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### Question: 1

As part of a migration strategy, a Solutions Architect needs to analyze workloads that can be optimized for performance and cost. The Solutions Architect has identified a stateless application that serves static content as a potential candidate to move to the cloud. The Solutions Architect has the flexibility to choose an identity solution between Facebook, Twitter, and Amazon.

Which AWS solution offers flexibility and ease of use, and the LEAST operational overhead for this migration?

- A. Use AWS Identity and Access Management (IAM) for managing identities, and migrate the application to run on Amazon S3, Amazon API Gateway, and AWS Lambda.
- B. Use a third-party solution for managing identities, and migrate the application to run on Amazon S3, EC2 Spot Instances, and Amazon EC2.
- C. Use Amazon Cognito for managing identities, and migrate the application to run on Amazon S3, Amazon API Gateway, and AWS Lambda.
- D. Use Amazon Cognito for managing identities, and migrate the application to run on Amazon S3, EC2 Spot Instances, and Amazon EC2.

**Answer: C**

### Question: 2

A company needs to capture all client connection information from its Application Load Balancer every five minutes. This data will be used to analyze traffic patterns and troubleshoot the application.

How can a Solutions Architect meet this requirement?

- A. Enable AWS CloudTrail for the Application Load Balancer.
- B. Enable Access Logs on the Application Load Balancer.
- C. Install CloudWatch Agent on the Application Load Balancer.
- D. Enable CloudWatch metrics on the Application Load Balancer.

**Answer: B**

### Question: 3

An application runs on EC2 instances behind an Elastic Load Balancing Application Load Balancer. The instances run in an EC2 Auto Scaling group across multiple Availability Zones. The application provides a

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RESTful interface with both synchronous and asynchronous operations. The asynchronous operations require up to 5 minutes to complete. Although the application must remain available at all times, after business hours, the traffic going to the application is greatly reduced and often results in the Auto Scaling group running the minimum number of On-Demand Instances.

What should the Solutions Architect recommend to optimize the cost of the environment after business hours?

- A. Change the Availability Zones in which the instances were created to another Availability Zone in the same region with a lower cost.
- B. Replace all On-Demand Instances with Spot Instances in the Auto Scaling group.
- C. Purchase Reserved Instances for the minimum number of Auto Scaling instances.
- D. Reduce the number of minimum instances to 0. New requests to the Application Load Balancer create new instances.

**Answer: B**

### Question: 4

A Solutions Architect is designing a web application for document sharing. The users will upload documents that are then made available to other users. There will be tens of thousands of these documents.

What is the MOST cost-effective storage solution?

- A. Amazon EFS
- B. Amazon S3
- C. Amazon Glacier
- D. Amazon EBS

**Answer: A**

Reference <https://dzone.com/articles/confused-by-aws-storage-options-s3-ebs-amp-efs-explained>

### Question: 5

A Solutions Architect was tasked with reviewing several templates that build VPCs and ensuring that they meet specific security requirements. After reviewing the templates, the Architect realizes that all of the templates are missing important security best practices.

What should the Architect do to implement security best practices in an efficient manner?

- A. Use VPC peering to enforce network consistency
- B. Restrict users from deploying an AWS CloudFormation template
- C. Provide the teams a nested AWS CloudFormation template that builds the VPC correctly

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D. Create AWS Identity and Access Management (IAM) policies that enforce the corporate VPC architecture standards

**Answer: D**

### Question: 6

A Solutions Architect has been given the following requirements for a company's VPC:  
What is the minimum number of subnets that the Solutions Architect will need based on these requirements and best practices?

- A. 2
- B. 3
- C. 4
- D. 6

**Answer: D**

### Question: 7

An application currently stores objects in Amazon S3-Standard. The application accesses new objects frequently for one week. After one week, they are accessed occasionally for analysis batch jobs. A Solutions Architect has been asked to reduce storage costs for the application while allowing immediate access for batch jobs.

How can costs be reduced without reducing data durability?

- A. Create a lifecycle policy that moves Amazon S3 data to Amazon S3 One Zone-Infrequent Access storage after 7 days. After 30 days, move the data to Amazon Glacier.
- B. Keep the data on Amazon S3, and create a lifecycle policy to move S3 data to Amazon Glacier after 7 days.
- C. Move all Amazon S3 data to S3 Standard-Infrequent Access storage, and create a lifecycle policy to move the data to Amazon Glacier after 7 days.
- D. Keep the data on Amazon S3, then create a lifecycle policy to move the data to S3 Standard-Infrequent Access storage after 7 days.

**Answer: A**

Reference <https://aws.amazon.com/blogs/aws/new-automatic-cost-optimization-for-amazon-s3-via-intelligent-tiering/>

### Question: 8

A company is building a critical ingestion service on AWS that will receive 1,000 incoming events per second. The events must be processed in order, and no events may be lost. Multiple applications will need to process each event. The company will expose the service as RESTful calls through an API Gateway.

What should a Solutions Architect use to receive the events based on these requirements?

- A. Amazon Kinesis Data Stream
- B. Amazon DynamoDB
- C. Amazon SQS
- D. Amazon SNS

**Answer: A**

### Question: 9

An AWS Lambda function requires access to an Amazon RDS for SQL Server instance. It is against company policy to store passwords in Lambda functions.

How can a Solutions Architect enable the Lambda function to retrieve the database password without violating company policy?

- A. Add an IAM policy for IAM database access to the Lambda execution role.
- B. Store a one-way hash of the password in the Lambda function.
- C. Have the Lambda function use the AWS Systems Manager Parameter Store.
- D. Connect to the Amazon RDS for SQL Server instance by using a role assigned to the Lambda function.

**Answer: C**

### Question: 10

A company has two different types of reporting needs on their 200-GB data warehouse:

Which design would meet these requirements with the LEAST cost?

- A. Replicate relevant data between Amazon Redshift and Amazon DynamoDB. Data scientists use Redshift. Dashboards use DynamoDB.
- B. Configure auto-replication between Amazon Redshift and Amazon RDS. Data scientists use Redshift. Dashboards use RDS.
- C. Use Amazon Redshift for both requirements, with separate query queues configured in workload management.

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D. Use Amazon Redshift for Data Scientists. Run automated dashboard queries against Redshift and store the results in Amazon ElastiCache. Dashboards query ElastiCache.

**Answer: D**

### Question: 11

A company has an application that uses Amazon CloudFront for content that is hosted on an Amazon S3 bucket. After an unexpected refresh, the users are still seeing old content.

Which step should the Solutions Architect take to ensure that new content is displayed?

- A. Perform a cache refresh on the CloudFront distribution that is serving the content.
- B. Perform an invalidation on the CloudFront distribution that is serving the content.
- C. Create a new cache behavior path with the updated content.
- D. Change the TTL value for removing the old objects.

**Answer: A**

### Question: 12

A company expects its user base to increase five times over one year. Its application is hosted in one region and uses an Amazon RDS MySQL database, an ELB Application Load Balancer, and Amazon ECS to host the website and its microservices.

Which design changes should a Solutions Architect recommend to support the expected growth? (Choose two.)

- A. Move static files from ECS to Amazon S3
- B. Use an Amazon Route 53 geolocation routing policy
- C. Scale the environment based on real-time AWS CloudTrail logs
- D. Create a dedicated Elastic Load Balancer for each microservice
- E. Create RDS read replicas and change the application to use these replicas

**Answer: A,E**

### Question: 13

A company is rolling out a new web service, but is unsure how many customers the service will attract. However, the company is unwilling to accept any downtime.

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What could a Solutions Architect recommend to the company in order to keep track of customers' current session data?

- A. Amazon EC2
- B. Amazon RDS
- C. AWS CloudTrail
- D. Amazon DynamoDB

**Answer: D**

### Question: 14

A web application is running on Amazon EC2 instances behind an Elastic Load Balancing Application Load Balancer (ALB). The EC2 instances should receive no traffic, except for web requests to the application. Based on these requirements, what security group rules should be put on the Amazon EC2 instances?

- A. An inbound rule allowing traffic from the security group attached to the ALB
- B. An inbound rule allowing traffic from the network ACLs attached to the ALB
- C. An outbound rule allowing traffic to the security group attached to the ALB
- D. An outbound rule blocking all traffic to the Internet

**Answer: A**

### Question: 15

A Solutions Architect must migrate a monolithic on-premises application to AWS. It is a web application with a load balancer, web server, application server, and relational database. The key requirement driving the migration is that the application should perform better and be more elastic. Which of the following architectures would meet these requirements?

- A. Re-host the application on Amazon EC2 with lift and shift of existing application code. Configure an Elastic Load Balancing load balancer to handle incoming requests. Use Amazon CloudWatch alarms to receive notification of scaling issues. Increase and decrease the size of the Amazon EC2 instances using AWS CLI or AWS Management Console as required.
- B. Re-architect the application as a three-tier application. Move the database to Amazon RDS. Use read replicas and Amazon ElastiCache with RDS for better performance. Use an Application Load Balancer to forward incoming requests to web and application servers running on-premises.
- C. Re-platform the application as a three-tier application. Use Elastic Load Balancing for incoming requests. Use EC2 for web and application tiers. Use RDS at the database tier. Use CloudWatch alarms and Auto Scaling for horizontal scaling at the web tier.

D. Re-architect the application as Service Oriented Architecture (SOA). Run database and application servers on-premises. Run web-facing EC2 servers. Use an Enterprise Service Bus to handle communications between different parts of the application running on-premises and in the cloud.

**Answer: A**

### Question: 16

A company has asked the Solutions Architect to modify its AWS-hosted internal application to allow for load balancing. The customer requests always come from the company domain (example.net). The company requires that incoming HTTP and HTTPS traffic is routed based on the path element of the URL in the request.

Which implementation can satisfy all requirements?

- A. Configure a Network Load Balancer with listeners for appropriate path patterns for the target groups.
- B. Configure an Application Load Balancer with host-based routing based on the domain field in the HTTP header.
- C. Configure a Network Load Balancer and enable cross-zone load balancing to ensure that all EC2 instances are used.
- D. Configure an Application Load Balancer with listeners for appropriate path patterns for the target group.

**Answer: B**

Reference <https://aws.amazon.com/blogs/aws/new-host-based-routing-support-for-aws-application-load-balancers/>

### Question: 17

A Solutions Architect is asked to improve the fault tolerance of an existing Python application. The web application places 1-MB images in an S3 bucket. The application then uses a single t2.large instance to transform the image to include a watermark with the company's brand before writing the image back to the S3 bucket.

What should the Solutions Architect recommend to increase the fault tolerance of the solution?

- A. Convert the code to a Lambda function triggered by scheduled Amazon CloudWatch Events.
- B. Increase the instance size to m4.xlarge and configure Enhanced Networking.
- C. Convert the code to a Lambda function triggered by Amazon S3 events.
- D. Create an Amazon SQS queue to send the images to the t2.large instance.

**Answer: C**

### Question: 18

A Solutions Architect has been asked to deliver video content stored on Amazon S3 to specific users from Amazon CloudFront while restricting access by unauthorized users.

How can the Architect implement a solution to meet these requirements?

- A. Configure CloudFront to use signed-URLs to access Amazon S3.
- B. Store the videos as private objects in Amazon S3, and let CloudFront serve the objects by using only Origin Access Identity (OAI).
- C. Use Amazon S3 static website as the origin of CloudFront, and configure CloudFront to deliver the videos by generating a signed URL for users.
- D. Use OAI for CloudFront to access private S3 objects and select the Restrict Viewer Access option in CloudFront cache behavior to use signed URLs.

**Answer: B**

Reference <https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3.html>

### Question: 19

A Solutions Architect needs to deploy a node.js-based web application that is highly available and scales automatically. The Marketing team needs to roll back on application releases quickly, and they need to have an operational dashboard. The Marketing team does not want to manage deployment of OS patches to the Linux servers.

Use of which AWS service will satisfy these requirements?

- A. Amazon EC2
- B. Amazon API Gateway
- C. AWS Elastic Beanstalk
- D. Amazon EC2 Container Service

**Answer: C**

Reference <https://aws.amazon.com/getting-started/projects/deploy-nodejs-web-app/>

### Question: 20

A company has a website running on Amazon EC2. The application DNS name points to an Elastic IP address associated with the EC2 instance. In the event of an attack on the website coming from a specific IP address, the company wants a way to block the offending IP address.



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Which tool or service should a Solutions Architect recommend to block the IP address?

- A. Security groups
- B. Network ACL
- C. AWS WAF
- D. AWS Shield

<b>Answer: C</b>
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