



AWS SAA

Exam Prep

Quick Facts

Category	Associate
Exam duration	90 minutes
Exam format	65 questions; either multiple choice or multiple response
Delivery Method	In person at a Pearson VUE testing center or online proctored exam.
Languages offered	English, Japanese, Korean, Simplified Chinese, Traditional Chinese, Bahasa (Indonesian), Spanish (Spain), Spanish (Latin America), French (France), German, Italian, and Portuguese (Brazil)

Content / Domain	% of Exam
Design Secure Architectures	30%
Design Resilient Architectures	26%
Design High-Performing Architectures	24%
Design Cost-Optimized Architectures	20%
TOTAL	100%

<https://training.resources.awscloud.com/get-certified-solutions-architect-associate>

Practice Questions

Category: CSAA – Design Cost-Optimized Architectures (EC2)

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A multinational corporate and investment bank is regularly processing steady workloads of accruals, loan interests, and other critical financial calculations every night from 10 PM to 3 AM on their on-premises data center for their corporate clients. Once the process is done, the results are then uploaded to the Oracle General Ledger which means that the processing should not be delayed or interrupted. The CTO has decided to move its IT infrastructure to AWS to save costs. The company needs to reserve compute capacity in a specific Availability Zone to properly run their workloads.

As the Senior Solutions Architect, how can you implement a cost-effective architecture in AWS for their financial system?

- A. Use Dedicated Hosts which provide a physical host that is fully dedicated to running your instances, and bring your existing per-socket, per-core, or per-VM software licenses to reduce costs.
- B. Use On-Demand EC2 instances which allows you to pay for the instances that you launch and use by the second. Reserve compute capacity in a specific Availability Zone to avoid any interruption.
- C. Use Regional Reserved Instances to reserve capacity on a specific Availability Zone and lower down the operating cost through its billing discounts.
- D. Use On-Demand Capacity Reservations, which provide compute capacity that is always available on the specified recurring schedule.

Category: CSAA – Design High-Performing Architectures (EC2)

The company that you are working for has a highly available architecture consisting of an elastic load balancer and several EC2 instances configured with auto-scaling in three Availability Zones. You want to monitor your EC2 instances based on a particular metric, which is not readily available in CloudWatch.

Which of the following is a custom metric in CloudWatch which you have to manually set up?

- A. Memory Utilization of an EC2 instance
- B. CPU Utilization of an EC2 instance
- C. Disk Reads activity of an EC2 instance
- D. Network packets out of an EC2 instance

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Category: CSAA – Design High-Performing Architectures (Auto Scaling)

A tech company has a CRM application hosted on an Auto Scaling group of On-Demand EC2 instances with different instance types and sizes. The application is extensively used during office hours from 9 in the morning to 5 in the afternoon. Their users are complaining that the performance of the application is slow during the start of the day but then works normally after a couple of hours.

Which of the following is the MOST operationally efficient solution to implement to ensure the application works properly at the beginning of the day?

- A. Configure a Dynamic scaling policy for the Auto Scaling group to launch new instances based on the CPU utilization.
- B. Configure a Dynamic scaling policy for the Auto Scaling group to launch new instances based on the Memory utilization.
- C. Configure a Scheduled scaling policy for the Auto Scaling group to launch new instances before the start of the day.
- D. Configure a Predictive scaling policy for the Auto Scaling group to automatically adjust the number of Amazon EC2 instances

ANSWER: C

Category: CSAA – Design Resilient Architectures (Auto Scaling)

A major TV network has a web application running on eight Amazon T3 EC2 instances behind an application load balancer. The number of requests that the application processes are consistent and do not experience spikes. A Solutions Architect must configure an Auto Scaling group for the instances to ensure that the application is running at all times.

Which of the following options can satisfy the given requirements?

- A. Deploy two EC2 instances with Auto Scaling in four regions behind an Amazon Elastic Load Balancer.
- B. Deploy four EC2 instances with Auto Scaling in one Availability Zone and four in another availability zone in the same region behind an Amazon Elastic Load Balancer.
- C. Deploy eight EC2 instances with Auto Scaling in one Availability Zone behind an Amazon Elastic Load Balancer.
- D. Deploy four EC2 instances with Auto Scaling in one region and four in another region behind an Amazon Elastic Load Balancer.

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Category: CSAA – Design High-Performing Architectures (Dynamo DB)

A popular augmented reality (AR) mobile game is heavily using a RESTful API which is hosted in AWS. The API uses Amazon API Gateway and a DynamoDB table with a preconfigured read and write capacity. Based on your systems monitoring, the DynamoDB table begins to throttle requests during high peak loads which causes the slow performance of the game.

Which of the following can you do to improve the performance of your app?

- A. Create an SQS queue in front of the DynamoDB table.
- B. Use DynamoDB Auto Scaling
- C. Add the DynamoDB table to an Auto Scaling Group.
- D. Integrate an Application Load Balancer with your DynamoDB table.

ANSWER: B

Category: CSAA – Design Resilient Architectures (Dynamo DB)

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A company is running a web application on AWS. The application is made up of an Auto-Scaling group that sits behind an Application Load Balancer and an Amazon DynamoDB table where user data is stored. The solutions architect must design the application to remain available in the event of a regional failure. A solution to automatically monitor the status of your workloads across your AWS account, conduct architectural reviews and check for AWS best practices.

Which configuration meets the requirement with the least amount of downtime possible?

In a secondary region, create a global table of the DynamoDB table and replicate the auto-scaling group and application load balancer. Use Route 53 DNS failover to automatically route traffic to the resources in the secondary region. Set up the AWS Well-Architected Tool to easily get recommendations for improving your workloads based on the AWS best practices

Write a CloudFormation template that includes the auto-scaling group, application load balancer, and DynamoDB table. In the event of a failure, deploy the template in a secondary region. Configure Amazon EventBridge (Amazon CloudWatch Events) to trigger a Lambda function that updates the application's Route 53 DNS record. Launch an Amazon Managed Grafana workspace to automatically receive tips and action items for improving your workloads based on the AWS best practices

Write a CloudFormation template that includes the auto-scaling group, application load balancer, and DynamoDB table. In the event of a failure, deploy the template in a secondary region. Use Route 53 DNS failover to automatically route traffic to the resources in the secondary region. Set up and configure the Amazon Managed Service for Prometheus service to receive insights for improving your workloads based on the AWS best practices.

ANSWER: A

In a secondary region, create a global secondary index of the DynamoDB table and replicate the auto-scaling group and application load balancer. Use Route 53 DNS failover to automatically route traffic to the resources in the secondary region. Set up the AWS Compute Optimizer to automatically get recommendations for improving your workloads based on the AWS best practices

Category: CSAA – Design Secure Architectures (EBS)

A health organization is using a large Dedicated EC2 instance with multiple EBS volumes to host its health records web application. The EBS volumes must be encrypted due to the confidentiality of the data that they are handling and also to comply with the HIPAA (Health Insurance Portability and Accountability Act) standard.

In EBS encryption, what service does AWS use to secure the volume's data at rest? (Select TWO.)

- A. By using Amazon-managed keys in AWS Key Management Service (KMS).
- B. By using S3 Server-Side Encryption.
- C. By using a password stored in CloudHSM.
- D. By using your own keys in AWS Key Management Service (KMS).
- E. By using the SSL certificates provided by the AWS Certificate Manager (ACM).
- F. By using S3 Client-Side Encryption.

ANSWER: A, D 

Category: CSAA – Design Resilient Architectures (EBS)

A company plans to migrate all of their applications to AWS. The Solutions Architect suggested to store all the data to EBS volumes. The Chief Technical Officer is worried that EBS volumes are not appropriate for the existing workloads due to compliance requirements, downtime scenarios, and IOPS performance.

Which of the following are valid points in proving that EBS is the best service to use for migration? (Select TWO.)

- A. Amazon EBS provides the ability to create snapshots (backups) of any EBS volume and write a copy of the data in the volume to Amazon RDS, where it is stored redundantly in multiple Availability Zones
- B. When you create an EBS volume in an Availability Zone, it is automatically replicated on a separate AWS region to prevent data loss due to a failure of any single hardware component.
- C. EBS volumes support live configuration changes while in production which means that you can modify the volume type, volume size, and IOPS capacity without service interruptions.
- D. EBS volumes can be attached to any EC2 Instance in any Availability Zone.
- E. An EBS volume is off-instance storage that can persist independently from the life of an instance.

ANSWER: C,E

Category: CSAA – Design Resilient Architectures (EFS)

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A content management system (CMS) is hosted on a fleet of auto-scaled, On-Demand EC2 instances that use Amazon Aurora as its database. Currently, the system stores the file documents that the users upload in one of the attached EBS Volumes. Your manager noticed that the system performance is quite slow and he has instructed you to improve the architecture of the system.

In this scenario, what will you do to implement a scalable, high-available POSIX-compliant shared file system?

- A. Upgrading your existing EBS volumes to Provisioned IOPS SSD Volumes
- B. Create an S3 bucket and use this as the storage for the CMS
- C. Use EFS
- D. Use ElastiCache

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Category: CSAA – Design High-Performing Architectures (EFS)

A multinational company has been building its new data analytics platform with high-performance computing workloads (HPC) which requires a scalable, POSIX-compliant storage service. The data need to be stored redundantly across multiple AZs and allows concurrent connections from thousands of EC2 instances hosted on multiple Availability Zones.

Which of the following AWS storage service is the most suitable one to use in this scenario?

- A. Amazon ElastiCache
- B. Amazon Elastic File System
- C. Amazon S3
- D. Amazon EBS Volumes

ANSWER: B

11 Category: CSAA – Design Resilient Architectures (S3/Route53)

A company has a static corporate website hosted in a standard S3 bucket and a new web domain name that was registered using Route 53. You are instructed by your manager to integrate these two services in order to successfully launch their corporate website.

What are the prerequisites when routing traffic using Amazon Route 53 to a website that is hosted in an Amazon S3 Bucket? (Select TWO.)

- A. The Cross-Origin Resource Sharing (CORS) option should be enabled in the S3 bucket
- B. The S3 bucket name must be the same as the domain name
- C. The S3 bucket must be in the same region as the hosted zone
- D. A registered domain name
- E. The record set must be of type "MX"

ANSWER: B, D 

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You are looking at ways to improve some existing infrastructure as it seems a lot of engineering resources are being taken up with basic management and monitoring tasks and the costs seem to be excessive.

You are thinking of deploying Amazon ElastiCache to help. Which of the following statements is true in regards to ElastiCache?

A. You can improve load and response times to user actions and queries however the cost associated with scaling web applications will be more.

B. You can't improve load and response times to user actions and queries but you can reduce the cost associated with scaling web applications.

C. You can improve load and response times to user actions and queries however the cost associated with scaling web applications will remain the same.

D. You can improve load and response times to user actions and queries and also reduce the cost associated with scaling web applications.

ANSWER: D 

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Category: CSAA – Design Resilient Architectures

As part of the Business Continuity Plan of your company, your IT Director instructed you to set up an automated backup of all of the EBS Volumes for your EC2 instances as soon as possible.

What is the fastest and most cost-effective solution to automatically back up all of your EBS Volumes?

- A. For an automated solution, create a scheduled job that calls the "create-snapshot" command via the AWS CLI to take a snapshot of production EBS volumes periodically.
- B. Set your Amazon Storage Gateway with EBS volumes as the data source and store the backups in your on-premises servers through the storage gateway.
- C. Use an EBS-cycle policy in Amazon S3 to automatically back up the EBS volumes.
- D. Use Amazon Data Lifecycle Manager (Amazon DLM) to automate the creation of EBS snapshots.

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Category: CSAA – Design Resilient Architectures

A company has a dynamic web app written in MEAN stack that is going to be launched in the next month. There is a probability that the traffic will be quite high in the first couple of weeks. In the event of a load failure, how can you set up DNS failover to a static website?

- A. Add more servers in case the application fails.
- B. Use Route 53 with the failover option to a static S3 website bucket or CloudFront distribution.
- C. Enable failover to an application hosted in an on-premises data center.
- D. Duplicate the exact application architecture in another region and configure DNS weight-based routing.

Category: CSAA – Design Cost-Optimized Architectures

A company wants to organize the way it tracks its spending on AWS resources. A report that summarizes the total billing accrued by each department must be generated at the end of the month.

Which solution will meet the requirements?

- A. Tag resources with the department name and enable cost allocation tags.
- B. Tag resources with the department name and configure a budget action in AWS Budget.
- C. Use AWS Cost Explorer to view spending and filter usage data by Resource.
- D. Create a Cost and Usage report for AWS services that each department is using.

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Category: CSAA – Design High-Performing Architectures

A Solutions Architect created a new Standard-class S3 bucket to store financial reports that are not frequently accessed but should immediately be available when an auditor requests them. To save cost the Architect changed the storage class of the S3 bucket from Standard to Infrequent Access storage class.

In Amazon S3 Standard – Infrequent Access storage class, which of the following statements are true? (Select TWO.)

- A. It provides high latency and low throughput performance.
- B. Ideal to use for data archiving.
- C. It is designed for data that requires rapid access when needed.
- D. It automatically moves data to the most cost-effective access tier without any operational overhead.
- E. It is designed for data that is accessed less frequently.

ANSWER: C, E



Category: CSAA – Design Secure Architectures

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An organization stores and manages financial records of various companies in its on-premises data center, which is almost out of space. The management decided to move all of their existing records to a cloud storage service. All future financial records will also be stored in the cloud. For additional security, all records must be prevented from being deleted or overwritten.

Which of the following should you do to meet the above requirement?

- A. Use AWS Storage Gateway to establish hybrid cloud storage. Store all of your data in Amazon EBS and enable object lock.
- B. Use AWS DataSync to move the data. Store all of your data in Amazon EFS and enable object lock.
- C. Use AWS DataSync to move the data. Store all of your data in Amazon S3 and enable object lock.
- D. Use AWS Storage Gateway to establish hybrid cloud storage. Store all of your data in Amazon S3 and enable object lock.

19 Category: CSAA – Design Resilient Architectures

A company is running a custom application in an Auto Scaling group of Amazon EC2 instances. Several instances are failing due to insufficient swap space. The Solutions Architect has been instructed to troubleshoot the issue and effectively monitor the available swap space of each EC2 instance.

Which of the following options fulfills this requirement?

- A. Install the CloudWatch agent on each instance and monitor the SwapUtilization metric.
- B. Create a new trail in AWS CloudTrail and configure Amazon CloudWatch Logs to monitor your trail logs.
- C. Create a CloudWatch dashboard and monitor the SwapUsed metric.
- D. Enable detailed monitoring on each instance and monitor the SwapUtilization metric.

Category: CSAA – Design Secure Architectures

A company has an application that continually sends encrypted documents to Amazon S3. The company requires that the configuration for data access is in line with their strict compliance standards. They should also be alerted if there is any risk of unauthorized access or suspicious access patterns.

Which step is needed to meet the requirements?

- A. Use Amazon GuardDuty to monitor malicious activity on S3.
- B. Use Amazon Inspector to alert whenever a security violation is detected on S3.
- C. Use Amazon Macie to monitor and detect access patterns on S3.
- D. Use Amazon Rekognition to monitor and recognize patterns on S3.



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