uses the newly created S3 buckets as a target.

F) Create an Amazon Route 53 alias record. Configure a simple routing policy that uses the Amazon CloudFront distribution as a target.

3) A company is using AWS CodeBuild to build an application. Company policy requires all build artifacts to be encrypted at rest. The company must limit access to the artifacts to IAM users in an operations IAM group that have permission to assume an operations IAM role. Which solution will meet these requirements?

A) Add a post-build command to the CodeBuild build specification to push build objects to an Amazon S3 bucket. Set a bucket policy that prevents upload to the bucket unless the request includes the x-amzserver-side-encryption header. Add a Deny statement for all actions with a NotPrincipal element that references the operations IAM group.

B) Add a post-build command to the CodeBuild build specification to push build objects to an Amazon S3 bucket. Configure an S3 event notification to invoke an AWS Lambda function to get the object, encrypt the object, and put the object back into the S3 bucket with a tag key of Encrypted and a tag value of True. Set a bucket policy with a Deny statement for all actions with a NotPrincipal element that references the operations IAM group. Include in the policy a Condition element that references the Encrypted tag.

C) Add a post-build command to the CodeBuild build specification to push build objects to an Amazon S3 bucket that has S3 default encryption enabled. Set a bucket policy that contains a Deny statement for all actions with a NotPrincipal element that references the operations IAM role.

D) Add a post-build command to the CodeBuild build specification to call the AWS Key Management Service (AWS KMS) Encrypt API operation and pass the artifact to AWS KMS for encryption with a specified KMS key. Push the encrypted artifact to an Amazon S3 bucket. Set up the operations IAM group as the only user for the specified KMS key.

4) A DevOps engineer needs to implement a blue/green deployment process for an application on AWS. The DevOps engineer must gradually shift the traffic between the environments. The application runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances run in an Amazon EC2 Auto Scaling group. The application stores data on an Amazon RDS Multi-AZ DB instance. Amazon Route 53 provides external DNS. Which combination of steps should the DevOps engineer take to meet these requirements? **(Select three choices)**

A) Create a second Auto Scaling group behind the same ALB.

B) Create a second Auto Scaling group behind a second ALB.

C) In Route 53, create a second alias record that points to the new environment. Use a failover routing policy to choose between the two records.

D) In Route 53, create a second alias record that points to the new environment. Use a weighted routing policy to choose between the two records.

E) Configure the new EC2 instances to use the primary RDS DB instance.

F) Configure the new EC2 instances to use the standby RDS DB instance.

5) A company runs an application on Amazon EC2 instances that use the latest version of the Amazon Linux 2 AMI. When server administrators apply new security patches, the server administrators manually remove affected instances from service, patch the instances, and place the instances back into service. A new security policy requires the company to apply security patches within 7 days after patches are released. The company's security team must verify that all the EC2 instances are compliant with this policy. The patching must occur during a time that has the least impact on users. Which solution will automate compliance with these requirements?

A) Configure an AWS CodeBuild project to download and apply patches to all the instances over SSH. Use an Amazon EventBridge (Amazon CloudWatch Events) scheduled rule to run the CodeBuild project during a maintenance window.

B) Use AWS Systems Manager Patch Manager to create a patch baseline. Create a script on the EC2 instances to use the AWS CLI to pull the latest patches from Patch Manager. Create a cron job to schedule the script to run during a maintenance window.

C) Create a script to apply any available security patches. Create a cron job to schedule the script to run during a maintenance window. Install the script and cron job on the application AMI. Redeploy the application.

D) Enlist all the EC2 instances in an AWS Systems Manager Patch Manager patch group. Use Patch Manager to create a patch baseline. Configure a maintenance window to apply the patch baseline.

6) A company uses AWS CloudTrail on all its AWS accounts and sends all trails to a centralized Amazon S3 bucket. The company sends specified events to a third-party logging tool by using S3 event notifications and an AWS Lambda function. The company has hired a security services provider to set up a security operations center. The security services provider wants to receive the CloudTrail logs through an Amazon Simple Queue Service (Amazon SQS) queue. The company must continue to use S3 event notifications and the Lambda function to send events to the third-party logging tool. What is the MOST operationally efficient way to meet these requirements?

A) Add an additional notification to the S3 bucket for all CreateObject events to send all objects to the SQS queue.

B) Replace the existing S3 event notification destination with an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe the Lambda function and the SQS queue to the topic.

C) Replace the existing S3 event notification destination with an Amazon Kinesis data stream. Create consumers for the Lambda function and the SQS queue.

D) Configure the trail to send logs to Amazon CloudWatch Logs. Subscribe the SQS queue to the CloudWatch Logs log group.

7) A company is reviewing its AWS account security policies. The company has staff members in different countries and wants to monitor its AWS accounts for unusual behavior that is associated with an IAM identity. The company wants to send a notification to any staff member for whom unusual activity is detected. The company also wants to send a notification to the user's team leader. An external messaging platform will send the notifications. The platform requires a target user-id for each recipient. The company already has an API on AWS that the company can use to return the user-id of the staff member and the team leader from IAM user names. The company manages its AWS accounts by using AWS Organizations. Which solution will meet these requirements?

A) Designate an account in the organization as the Amazon GuardDuty administrator. Add the company's AWS accounts as GuardDuty member accounts that are associated with the GuardDuty administrator account. Create an AWS Lambda function to perform the user-id lookup and to send notifications to the external messaging platform. Create an Amazon EventBridge (Amazon CloudWatch Events) rule in the GuardDuty administrator account to match the Impact:IAMUser/AnomalousBehavior notification type and invoke the Lambda function.

B) Designate an account in the organization as the Amazon Detective administrator. Add the company's AWS accounts as Detective member accounts that are associated with the Detective administrator account. Create an AWS Lambda function to perform the user-id lookup and to send notifications to the external messaging platform. Create an Amazon EventBridge (Amazon CloudWatch Events) rule in the Detective administrator account to match the Impact:IAMUser/AnomalousBehavior notification type and invoke the Lambda function.

C) Designate an account in the organization as the Amazon GuardDuty administrator. Add the company's AWS accounts as GuardDuty member accounts that are associated with the GuardDuty administrator account. Create an AWS Lambda function to perform the user-id lookup and to send notifications to the external messaging platform. Create an Amazon Simple Notification Service (Amazon SNS) topic in the GuardDuty administrator account to match the Impact:IAMUser/AnomalousBehavior notification type and invoke the Lambda function.

D) Designate an account in the organization as the Amazon Detective administrator. Add the company's AWS accounts as Detective member accounts that are associated with the Detective administrator account. Create an AWS Lambda function to perform the user-id lookup and to send notifications to the external messaging platform. Create an Amazon Simple Notification Service (Amazon SNS) topic in the Detective administrator account to match the Impact:IAMUser/AnomalousBehavior notification type and invoke the Lambda function.

8) A development team is designing an application that has a large customer base spread across three AWS Regions. The application will use an Amazon DynamoDB table that must be available in all three Regions to deliver low-latency data access. When the table is updated in one Region, the changes must seamlessly propagate to the other Regions. How should a DevOps engineer configure the table to meet these requirements with the LEAST operational overhead?

A) Create a DynamoDB table in each of the three Regions. Give each table the same name.

B) Configure three DynamoDB tables in each of the three Regions. Use the AWS SDK for DynamoDB to synchronize data changes among the tables.

C) Configure a multi-Region, multi-active DynamoDB global table that includes the three Regions.

D) Use DynamoDB global tables to configure a primary table in one Region and a read replica in each of the other Regions.

9) A company has a legacy API that runs on a fleet of Amazon EC2 instances behind a public Application Load Balancer (ALB). The ALB has access logging enabled and stores the access logs in Amazon S3. The API is available through the hostname api.example.com. The company uses Amazon Route 53 to manage the hostname. Developers have rebuilt five of the API endpoints by using a different AWS Lambda function for each endpoint. A DevOps engineer wants to test the new versions of the Lambda functions with a limited number of random customers. To ensure compatibility with an existing log processing service, the test must not affect the ALB access logs. How should the DevOps engineer perform the test to meet these requirements?

A) Add the five Lambda functions as targets to the existing target group for the EC2 instances. Set the weight in the target group of each Lambda function target to be less than the EC2 instance targets. Amend the default rule on the ALB to enable target group-level stickiness.

B) Create a single target group that includes all the Lambda functions as individual targets. On the ALB, create a new listener rule that includes a host header condition that matches the API endpoint's hostname. Add the target group to the listener rule. Specify a lower weight for the new target group than the weight of the default rule's target group.

C) Create a new ALB and a new target group for each Lambda function. Create a new listener rule that includes a host header condition that matches each of the endpoints and forwards traffic to the target groups. Create a new Route 53 alias record with a weight of 10. Update the existing Route 53 record for the api.example.com hostname with a weight of 90.

D) Create a new target group for each Lambda function. On the ALB, create new listener rules that include a path condition that matches each of the different endpoints. Set the rules to be weighted between the Lambda function target group for that endpoint and the instance-based target group.

10) A DevOps engineer is managing a legacy application on AWS. The application is a monolithic Windows program that runs on a single Amazon EC2 instance. The source code for the application is not available, so the application cannot be modified. The application has a memory leak and malfunctions when memory utilization on the EC2 instance increases to more than 90%. The DevOps engineer has configured the unified Amazon CloudWatch agent on the EC2 instance to collect the operation system's memory utilization metrics. The DevOps engineer needs to implement a solution to prevent the application from malfunctioning. Which combination of steps will meet these requirements with the MOST operational efficiency? **(Select two choices)**

A) Create an Amazon EventBridge (Amazon CloudWatch Events) rule that publishes to an Amazon Simple Notification Service (Amazon SNS) topic when memory utilization increases to more than 80%.

B) Create a metric filter on memory utilization in Amazon CloudWatch Logs. Create a CloudWatch alarm on the memory utilization filter. Configure the alarm to publish to an Amazon Simple Notification Service (Amazon SNS) topic when the memory utilization increases to more than 80%.

C) Create a CloudWatch alarm on the memory utilization metric. Configure the alarm to publish to an Amazon Simple Notification Service (Amazon SNS) topic when the memory utilization increases to more than 80%.

D) Configure an AWS Lambda function to restart the application by using AWS Systems Manager Run Command. Subscribe the Lambda function to the Amazon Simple Notification Service (Amazon SNS) topic.

E) Configure the EC2 instance to run a script that restarts the application. Subscribe the EC2 instance to the Amazon Simple Notification Service (Amazon SNS) topic.

AWS DevOps Engineer Professional Certification Example Questions Answers

1) B
2) B, C, F
3) C
4) B, D, E
5) D
6) B
7) A
8) C
9) D
10) C, D