

Amazon-Web-Services

Exam Questions SAA-C02

AWS Certified Solutions Architect - Associate (SAA-C02)



NEW QUESTION 1

A solutions architect is designing a two-tier web application. The application consists of a public-facing web tier hosted on Amazon EC2 in public subnets. The database tier consists of Microsoft SQL Server running on Amazon EC2 in a private subnet. Security is a high priority for the company. How should security groups be configured in this situation? (Select TWO.)

- A. Configure the security group for the web tier to allow inbound traffic on port 443 from 0.0.0.0/0.
- B. Configure the security group for the web tier to allow outbound traffic on port 443 from 0.0.0.0/0.
- C. Configure the security group for the database tier to allow inbound traffic on port 1433 from the security group for the web tier.
- D. Configure the security group for the database tier to allow outbound traffic on ports 443 and 1433 to the security group for the web tier.
- E. Configure the security group for the database tier to allow inbound traffic on ports 443 and 1433 from the security group for the web tier.

Answer: AC

NEW QUESTION 2

A gaming company has multiple Amazon EC2 instances in a single Availability Zone for its multiplayer game that communicates with users on Layer 4. The chief technology officer (CTO) wants to make the architecture highly available and cost-effective. What should a solutions architect do to meet these requirements? (Select TWO.)

- A. Increase the number of EC2 instances.
- B. Decrease the number of EC2 instances.
- C. Configure a Network Load Balancer in front of the EC2 instances.
- D. Configure an Application Load Balancer in front of the EC2 instances.
- E. Configure an Auto Scaling group to add or remove instances in multiple Availability Zones automatically.

Answer: CE

NEW QUESTION 3

A company has a multi-tier application that runs six front-end web servers in an Amazon EC2 Auto Scaling group in a single Availability Zone behind an Application Load Balancer (ALB). A solutions architect needs to modify the infrastructure to be highly available without modifying the application. Which architecture should the solutions architect choose that provides high availability?

- A. Create an Auto Scaling group that uses three instances across each of two Regions.
- B. Modify the Auto Scaling group to use three instances across each of two Availability Zones.
- C. Create an Auto Scaling template that can be used to quickly create more instances in another Region.
- D. Change the ALB in front of the Amazon EC2 instances in a round-robin configuration to balance traffic to the web tier.

Answer: B

NEW QUESTION 4

A company is running an ecommerce application on Amazon EC2. The application consists of a stateless web tier that requires a minimum of 10 instances, and a peak of 250 instances to support the application's usage. The application requires 50 instances 80% of the time. Which solution should be used to minimize costs?

- A. Purchase Reserved Instances to cover 250 instances.
- B. Purchase Reserved Instances to cover 80 instances. Use Spot Instances to cover the remaining instances.
- C. Purchase On-Demand Instances to cover 40 instances. Use Spot Instances to cover the remaining instances.
- D. Purchase Reserved Instances to cover 50 instances. Use On-Demand and Spot Instances to cover the remaining instances.

Answer: D

NEW QUESTION 5

A company's website is using an Amazon RDS MySQL Multi-AZ DB instance for its transactional data storage. There are other internal systems that query this DB instance to fetch data for internal batch processing. The RDS DB instance slows down significantly the internal systems' fetch data. This impacts the website's read and write performance, and the users experience slow response times. Which solution will improve the website's performance?

- A. Use an RDS PostgreSQL DB instance instead of a MySQL database.
- B. Use Amazon ElastiCache to cache the query responses for the website.
- C. Add an additional Availability Zone to the current RDS MySQL Multi-AZ DB instance.
- D. Add a read replica to the RDS DB instance and configure the internal systems to query the read replica.

Answer: D

NEW QUESTION 6

A company is migrating from an on-premises infrastructure to the AWS Cloud. One of the company's applications stores files on a Windows file server farm that uses Distributed File System Replication (DFS-R) to keep data in sync. A solutions architect needs to replace the file server farm. Which service should the solutions architect use?

- A. Amazon EFS
- B. Amazon FSx
- C. Amazon S3
- D. AWS Storage Gateway

Answer: B

NEW QUESTION 7

A recently acquired company is required to build its own infrastructure on AWS and migrate multiple applications to the cloud within a month. Each application has approximately 50 TB of data to be transferred. After the migration is complete, this company and its parent company will both require secure network connectivity with consistent throughput from their data centers to the applications. A solutions architect must ensure one-time data migration and ongoing network connectivity. Which solution will meet these requirements?

- A. AWS Direct Connect for both the initial transfer and ongoing connectivity
- B. AWS Site-to-Site VPN for both the initial transfer and ongoing connectivity
- C. AWS Snowball for the initial transfer and AWS Direct Connect for ongoing connectivity
- D. AWS Snowball for the initial transfer and AWS Site-to-Site VPN for ongoing connectivity

Answer: C

NEW QUESTION 8

An application running on AWS uses an Amazon Aurora Multi-AZ 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 Amazon Aurora database
- B. Update the application to read from the Multi-AZ standby instance
- C. Create a read replica and modify the application to use the appropriate endpoint
- D. Create a second Amazon Aurora database and link it to the primary database as a read replica.

Answer: C

NEW QUESTION 9

A company's web application uses an Amazon RDS PostgreSQL DB instance to store its application data. During the financial closing period at the start of every month, accountants run large queries that impact the database's performance due to high usage. The company wants to minimize the impact that the reporting activity has on the web application.

What should a solutions architect do to reduce the impact on the database with the LEAST amount of effort?

- A. Create a read replica and direct reporting traffic to the replica.
- B. Create a Multi-AZ database and direct reporting traffic to the standby.
- C. Create a cross-Region read replica and direct reporting traffic to the replica.
- D. Create an Amazon Redshift database and direct reporting traffic to the Amazon Redshift database.

Answer: B

NEW QUESTION 10

A company's production application runs online transaction processing (OLTP) transactions on an Amazon RDS MySQL DB instance. The company is launching a new reporting tool that will access the same data. The reporting tool must be highly available and not impact the performance of the production application. How can this be achieved?

- A. Create hourly snapshots of the production RDS DB instance
- B. Create a Multi-AZ RDS Read Replica of the production RDS DB instance
- C. Create multiple RDS Read Replicas of the production RDS DB instance. Place the Read Replicas in an Auto Scaling group.
- D. Create a Single-AZ RDS Read Replica of the production RDS DB instance. Create a second Single-AZ RDS Read Replica from the replica.

Answer: B

NEW QUESTION 10

A company must generate sales reports at the beginning of every month. The reporting process launches 20 Amazon EC2 instances on the first of the month. The process runs for 7 days and cannot be interrupted. The company wants to minimize costs.

Which pricing model should the company choose?

- A. Reserved Instances
- B. Spot Block Instances
- C. On-Demand Instances
- D. Scheduled Reserved Instances D18912E1457D5D1DDCBD40AB3BF70D5D

Answer: C

NEW QUESTION 14

A start-up company has a web application based in the us-east-1 Region with multiple Amazon EC2 instances running behind an Application Load Balancer across multiple Availability Zones. As the company's user base grows in the us-west-1 Region, it needs a solution with low latency and high availability.

What should a solutions architect do to accomplish this?

- A. Provision EC2 instances in us-west-1. Switch the Application Load Balancer to a Network Load Balancer to achieve cross-Region load balancing.
- B. Provision EC2 instances and an Application Load Balancer in us-west-1. Make the load balancer distribute the traffic based on the location of the request.
- C. Provision EC2 instances and configure an Application Load Balancer in us-west-1. Create an accelerator in AWS Global Accelerator that uses an endpoint group that includes the load balancer endpoints in both Regions.
- D. Provision EC2 instances and configure an Application Load Balancer in us-west-1. Configure Amazon Route 53 with a weighted routing policy.
- E. Create alias records in Route 53 that point to the Application Load Balancer.

Answer: B

NEW QUESTION 18

A company's legacy application is currently relying on a single-instance Amazon RDS MySQL database without encryption. Due to new compliance requirements, all existing and new data in this database must be encrypted. How should this be accomplished?

- A. Create an Amazon S3 bucket with server-side encryption enabled. Move all the data to Amazon S3. Delete the RDS instance.
- B. Enable RDS Multi-AZ mode with encryption at rest enabled. Perform a failover to the standby instance to delete the original instance.
- C. Take a snapshot of the RDS instance. Create an encrypted copy of the snapshot. Restore the RDS instance from the encrypted snapshot.
- D. Create an RDS read replica with encryption at rest enabled. Promote the read replica to master and switch the application over to the new master. Delete the old RDS instance.

Answer: C

NEW QUESTION 22

A solutions architect has created a new AWS account and must secure AWS account root user access. Which combination of actions will accomplish this? (Select TWO.)

- A. Ensure the root user uses a strong password.
- B. Enable multi-factor authentication to the root user.
- C. Store root user access keys in an encrypted Amazon S3 bucket.
- D. Add the root user to a group containing administrative permissions.
- E. Apply the required permissions to the root user with an inline policy document.

Answer: AB

Explanation:

https://docs.aws.amazon.com/IAM/latest/UserGuide/id_root-user.html

NEW QUESTION 27

A solutions architect is designing the cloud architecture for a new application being deployed on AWS. The process should run in parallel while adding and removing application nodes as needed based on the number of jobs to be processed. The processor application is stateless. The solutions architect must ensure that the application is loosely coupled and the job items are durably stored. Which design should the solutions architect use?

- A. Create an Amazon SNS topic to send the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch configuration that uses the AMI. Create an Auto Scaling group using the launch configuration. Set the scaling policy for the Auto Scaling group to add and remove nodes based on CPU usage.
- B. Create an Amazon SQS queue to hold the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch configuration that uses the AMI. Create an Auto Scaling group using the launch configuration. Set the scaling policy for the Auto Scaling group to add and remove nodes based on network usage.
- C. Create an Amazon SQS queue to hold the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch template that uses the AMI. Create an Auto Scaling group using the launch template. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of items in the SQS queue.
- D. Create an Amazon SNS topic to send the jobs that need to be processed. Create an Amazon Machine Image (AMI) that consists of the processor application. Create a launch template that uses the AMI. Create an Auto Scaling group using the launch template. Set the scaling policy for the Auto Scaling group to add and remove nodes based on the number of messages published to the SNS topic.

Answer: C

NEW QUESTION 28

A company hosts its product information webpages on AWS. The existing solution uses multiple Amazon EC2 instances behind an Application Load Balancer in an Auto Scaling group. The website also uses a custom DNS name and communicates with HTTPS only using a dedicated SSL certificate. The company is planning a new product launch and wants to be sure that users from around the world have the best possible experience on the new website. What should a solutions architect do to meet these requirements?

- A. Redesign the application to use Amazon CloudFront.
- B. Redesign the application to use AWS Elastic Beanstalk.
- C. Redesign the application to use a Network Load Balancer.
- D. Redesign the application to use Amazon S3 static website hosting.

Answer: A

NEW QUESTION 33

A marketing company is storing CSV files in an Amazon S3 bucket for statistical analysis. An application on an Amazon EC2 instance needs permission to efficiently process the CSV data stored in the S3 bucket. Which action will MOST securely grant the EC2 instance access to the S3 bucket?

- A. Attach a resource-based policy to the S3 bucket.
- B. Create an IAM user for the application with specific permissions to the S3 bucket.
- C. Associate an IAM role with least privilege permissions to the EC2 instance profile.
- D. Store AWS credentials directly on the EC2 instance for applications on the instance to use for API calls.

Answer: C

NEW QUESTION 38

A company's application is running on Amazon EC2 instances in a single Region. In the event of a disaster, a solutions architect needs to ensure that the resources can also be deployed to a second Region. Which combination of actions should the solutions architect take to accomplish this? (Select TWO)

- A. Detach a volume on an EC2 instance and copy it to Amazon S3
- B. Launch a new EC2 instance from an Amazon Machine image (AMI) in a new Region
- C. Launch a new EC2 instance in a new Region and copy a volume from Amazon S3 to the new instance
- D. Copy an Amazon Machine Image (AMI) of an EC2 instance and specify a different Region for the destination
- E. Copy an Amazon Elastic Block Store (Amazon EBS) volume from Amazon S3 and launch an EC2 instance in the destination Region using that EBS volume

Answer: BD

NEW QUESTION 42

A media streaming company collects real-time data and stores it in a disk-optimized database system. The company is not getting the expected throughput and wants an in-memory database storage solution that performs faster and provides high availability using data replication. Which database should a solutions architect recommend?

- A. Amazon RDS for MySQL
- B. Amazon RDS for PostgreSQL
- C. Amazon ElastiCache for Redis
- D. Amazon ElastiCache for Memcached

Answer: C

NEW QUESTION 43

A company runs an application in a branch office within a small data closet with no virtualized compute resources. The application data is stored on an NFS volume. Compliance standards require a daily offsite backup of the NFS volume. Which solution meets these requirements?

- A. Install an AWS Storage Gateway file gateway on premises to replicate the data to Amazon S3.
- B. Install an AWS Storage Gateway file gateway hardware appliance on premises to replicate the data to Amazon S3.
- C. Install an AWS Storage Gateway volume gateway with stored volumes on premises to replicate the data to Amazon S3.
- D. Install an AWS Storage Gateway volume gateway with cached volumes on premises to replicate the data to Amazon S3.

Answer: C

NEW QUESTION 46

A web application is deployed in the AWS Cloud. It consists of a two-tier architecture that includes a web layer and a database layer. The web server is vulnerable to cross-site scripting (XSS) attacks. What should a solutions architect do to remediate the vulnerability?

- A. Create a Classic Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
- B. Create a Network Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
- C. Create an Application Load Balancer. Put the web layer behind the load balancer and enable AWS WAF.
- D. Create an Application Load Balancer. Put the web layer behind the load balancer and use AWS Shield Standard.

Answer: C

NEW QUESTION 49

A company is performing an AWS Well-Architected Framework review of an existing workload deployed on AWS. The review identified a public-facing website running on the same Amazon EC2 instance as a Microsoft Active Directory domain controller that was installed recently to support other AWS services. A solutions architect needs to recommend a new design that would improve the security of the architecture and minimize the administrative demand on IT staff. What should the solutions architect recommend?

- A. Use AWS Directory Service to create a managed Active Directory.
- B. Uninstall Active Directory on the current EC2 instance.
- C. Create another EC2 instance in the same subnet and reinstall Active Directory on it.
- D. Uninstall Active Directory.
- E. Use AWS Directory Service to create an Active Directory connection.
- F. Proxy Active Directory requests to the Active domain controller running on the current EC2 instance.
- G. Enable AWS Single Sign-On (AWS SSO) with Security Assertion Markup Language (SAML) 2.0 federation with the current Active Directory controller.
- H. Modify the EC2 instance's security group to deny public access to Active Directory.

Answer: C

NEW QUESTION 52

A solutions architect is deploying a distributed database on multiple Amazon EC2 instances. The database stores all data on multiple instances so it can withstand the loss of an instance. The database requires block storage with latency and throughput to support several million transactions per second per server. Which storage solution should the solutions architect use?

- A. Amazon EBS
- B. Amazon EC2 instance store
- C. Amazon EFS
- D. Amazon S3

Answer: B

NEW QUESTION 57

A solutions architect is implementing a document review application using an Amazon S3 bucket for storage. The solution must prevent accidental deletion of the documents and ensure that all versions of the documents are available. Users must be able to download, modify, and upload documents.

Which combination of actions should be taken to meet these requirements'? (Select TWO)

- A. Enable a read-only bucket ACL
- B. Enable versioning on the bucket
- C. Attach an IAM policy to the bucket
- D. Enable MFA Delete on the bucket
- E. Encrypt the bucket using AWS KMS

Answer: BD

NEW QUESTION 62

A solutions architect is designing a web application that will run on Amazon EC2 instances behind an Application Load Balancer (ALB). The company strictly requires that the application be resilient against malicious internet activity and attacks, and protect against new common vulnerabilities and exposures. What should the solutions architect recommend?

- A. Leverage Amazon CloudFront with the ALB endpoint as the origin
- B. Deploy an appropriate managed rule for AWS WAF and associate it with the ALB
- C. Subscribe to AWS Shield Advanced and ensure common vulnerabilities and exposures are blocked
- D. Configure network ACLs and security groups to allow only ports 80 and 443 to access the EC2 instances

Answer: B

NEW QUESTION 65

A product team is creating a new application that will store a large amount of data. The data will be analyzed hourly and modified by multiple Amazon EC2 Linux instances. The application team believes the amount of space needed will continue to grow for the next 6 months. Which set of actions should a solutions architect take to support these needs'?

- A. Store the data in an Amazon EBS volume. Mount the EBS volume on the application instances.
- B. Store the data in an Amazon EFS file system. Mount the file system on the application instances.
- C. Store the data in Amazon S3 Glacier. Update the vault policy to allow access to the application instances.
- D. Store the data in Amazon S3 Standard-Infrequent Access (S3 Standard-IA). Update the bucket policy to allow access to the application instances.

Answer: B

NEW QUESTION 68

A solutions architect is designing an application for a two-step order process. The first step is synchronous and must return to the user with little latency. The second step takes longer, so it will be implemented in a separate component. Orders must be processed exactly once and in the order in which they are received. How should the solutions architect integrate these components?

- A. Use Amazon SQS FIFO queues.
- B. Use an AWS Lambda function along with Amazon SQS standard queues.
- C. Create an SNS topic and subscribe an Amazon SQS FIFO queue to that topic.
- D. Create an SNS topic and subscribe an Amazon SQS Standard queue to that topic.

Answer: C

NEW QUESTION 69

A company runs a multi-tier web application that hosts news content. The application runs on Amazon EC2 instances behind an Application Load Balancer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones and use an Amazon Aurora database. A solutions architect needs to make the application more resilient to periodic increases in request rates. Which architecture should the solutions architect implement? (Select TWO)

- A. Add AWS Shield.
- B. Add Aurora Replicas.
- C. Add AWS Direct Connect.
- D. Add AWS Global Accelerator.
- E. Add an Amazon CloudFront distribution in front of the Application Load Balancer.

Answer: DE

NEW QUESTION 74

A company built a food ordering application that captures user data and stores it for future analysis. The application's static front end is deployed on an Amazon EC2 instance. The front-end application sends the requests to the backend application running on a separate EC2 instance. The backend application then stores the data in Amazon RDS. What should a solutions architect do to decouple the architecture and make it scalable?

- A. Use Amazon S3 to serve the front-end application, which sends requests to Amazon EC2 to execute the backend application. The backend application will process and store the data in Amazon RDS.
- B. Use Amazon S3 to serve the front-end application and write requests to an Amazon Simple Notification Service (Amazon SNS) topic. Subscribe Amazon EC2 instances to the HTTP/HTTPS endpoint of the topic and process and store the data in Amazon RDS.
- C. Use an EC2 instance to serve the front end and write requests to an Amazon SQS queue. Place the backend instance in an Auto Scaling group and scale based on the queue depth to process and store the data in Amazon RDS.
- D. Use Amazon S3 to serve the static front-end application and send requests to Amazon API Gateway, which writes the requests to an Amazon SQS queue. Place the backend instances in an Auto Scaling group and scale based on the queue depth to process and store the data in Amazon RDS.

Answer: D

NEW QUESTION 78

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