

SAP-C02 Dumps

AWS Certified Solutions Architect - Professional

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NEW QUESTION 1

- (Exam Topic 1)

A solutions architect is designing a publicly accessible web application that is on an Amazon CloudFront distribution with an Amazon S3 website endpoint as the origin. When the solution is deployed, the website returns an Error 403: Access Denied message.

Which steps should the solutions architect take to correct the issue? (Select TWO.)

- A. Remove the S3 block public access option from the S3 bucket.
- B. Remove the requester pays option from the S3 bucket.
- C. Remove the origin access identity (OAI) from the CloudFront distribution.
- D. Change the storage class from S3 Standard to S3 One Zone-Infrequent Access (S3 One Zone-IA).
- E. Disable S3 object versioning.

Answer: AB

Explanation:

See using S3 to host a static website with Cloudfront: <https://aws.amazon.com/premiumsupport/knowledge-center/cloudfront-serve-static-website/>

- Using a REST API endpoint as the origin, with access restricted by an origin access identity (OAI)
- Using a website endpoint as the origin, with anonymous (public) access allowed
- Using a website endpoint as the origin, with access restricted by a Referer header

NEW QUESTION 2

- (Exam Topic 1)

A company is running an application distributed over several Amazon EC2 instances in an Auto Scaling group behind an Application Load Balancer. The security team requires that all application access attempts be made available for analysis. Information about the client IP address, connection type, and user agent must be included.

Which solution will meet these requirements?

- A. Enable EC2 detailed monitoring, and include network logs. Send all logs through Amazon Kinesis Data Firehose to an Amazon Elasticsearch Service (Amazon ES) cluster that the security team uses for analysis.
- B. Enable VPC Flow Logs for all EC2 instance network interfaces. Publish VPC Flow Logs to an Amazon S3 bucket. Have the security team use Amazon Athena to query and analyze the logs.
- C. Enable access logs for the Application Load Balancer, and publish the logs to an Amazon S3 bucket. Have the security team use Amazon Athena to query and analyze the logs.
- D. Enable Traffic Mirroring and specify all EC2 instance network interfaces as the source.
- E. Send all traffic information through Amazon Kinesis Data Firehose to an Amazon Elasticsearch Service (Amazon ES) cluster that the security team uses for analysis.

Answer: C

Explanation:

<https://docs.aws.amazon.com/elasticloadbalancing/latest/application/load-balancer-access-logs.html>

NEW QUESTION 3

- (Exam Topic 1)

A company needs to architect a hybrid DNS solution. This solution will use an Amazon Route 53 private hosted zone for the domain cloud.example.com for the resources stored within VPCs.

The company has the following DNS resolution requirements:

- On-premises systems should be able to resolve and connect to cloud.example.com.
- All VPCs should be able to resolve cloud.example.com.

There is already an AWS Direct Connect connection between the on-premises corporate network and AWS Transit Gateway. Which architecture should the company use to meet these requirements with the HIGHEST performance?

- A. Associate the private hosted zone to all the VPCs.
- B. Create a Route 53 inbound resolver in the shared services VPC.
- C. Attach all VPCs to the transit gateway and create forwarding rules in the on-premises DNS server for cloud.example.com that point to the inbound resolver.
- D. Associate the private hosted zone to all the VPCs.
- E. Deploy an Amazon EC2 conditional forwarder in the shared services VPC.
- F. Attach all VPCs to the transit gateway and create forwarding rules in the on-premises DNS server for cloud.example.com that point to the conditional forwarder.
- G. Associate the private hosted zone to the shared services VPC.
- H. Create a Route 53 outbound resolver in the shared services VPC.
- I. Attach all VPCs to the transit gateway and create forwarding rules in the on-premises DNS server for cloud.example.com that point to the outbound resolver.
- J. Associate the private hosted zone to the shared services VPC.
- K. Create a Route 53 inbound resolver in the shared services VPC.
- L. Attach the shared services VPC to the transit gateway and create forwarding rules in the on-premises DNS server for cloud.example.com that point to the inbound resolver.

Answer: D

Explanation:

<https://aws.amazon.com/blogs/networking-and-content-delivery/centralized-dns-management-of-hybrid-cloud-w>

NEW QUESTION 4

- (Exam Topic 1)

A company wants to move a web application to AWS. The application stores session information locally on each web server, which will make auto scaling difficult. As part of the migration, the application will be rewritten to decouple the session data from the web servers. The company requires low latency, scalability, and availability.

Which service will meet the requirements for storing the session information in the MOST cost-effective way?

- A. Amazon ElastiCache with the Memcached engine
- B. Amazon S3
- C. Amazon RDS MySQL
- D. Amazon ElastiCache with the Redis engine

Answer: D

Explanation:

<https://aws.amazon.com/caching/session-management/>

Building real-time apps across versatile use cases like gaming, geospatial service, caching, session stores, or queuing, with advanced data structures, replication, and point-in-time snapshot support. Memcached: Building a simple, scalable caching layer for your data-intensive apps. <https://aws.amazon.com/elasticache/>

NEW QUESTION 5

- (Exam Topic 1)

A company has many AWS accounts and uses AWS Organizations to manage all of them. A solutions architect must implement a solution that the company can use to share a common network across multiple accounts.

The company's infrastructure team has a dedicated infrastructure account that has a VPC. The infrastructure team must use this account to manage the network. Individual accounts cannot have the ability to manage their own networks. However, individual accounts must be able to create AWS resources within subnets.

Which combination of actions should the solutions architect perform to meet these requirements? (Select TWO.)

- A. Create a transit gateway in the infrastructure account.
- B. Enable resource sharing from the AWS Organizations management account.
- C. Create VPCs in each AWS account within the organization in AWS Organization
- D. Configure the VPCs to share the same CIDR range and subnets as the VPC in the infrastructure account
- E. Peer the VPCs in each individual account with the VPC in the infrastructure account,
- F. Create a resource share in AWS Resource Access Manager in the infrastructure account
- G. Select the specific AWS Organizations OU that will use the shared network
- H. Select each subnet to associate with the resource share.
- I. Create a resource share in AWS Resource Access Manager in the infrastructure account
- J. Select the specific AWS Organizations OU that will use the shared network
- K. Select each prefix list to associate with the resource share.

Answer: CE

Explanation:

<https://docs.aws.amazon.com/vpc/latest/userguide/sharing-managed-prefix-lists.html>

NEW QUESTION 6

- (Exam Topic 1)

A solutions architect has an operational workload deployed on Amazon EC2 instances in an Auto Scaling group. The VPC architecture spans two Availability Zones (AZ) with a subnet in each that the Auto Scaling group is targeting. The VPC is connected to an on-premises environment and connectivity cannot be interrupted. The maximum size of the Auto Scaling group is 20 instances in service. The VPC IPv4 addressing is as follows:

VPC CIDR: 10.0.0.0/23

AZ1 subnet CIDR: 10.0.0.0/24 AZ2 subnet CIDR: 10.0.1.0/24

Since deployment, a third AZ has become available in the Region. The solutions architect wants to adopt the new AZ without adding additional IPv4 address space and without service downtime.

Which solution will meet these requirements?

- A. Update the Auto Scaling group to use the AZ2 subnet only
- B. Delete and re-create the AZ1 subnet using half the previous address space
- C. Adjust the Auto Scaling group to also use the new AZ1 subnet
- D. When the instances are healthy, adjust the Auto Scaling group to use the AZ1 subnet only
- E. Remove the current AZ2 subnet
- F. Create a new AZ2 subnet using the second half of the address space from the original AZ1 subnet
- G. Create a new AZ3 subnet using half the original AZ2 subnet address space, then update the Auto Scaling group to target all three new subnets.
- H. Terminate the EC2 instances in the AZ1 subnet
- I. Delete and re-create the AZ1 subnet using half the address space
- J. Update the Auto Scaling group to use this new subnet
- K. Repeat this for the second AZ
- L. Define a new subnet in AZ3, then update the Auto Scaling group to target all three new subnets.
- M. Create a new VPC with the same IPv4 address space and define three subnets, with one for each AZ
- N. Update the existing Auto Scaling group to target the new subnets in the new VPC.
- O. Update the Auto Scaling group to use the AZ2 subnet only
- P. Update the AZ1 subnet to have half the previous address space
- Q. Adjust the Auto Scaling group to also use the AZ1 subnet again
- R. When the instances are healthy, adjust the Auto Scaling group to use the AZ1 subnet only
- S. Update the current AZ2 subnet and assign the second half of the address space from the original AZ1 subnet
- T. Create a new AZ3 subnet using half the original AZ2 subnet address space, then update the Auto Scaling group to target all three new subnets.

Answer: A

Explanation:

https://aws.amazon.com/premiumsupport/knowledge-center/vpc-ip-address-range/?nc1=h_ls

It's not possible to modify the IP address range of an existing virtual private cloud (VPC) or subnet. You must delete the VPC or subnet, and then create a new VPC or subnet with your preferred CIDR block.

NEW QUESTION 7

- (Exam Topic 1)

A company wants to deploy an AWS WAF solution to manage AWS WAF rules across multiple AWS accounts. The accounts are managed under different OUs in AWS Organizations.

Administrators must be able to add or remove accounts or OUs from managed AWS WAF rule sets as needed. Administrators also must have the ability to automatically update and remediate noncompliant AWS WAF rules in all accounts. Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Use AWS Firewall Manager to manage AWS WAF rules across accounts in the organization.
- B. Use an AWS Systems Manager Parameter Store parameter to store account numbers and OUs to manage. Update the parameter as needed to add or remove accounts or OUs. Use an Amazon EventBridge (Amazon CloudWatch Events) rule to identify any changes to the parameter and to invoke an AWS Lambda function to update the security policy in the Firewall Manager administrative account.
- C. Deploy an organization-wide AWS Config rule that requires all resources in the selected OUs to associate the AWS WAF rule.
- D. Deploy automated remediation actions by using AWS Lambda to fix noncompliant resources. Deploy AWS WAF rules by using an AWS CloudFormation stack set to target the same OUs where the AWS Config rule is applied.
- E. Create AWS WAF rules in the management account of the organization. Use AWS Lambda environment variables to store account numbers and OUs to manage. Update environment variables as needed to add or remove accounts or OUs. Create cross-account IAM roles in member accounts. Assume the roles by using AWS Security Token Service (AWS STS) in the Lambda function to create and update AWS WAF rules in the member accounts.
- F. Use AWS Control Tower to manage AWS WAF rules across accounts in the organization. Use AWS Key Management Service (AWS KMS) to store account numbers and OUs to manage. Update AWS KMS as needed to add or remove accounts or OUs. Create IAM users in member accounts. Allow AWS Control Tower in the management account to use the access key and secret access key to create and update AWS WAF rules in the member accounts.

Answer: B

NEW QUESTION 8

- (Exam Topic 1)

A group of research institutions and hospitals are in a partnership to study 2 PBs of genomic data. The institute that owns the data stores it in an Amazon S3 bucket and updates it regularly. The institute would like to give all of the organizations in the partnership read access to the data. All members of the partnership are extremely cost-conscious, and the institute that owns the account with the S3 bucket is concerned about covering the costs for requests and data transfers from Amazon S3.

Which solution allows for secure datasharing without causing the institute that owns the bucket to assume all the costs for S3 requests and data transfers'?

- A. Ensure that all organizations in the partnership have AWS account.
- B. In the account with the S3 bucket, create a cross-account role for each account in the partnership that allows read access to the data.
- C. Have the organizations assume and use that read role when accessing the data.
- D. Ensure that all organizations in the partnership have AWS account.
- E. Create a bucket policy on the bucket that owns the data. The policy should allow the accounts in the partnership read access to the bucket.
- F. Enable Requester Pays on the bucket.
- G. Have the organizations use their AWS credentials when accessing the data.
- H. Ensure that all organizations in the partnership have AWS account.
- I. Configure buckets in each of the accounts with a bucket policy that allows the institute that owns the data the ability to write to the bucket. Periodically sync the data from the institute's account to the other organization.
- J. Have the organizations use their AWS credentials when accessing the data using their accounts.
- K. Ensure that all organizations in the partnership have AWS account.
- L. In the account with the S3 bucket, create a cross-account role for each account in the partnership that allows read access to the data.
- M. Enable Requester Pays on the bucket.
- N. Have the organizations assume and use that read role when accessing the data.

Answer: B

Explanation:

In general, bucket owners pay for all Amazon S3 storage and data transfer costs associated with their bucket. A bucket owner, however, can configure a bucket to be a Requester Pays bucket. With Requester Pays buckets, the requester instead of the bucket owner pays the cost of the request and the data download from the bucket. The bucket owner always pays the cost of storing data. If you enable Requester Pays on a bucket, anonymous access to that bucket is not allowed. <https://docs.aws.amazon.com/AmazonS3/latest/userguide/RequesterPaysExamples.html>

NEW QUESTION 9

- (Exam Topic 1)

A company wants to change its internal cloud billing strategy for each of its business units. Currently, the cloud governance team shares reports for overall cloud spending with the head of each business unit. The company uses AWS Organizations to manage the separate AWS accounts for each business unit. The existing tagging standard in Organizations includes the application, environment, and owner. The cloud governance team wants a centralized solution so each business unit receives monthly reports on its cloud spending. The solution should also send notifications for any cloud spending that exceeds a set threshold.

Which solution is the MOST cost-effective way to meet these requirements?

- A. Configure AWS Budgets in each account and configure budget alerts that are grouped by application, environment, and owner.
- B. Add each business unit to an Amazon SNS topic for each alert.
- C. Use Cost Explorer in each account to create monthly reports for each business unit.
- D. Configure AWS Budgets in the organization's master account and configure budget alerts that are grouped by application, environment, and owner.
- E. Add each business unit to an Amazon SNS topic for each alert.
- F. Use Cost Explorer in the organization's master account to create monthly reports for each business unit.
- G. Configure AWS Budgets in each account and configure budget alerts that are grouped by application, environment, and owner.
- H. Add each business unit to an Amazon SNS topic for each alert.
- I. Use the AWS Billing and Cost Management dashboard in each account to create monthly reports for each business unit.
- J. Enable AWS Cost and Usage Reports in the organization's master account and configure reports grouped by application, environment, and owner.
- K. Create an AWS Lambda function that processes AWS Cost and Usage Reports, sends budget alerts, and sends monthly reports to each business unit's email list.

Answer: B

Explanation:

Configure AWS Budgets in the organization's master account and configure budget alerts that are grouped by application, environment, and owner. Add each business unit to an Amazon SNS topic for each alert. Use Cost Explorer in the organization's master account to create monthly reports for each business unit. <https://aws.amazon.com/about-aws/whats-new/2019/07/introducing-aws-budgets-reports/#:~:text=AWS%20Bud>

NEW QUESTION 10

- (Exam Topic 1)

A company has an Amazon VPC that is divided into a public subnet and a private subnet. A web application runs in Amazon VPC, and each subnet has its own NACL. The public subnet has a CIDR of 10.0.0.0/24. An Application Load Balancer is deployed to the public subnet. The private subnet has a CIDR of 10.0.1.0/24. Amazon EC2 instances that run a web server on port 80 are launched into the private subnet.

Only network traffic that is required for the Application Load Balancer to access the web application can be allowed to travel between the public and private subnets.

What collection of rules should be written to ensure that the private subnet's NACL meets the requirement? (Select TWO.)

- A. An inbound rule for port 80 from source 0.0.0.0/0
- B. An inbound rule for port 80 from source 10.0.0.0/24
- C. An outbound rule for port 80 to destination 0.0.0.0/0
- D. An outbound rule for port 80 to destination 10.0.0.0/24
- E. An outbound rule for ports 1024 through 65535 to destination 10.0.0.0/24

Answer: BE

Explanation:

Ephemeral ports are not covered in the syllabus, so be careful that you don't confuse day to day best practice with what is required for the exam. Link to an explanation on Ephemeral ports here: <https://acloud.guru/forums/aws-certified-solutions-architect-associate/discussion/-KUbcwo4IXefMI7janaK/netw>

NEW QUESTION 10

- (Exam Topic 1)

A finance company is running its business-critical application on current-generation Linux EC2 instances. The application includes a self-managed MySQL database performing heavy I/O operations. The application is working fine to handle a moderate amount of traffic during the month. However, it slows down during the final three days of each month due to month-end reporting, even though the company is using Elastic Load Balancers and Auto Scaling within its infrastructure to meet the increased demand.

Which of the following actions would allow the database to handle the month-end load with the LEAST impact on performance?

- A. Pre-warming Elastic Load Balancers, using a bigger instance type, changing all Amazon EBS volumes to GP2 volumes.
- B. Performing a one-time migration of the database cluster to Amazon RDS
- C. and creating several additional read replicas to handle the load during end of month
- D. Using Amazon CloudWatch with AWS Lambda to change the type
- E. size, or IOPS of Amazon EBS volumes in the cluster based on a specific CloudWatch metric
- F. Replacing all existing Amazon EBS volumes with new PIOPS volumes that have the maximum available storage size and I/O per second by taking snapshots before the end of the month and reverting back afterwards.

Answer: B

Explanation:

In this scenario, the Amazon EC2 instances are in an Auto Scaling group already, which means that the database read operations are the possible bottleneck, especially during the month-end wherein the reports are generated. This can be solved by creating RDS read replicas.

NEW QUESTION 14

- (Exam Topic 1)

A company wants to host a new global website that consists of static content. A solutions architect is working on a solution that uses Amazon CloudFront with an origin access identity (OAI) to access website content that is stored in a private Amazon S3 bucket.

During testing, the solutions architect receives 404 errors from the S3 bucket. Error messages appear only for attempts to access paths that end with a forward slash, such as `example.com/path/`. These requests should return the existing S3 object `path/index.html`. Any potential solution must not prevent CloudFront from caching the content.

What should the solutions architect do to resolve this problem?

- A. Change the CloudFront origin to an Amazon API Gateway proxy endpoint
- B. Rewrite the S3 request URL by using an AWS Lambda function.
- C. Change the CloudFront origin to an Amazon API Gateway endpoint
- D. Rewrite the S3 request URL in an AWS service integration.
- E. Change the CloudFront configuration to use an AWS Lambda@Edge function that is invoked by a viewer request event to rewrite the S3 request URL.
- F. Change the CloudFront configuration to use an AWS Lambda@Edge function that is invoked by an origin request event to rewrite the S3 request URL.

Answer: C

NEW QUESTION 15

- (Exam Topic 1)

A company is storing data on-premises on a Windows file server. The company produces 5 GB of new data daily.

The company migrated part of its Windows-based workload to AWS and needs the data to be available on a file system in the cloud. The company already has established an AWS Direct Connect connection between the on-premises network and AWS.

Which data migration strategy should the company use?

- A. Use the file gateway option in AWS Storage Gateway to replace the existing Windows file server, and point the existing file share to the new file gateway.
- B. Use AWS DataSync to schedule a daily task to replicate data between the on-premises Windows file server and Amazon FSx.
- C. Use AWS Data Pipeline to schedule a daily task to replicate data between the on-premises Windows file server and Amazon Elastic File System (Amazon EFS).
- D. Use AWS DataSync to schedule a daily task to replicate data between the on-premises Windows file server and Amazon Elastic File System (Amazon EFS).

Answer: B

Explanation:

<https://aws.amazon.com/storagegateway/file/> <https://docs.aws.amazon.com/fsx/latest/WindowsGuide/migrate-files-to-fsx-datasync.html>

<https://docs.aws.amazon.com/systems-manager/latest/userguide/prereqs-operating-systems.html#prereqs-os-win>

NEW QUESTION 17

- (Exam Topic 1)

A scientific organization requires the processing of text and picture data stored in an Amazon S3 bucket. The data is gathered from numerous radar stations during a mission's live, time-critical phase. The data is uploaded by the radar stations to the source S3 bucket. The data is preceded with the identification number of the radar station.

In a second account, the business built a destination S3 bucket. To satisfy a compliance target, data must be transferred from the source S3 bucket to the destination S3 bucket. Replication is accomplished by using an S3 replication rule that covers all items in the source S3 bucket.

A single radar station has been recognized as having the most precise data. At this radar station, data replication must be completed within 30 minutes of the radar station uploading the items to the source S3 bucket.

What actions should a solutions architect take to ensure that these criteria are met?

- A. Set up an AWS DataSync agent to replicate the prefixed data from the source S3 bucket to the destination S3 bucket
- B. Select to use at available bandwidth on the task, and monitor the task to ensure that it is in the TRANSFERRING status
- C. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert if this status changes.
- D. In the second account, create another S3 bucket to receive data from the radar station with the most accurate data Set up a new replication rule for this new S3 bucket to separate the replication from the other radar stations Monitor the maximum replication time to the destination
- E. Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert when the time exceeds the desired threshold
- F. Enable Amazon S3 Transfer Acceleration on the source S3 bucket, and configure the radar station with the most accurate data to use the new endpoint Monitor the S3 destination bucket's TotalRequestLatency metric Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert if this status changes
- G. Create a new S3 replication rule on the source S3 bucket that filters for the keys that use the prefix of the radar station with the most accurate data Enable S3 Replication Time Control (S3 RTC) Monitor the maximum replication time to the destination Create an Amazon EventBridge (Amazon CloudWatch Events) rule to trigger an alert when the time exceeds the desired threshold

Answer: D

Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/replication-time-control.html>

NEW QUESTION 19

- (Exam Topic 1)

The company needs to determine which costs on the monthly AWS bill are attributable to each application or team. The company also must be able to create reports to compare costs from the last 12 months and to help forecast costs for the next 12 months. A solutions architect must recommend an AWS Billing and Cost Management solution that provides these cost reports.

Which combination of actions will meet these requirements? (Select THREE.)

- A. Activate the user-defined cost allocation tags that represent the application and the team.
- B. Activate the AWS generated cost allocation tags that represent the application and the team.
- C. Create a cost category for each application in Billing and Cost Management.
- D. Activate IAM access to Billing and Cost Management.
- E. Create a cost budget.
- F. Enable Cost Explorer.

Answer: ACF

Explanation:

<https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html> <https://aws.amazon.com/premiumsupport/knowledge-center/cost-explorer-analyze-spending-and-usage/> <https://docs.aws.amazon.com/awsaccountbilling/latest/aboutv2/manage-cost-categories.html>
<https://docs.aws.amazon.com/cost-management/latest/userguide/ce-enable.html>

NEW QUESTION 23

- (Exam Topic 1)

A company that tracks medical devices in hospitals wants to migrate its existing storage solution to the AWS Cloud. The company equips all of its devices with sensors that collect location and usage information. This sensor data is sent in unpredictable patterns with large spikes. The data is stored in a MySQL database running on premises at each hospital. The company wants the cloud storage solution to scale with usage.

The company's analytics team uses the sensor data to calculate usage by device type and hospital. The team needs to keep analysis tools running locally while fetching data from the cloud. The team also needs to use existing Java application and SQL queries with as few changes as possible.

How should a solutions architect meet these requirements while ensuring the sensor data is secure?

- A. Store the data in an Amazon Aurora Serverless database
- B. Serve the data through a Network Load Balancer (NLB). Authenticate users using the NLB with credentials stored in AWS Secrets Manager.
- C. Store the data in an Amazon S3 bucket
- D. Serve the data through Amazon QuickSight using an IAM user authorized with AWS Identity and Access Management (IAM) with the S3 bucket as the data source.
- E. Store the data in an Amazon Aurora Serverless database
- F. Serve the data through the Aurora Data API using an IAM user authorized with AWS Identity and Access Management (IAM) and the AWS Secrets Manager ARN.
- G. Store the data in an Amazon S3 bucket
- H. Serve the data through Amazon Athena using AWS PrivateLink to secure the data in transit.

Answer: C

Explanation:

<https://aws.amazon.com/blogs/aws/new-data-api-for-amazon-aurora-serverless/> <https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/data-api.html>
<https://aws.amazon.com/blogs/aws/aws-privatelink-for-amazon-s3-now-available/> <https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/data-api.html#data-api.access>

The data is currently stored in a MySQL database running on-prem. Storing MySQL data in S3 doesn't sound good so B & D are out. Aurora Data API "enables the SQL HTTP endpoint, a connectionless Web Service API for running SQL queries against this database. When the SQL HTTP endpoint is enabled, you can also query your database from inside the RDS console (these features are free to use)."

NEW QUESTION 27

- (Exam Topic 1)

A large company with hundreds of AWS accounts has a newly established centralized internal process for purchasing new or modifying existing Reserved Instances. This process requires all business units that want to purchase or modify Reserved Instances to submit requests to a dedicated team for procurement or execution. Previously, business units would directly purchase or modify Reserved Instances in their own respective AWS accounts autonomously. Which combination of steps should be taken to proactively enforce the new process in the MOST secure way possible? (Select TWO.)

- A. Ensure all AWS accounts are part of an AWS Organizations structure operating in all features mode.
- B. Use AWS Contingency to report on the attachment of an IAM policy that denies access to the ec2:PurchaseReservedInstancesOffering and ec2:ModifyReservedInstances actions.
- C. In each AWS account, create an IAM policy with a DENY rule to the ec2:PurchaseReservedInstancesOffering and ec2:ModifyReservedInstances actions.
- D. Create an SCP that contains a deny rule to the ec2:PurchaseReservedInstancesOffering and ec2: Modify Reserved Instances action
- E. Attach the SCP to each organizational unit (OU) of the AWS Organizations structure.
- F. Ensure that all AWS accounts are part of an AWS Organizations structure operating in consolidated billing features mode.

Answer: AD

Explanation:

https://docs.aws.amazon.com/organizations/latest/APIReference/API_EnableAllFeatures.html

https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scp-strategies.html

NEW QUESTION 28

- (Exam Topic 1)

A large payroll company recently merged with a small staffing company. The unified company now has multiple business units, each with its own existing AWS account.

A solutions architect must ensure that the company can centrally manage the billing and access policies for all the AWS accounts. The solutions architect configures AWS Organizations by sending an invitation to all member accounts of the company from a centralized management account.

What should the solutions architect do next to meet these requirements?

- A. Create the OrganizationAccountAccess IAM group in each member account
- B. Include the necessary IAM roles for each administrator.
- C. Create the OrganizationAccountAccessPolicy IAM policy in each member account
- D. Connect the member accounts to the management account by using cross-account access.
- E. Create the OrganizationAccountAccessRole IAM role in each member account
- F. Grant permission to the management account to assume the IAM role.
- G. Create the OrganizationAccountAccessRole IAM role in the management account Attach the Administrator Access AWS managed policy to the IAM role
- H. Assign the IAM role to the administrators in each member account.

Answer: C

NEW QUESTION 31

- (Exam Topic 1)

A company is running a data-intensive application on AWS. The application runs on a cluster of hundreds of Amazon EC2 instances. A shared file system also runs on several EC2 instances that store 200 TB of data. The application reads and modifies the data on the shared file system and generates a report. The job runs once monthly, reads a subset of the files from the shared file system, and takes about 72 hours to complete. The compute instances scale in an Auto Scaling group, but the instances that host the shared file system run continuously. The compute and storage instances are all in the same AWS Region.

A solutions architect needs to reduce costs by replacing the shared file system instances. The file system must provide high performance access to the needed data for the duration of the 72-hour run.

Which solution will provide the LARGEST overall cost reduction while meeting these requirements?

- A. Migrate the data from the existing shared file system to an Amazon S3 bucket that uses the S3 Intelligent-Tiering storage class
- B. Before the job runs each month, use Amazon FSx for Lustre to create a new file system with the data from Amazon S3 by using lazy loadin
- C. Use the new file system as the shared storage for the duration of the job
- D. Delete the file system when the job is complete.
- E. Migrate the data from the existing shared file system to a large Amazon Elastic Block Store (Amazon EBS) volume with Multi-Attach enable
- F. Attach the EBS volume to each of the instances by using a user data script in the Auto Scaling group launch template
- G. Use the EBS volume as the shared storage for the duration of the job
- H. Detach the EBS volume when the job is complete.
- I. Migrate the data from the existing shared file system to an Amazon S3 bucket that uses the S3 Standard storage class
- J. Before the job runs each month, use Amazon FSx for Lustre to create a new file system with the data from Amazon S3 by using batch loadin
- K. Use the new file system as the shared storage for the duration of the job
- L. Delete the file system when the job is complete.
- M. Migrate the data from the existing shared file system to an Amazon S3 bucket
- N. Before the job runs each month, use AWS Storage Gateway to create a file gateway with the data from Amazon S3. Use the file gateway as the shared storage for the job
- O. Delete the file gateway when the job is complete.

Answer: B

NEW QUESTION 32

- (Exam Topic 1)

An e-commerce company is revamping its IT infrastructure and is planning to use AWS services. The company's CIO has asked a solutions architect to design a simple, highly available, and loosely coupled order processing application. The application is responsible for receiving and processing orders before storing them in an Amazon DynamoDB table. The application has a sporadic traffic pattern and should be able to scale during marketing campaigns to process the orders with minimal delays.

Which of the following is the MOST reliable approach to meet the requirements?

- A. Receive the orders in an Amazon EC2-hosted database and use EC2 instances to process them.
- B. Receive the orders in an Amazon SQS queue and trigger an AWS Lambda function to process them.
- C. Receive the orders using the AWS Step Functions program and trigger an Amazon ECS container to process them.
- D. Receive the orders in Amazon Kinesis Data Streams and use Amazon EC2 instances to process them.

Answer: B

Explanation:

Q: How does Amazon Kinesis Data Streams differ from Amazon SQS?

Amazon Kinesis Data Streams enables real-time processing of streaming big data. It provides ordering of records, as well as the ability to read and/or replay records in the same order to multiple Amazon Kinesis Applications. The Amazon Kinesis Client Library (KCL) delivers all records for a given partition key to the same record processor, making it easier to build multiple applications reading from the same Amazon Kinesis data stream (for example, to perform counting, aggregation, and filtering).

<https://aws.amazon.com/kinesis/data-streams/faqs/>

<https://aws.amazon.com/blogs/big-data/unite-real-time-and-batch-analytics-using-the-big-data-lambda-architect>

NEW QUESTION 35

- (Exam Topic 1)

A company is running a tone-of-business (LOB) application on AWS to support its users. The application runs in one VPC, with a backup copy in a second VPC in a different AWS Region for disaster recovery. The company has a single AWS Direct Connect connection between its on-premises network and AWS. The connection terminates at a Direct Connect gateway.

All access to the application must originate from the company's on-premises network, and traffic must be encrypted in transit through the use of IPsec. The company is routing traffic through a VPN tunnel over the Direct Connect connection to provide the required encryption.

A business continuity audit determines that the Direct Connect connection represents a potential single point of failure for access to the application. The company needs to remediate this issue as quickly as possible.

Which approach will meet these requirements?

- A. Order a second Direct Connect connection to a different Direct Connect location.
- B. Terminate the second Direct Connect connection at the same Direct Connect gateway.
- C. Configure an AWS Site-to-Site VPN connection over the internet. Terminate the VPN connection at a virtual private gateway in the secondary Region.
- D. Create a transit gateway. Attach the VPCs to the transit gateway, and connect the transit gateway to the Direct Connect gateway. Configure an AWS Site-to-Site VPN connection, and terminate it at the transit gateway.
- E. Create a transit gateway.
- F. Attach the VPCs to the transit gateway, and connect the transit gateway to the Direct Connect gateway.
- G. Order a second Direct Connect connection, and terminate it at the transit gateway.

Answer: C

Explanation:

Create a transit gateway. Attach the VPCs to the transit gateway, and connect the transit gateway to the Direct Connect gateway. Configure an AWS Site-to-Site VPN connection, and terminate it at the transit gateway.

<https://aws.amazon.com/premiumsupport/knowledge-center/dx-configure-dx-and-vpn-failover-tgw/>

All access to the application must originate from the company's on-premises network, and traffic must be encrypted in transit through the use of IPsec. = need to use VPN.

NEW QUESTION 37

- (Exam Topic 1)

A company needs to store and process image data that will be uploaded from mobile devices using a custom mobile app. Usage peaks between 8 AM and 5 PM on weekdays, with thousands of uploads per minute. The app is rarely used at any other time. A user is notified when image processing is complete.

Which combination of actions should a solutions architect take to ensure image processing can scale to handle the load? (Select THREE.)

- A. Upload files from the mobile software directly to Amazon S3. Use S3 event notifications to create a message in an Amazon MQ queue.
- B. Upload files from the mobile software directly to Amazon S3. Use S3 event notifications to create a message in an Amazon Simple Queue Service (Amazon SQS) standard queue.
- C. Invoke an AWS Lambda function to perform image processing when a message is available in the queue.
- D. Invoke an S3 Batch Operations job to perform image processing when a message is available in the queue.
- E. Send a push notification to the mobile app by using Amazon Simple Notification Service (Amazon SNS) when processing is complete.
- F. Send a push notification to the mobile app by using Amazon Simple Email Service (Amazon SES) when processing is complete.

Answer: BCE

Explanation:

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/batch-ops-basics.html>

NEW QUESTION 42

- (Exam Topic 1)

A solutions architect is designing an application to accept timesheet entries from employees on their mobile devices. Timesheets will be submitted weekly, with most of the submissions occurring on Friday. The data must be stored in a format that allows payroll administrators to run monthly reports. The infrastructure must be highly available and scale to match the rate of incoming data and reporting requests.

Which combination of steps meets these requirements while minimizing operational overhead? (Select TWO.)

- A. Deploy the application to Amazon EC2 On-Demand Instances. With load balancing across multiple Availability Zones.
- B. Use scheduled Amazon EC2 Auto Scaling to add capacity before the high volume of submissions on Fridays.
- C. Deploy the application in a container using Amazon Elastic Container Service (Amazon ECS) with load balancing across multiple Availability Zones.
- D. Use scheduled Service Auto Scaling to add capacity before the high volume of submissions on Fridays.
- E. Deploy the application front end to an Amazon S3 bucket served by Amazon CloudFront.
- F. Deploy the application backend using Amazon API Gateway with an AWS Lambda proxy integration.
- G. Store the timesheet submission data in Amazon Redshift.
- H. Use Amazon QuickSight to generate the reports using Amazon Redshift as the data source.
- I. Store the timesheet submission data in Amazon S3. Use Amazon Athena and Amazon QuickSight to generate the reports using Amazon S3 as the data source.

Answer: AE

NEW QUESTION 44

- (Exam Topic 1)

A company is developing and hosting several projects in the AWS Cloud. The projects are developed across multiple AWS accounts under the same organization in AWS Organizations. The company requires the cost for cloud infrastructure to be allocated to the owning project. The team responsible for all of the AWS accounts has discovered that several Amazon EC2 instances are lacking the Project tag used for cost allocation.

Which actions should a solutions architect take to resolve the problem and prevent it from happening in the future? (Select THREE.)

- A. Create an AWS Config rule in each account to find resources with missing tags.
- B. Create an SCP in the organization with a deny action for ec2:RunInstances if the Project tag is missing.
- C. Use Amazon Inspector in the organization to find resources with missing tags.
- D. Create an IAM policy in each account with a deny action for ec2:RunInstances if the Project tag is missing.
- E. Create an AWS Config aggregator for the organization to collect a list of EC2 instances with the missing Project tag.
- F. Use AWS Security Hub to aggregate a list of EC2 instances with the missing Project tag.

Answer: BDE

NEW QUESTION 45

- (Exam Topic 1)

A media company uses Amazon DynamoDB to store metadata for its catalog of movies that are available to stream. Each media item contains user-facing content that concludes a description of the media, a list of search tags, and similar data. In addition, media items include a list of Amazon S3 key names that relate to movie files. The company stores these movie files in a single S3 bucket that has versioning enabled. The company uses Amazon CloudFront to serve these movie files.

The company has 100,000 media items, and each media item can have many different S3 objects that represent different encodings of the same media. S3 objects that belong to the same media item are grouped together under the same key prefix, which is a random unique ID.

Because of an expiring contract with a media provider, the company must remove 2,000 media items. The company must completely delete all DynamoDB keys and movie files on Amazon S3 that are related to these media items within 36 hours. The company must ensure that the content cannot be recovered.

Which combination of actions will meet these requirements? (Select TWO.)

- A. Configure the DynamoDB table with a TTL field.
- B. Create and invoke an AWS Lambda function to perform a conditional update. Set the TTL field to the time of the contract's expiration on every affected media item.
- C. Configure an S3 Lifecycle object expiration rule that is based on the contract's expiration date.
- D. Write a script to perform a conditional delete on all the affected DynamoDB records.
- E. Temporarily suspend versioning on the S3 bucket.
- F. Create and invoke an AWS Lambda function that deletes affected objects. Reactivate versioning when the operation is complete.
- G. Write a script to delete objects from Amazon S3. Specify in each request a NoncurrentVersionExpiration property with a NoncurrentDays attribute set to 0.

Answer: CE

NEW QUESTION 48

- (Exam Topic 1)

To abide by industry regulations, a solutions architect must design a solution that will store a company's critical data in multiple public AWS Regions, including in the United States, where the company's headquarters is located. The solutions architect is required to provide access to the data stored in AWS to the company's global WAN network. The security team mandates that no traffic accessing this data should traverse the public internet.

How should the solutions architect design a highly available solution that meets the requirements and is cost-effective?

- A. Establish AWS Direct Connect connections from the company headquarters to all AWS Regions in use. Use the company WAN to send traffic over to the headquarters and then to the respective DX connection to access the data.
- B. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- C. Use inter-region VPC peering to access the data in other AWS Regions.
- D. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- E. Use an AWS transit VPC solution to access data in other AWS Regions.
- F. Establish two AWS Direct Connect connections from the company headquarters to an AWS Region. Use the company WAN to send traffic over a DX connection.
- G. Use Direct Connect Gateway to access data in other AWS Regions.

Answer: D

Explanation:

This feature also allows you to connect to any of the participating VPCs from any Direct Connect location, further reducing your costs for making using AWS services on a cross-region basis. <https://aws.amazon.com/blogs/aws/new-aws-direct-connect-gateway-inter-region-vpc-access/>
<https://docs.aws.amazon.com/whitepapers/latest/aws-vpc-connectivity-options/aws-direct-connect-aws-transit-g>

NEW QUESTION 49

- (Exam Topic 1)

A company has an application that generates reports and stores them in an Amazon S3 bucket. When a user accesses their report, the application generates a signed URL to allow the user to download the report. The company's security team has discovered that the files are public and that anyone can download them without authentication. The company has suspended the generation of new reports until the problem is resolved.

Which set of actions will immediately remediate the security issue without impacting the application's normal workflow?

- A. Create an AWS Lambda function that applies a deny all policy for users who are not authenticated. Create a scheduled event to invoke the Lambda function.
- B. Review the AWS Trusted Advisor bucket permissions check and implement the recommended actions.
- C. Run a script that puts a private ACL on all of the objects in the bucket.
- D. Use the Block Public Access feature in Amazon S3 to set the IgnorePublicAcls option to TRUE on the bucket.

Answer: D

Explanation:

The S3 bucket is allowing public access and this must be immediately disabled. Setting the IgnorePublicAcls option to TRUE causes Amazon S3 to ignore all public ACLs on a bucket and any objects that it contains. The other settings you can configure with the Block Public Access Feature are:
o BlockPublicAcls – PUT bucket ACL and PUT objects requests are blocked if granting public access.
o BlockPublicPolicy – Rejects requests to PUT a bucket policy if granting public access.

o RestrictPublicBuckets – Restricts access to principles in the bucket owners' AWS account. <https://aws.amazon.com/s3/features/block-public-access/>

NEW QUESTION 54

- (Exam Topic 1)

A large company in Europe plans to migrate its applications to the AWS Cloud. The company uses multiple AWS accounts for various business groups. A data privacy law requires the company to restrict developers' access to AWS European Regions only.

What should the solutions architect do to meet this requirement with the LEAST amount of management overhead?

- A. Create IAM users and IAM groups in each account
- B. Create IAM policies to limit access to non-European Regions Attach the IAM policies to the IAM groups
- C. Enable AWS Organizations, attach the AWS accounts, and create OUs for European Regions and non-European Region
- D. Create SCPs to limit access to non-European Regions and attach the policies to the OUs.
- E. Set up AWS Single Sign-On and attach AWS account
- F. Create permission sets with policies to restrict access to non-European Regions Create IAM users and IAM groups in each account.
- G. Enable AWS Organizations, attach the AWS accounts, and create OUs for European Regions and non-European Region
- H. Create permission sets with policies to restrict access to non-European Region
- I. Create IAM users and IAM groups in the primary account.

Answer: B

Explanation:

"This policy uses the Deny effect to deny access to all requests for operations that don't target one of the two approved regions (eu-central-1 and eu-west-1)."

https://docs.aws.amazon.com/organizations/latest/userguide/orgs_manage_policies_scps_examples_general.htm

https://docs.aws.amazon.com/IAM/latest/UserGuide/reference_policies_elements_condition.html

NEW QUESTION 55

- (Exam Topic 1)

A solutions architect is evaluating the reliability of a recently migrated application running on AWS. The front end is hosted on Amazon S3 and accelerated by Amazon CloudFront. The application layer is running in a stateless Docker container on an Amazon EC2 On-Demand Instance with an Elastic IP address. The storage layer is a MongoDB database running on an EC2 Reserved Instance in the same Availability Zone as the application layer.

Which combination of steps should the solutions architect take to eliminate single points of failure with minimal application code changes? (Select TWO.)

- A. Create a REST API in Amazon API Gateway and use AWS Lambda functions as the application layer.
- B. Create an Application Load Balancer and migrate the Docker container to AWS Fargate.
- C. Migrate the storage layer to Amazon DynamoDB.
- D. Migrate the storage layer to Amazon DocumentDB (with MongoDB compatibility).
- E. Create an Application Load Balancer and move the storage layer to an EC2 Auto Scaling group.

Answer: BD

Explanation:

https://aws.amazon.com/documentdb/?nc1=h_ls

<https://aws.amazon.com/blogs/containers/using-alb-ingress-controller-with-amazon-eks-on-fargate/>

NEW QUESTION 60

- (Exam Topic 1)

A company provides a centralized Amazon EC2 application hosted in a single shared VPC. The centralized application must be accessible from client applications running in the VPCs of other business units. The centralized application front end is configured with a Network Load Balancer (NLB) for scalability.

Up to 10 business unit VPCs will need to be connected to the shared VPC. Some of the business unit VPC CIDR blocks overlap with the shared VPC, and some overlap with each other. Network connectivity to the centralized application in the shared VPC should be allowed from authorized business unit VPCs only.

Which network configuration should a solutions architect use to provide connectivity from the client applications in the business unit VPCs to the centralized application in the shared VPC?

- A. Create an AWS Transit Gateway
- B. Attach the shared VPC and the authorized business unit VPCs to the transit gateway
- C. Create a single transit gateway route table and associate it with all of the attached VPC
- D. Allow automatic propagation of routes from the attachments into the route table
- E. Configure VPC routing tables to send traffic to the transit gateway.
- F. Create a VPC endpoint service using the centralized application NLB and enable (the option to require endpoint acceptance)
- G. Create a VPC endpoint in each of the business unit VPCs using the service name of the endpoint service
- H. Accept authorized endpoint requests from the endpoint service console.
- I. Create a VPC peering connection from each business unit VPC to the shared VPC
- J. Accept the VPC peering connections from the shared VPC console
- K. Configure VPC routing tables to send traffic to the VPC peering connection.
- L. Configure a virtual private gateway for the shared VPC and create customer gateways for each of the authorized business unit VPC
- M. Establish a Site-to-Site VPN connection from the business unit VPCs to the shared VPC
- N. Configure VPC routing tables to send traffic to the VPN connection.

Answer: B

Explanation:

Amazon Transit Gateway doesn't support routing between Amazon VPCs with overlapping CIDRs. If you attach a new Amazon VPC that has a CIDR which overlaps with an already attached Amazon VPC, Amazon Transit Gateway will not propagate the new Amazon VPC route into the Amazon Transit Gateway route table.

<https://docs.aws.amazon.com/elasticloadbalancing/latest/network/load-balancer-target-groups.html#client-ip-pre>

NEW QUESTION 65

- (Exam Topic 1)

A company needs to create and manage multiple AWS accounts for a number of departments from a central location. The security team requires read-only access to all accounts from its own AWS account. The company is using AWS Organizations and created an account for the security team. How should a solutions architect meet these requirements?

- A. Use the OrganizationAccountAccessRole IAM role to create a new IAM policy with read-only access in each member account
- B. Establish a trust relationship between the IAM policy in each member account and the security account
- C. Ask the security team to use the IAM policy to gain access.
- D. Use the OrganizationAccountAccessRole IAM role to create a new IAM role with read-only access in each member account
- E. Establish a trust relationship between the IAM role in each member account and the security account
- F. Ask the security team to use the IAM role to gain access.
- G. Ask the security team to use AWS Security Token Service (AWS STS) to call the AssumeRole API for the OrganizationAccountAccessRole IAM role in the master account from the security account
- H. Use the generated temporary credentials to gain access.
- I. Ask the security team to use AWS Security Token Service (AWS STS) to call the AssumeRole API for the OrganizationAccountAccessRole IAM role in the member account from the security account
- J. Use the generated temporary credentials to gain access.

Answer: D

NEW QUESTION 69

- (Exam Topic 1)

A financial company is building a system to generate monthly, immutable bank account statements for its users. Statements are stored in Amazon S3. Users should have immediate access to their monthly statements for up to 2 years. Some users access their statements frequently, whereas others rarely access their statements. The company's security and compliance policy requires that the statements be retained for at least 7 years. What is the MOST cost-effective solution to meet the company's needs?

- A. Create an S3 bucket with Object Lock disabled
- B. Store statements in S3 Standard
- C. Define an S3 Lifecycle policy to transition the data to S3 Standard-Infrequent Access (S3 Standard-IA) after 30 days
- D. Define another S3 Lifecycle policy to move the data to S3 Glacier Deep Archive after 2 years
- E. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- F. Create an S3 bucket with versioning enabled
- G. Store statements in S3 Intelligent-Tiering
- H. Use same-Region replication to replicate objects to a backup S3 bucket
- I. Define an S3 Lifecycle policy for the backup S3 bucket to move the data to S3 Glacier
- J. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- K. Create an S3 bucket with Object Lock enabled
- L. Store statements in S3 Intelligent-Tiering
- M. Enable compliance mode with a default retention period of 2 years
- N. Define an S3 Lifecycle policy to move the data to S3 Glacier after 2 years
- O. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.
- P. Create an S3 bucket with versioning disabled
- Q. Store statements in S3 One Zone-Infrequent Access (S3 One Zone-IA). Define an S3 Lifecycle policy to move the data to S3 Glacier Deep Archive after 2 years
- R. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.

Answer: C

Explanation:

<https://aws.amazon.com/about-aws/whats-new/2018/11/s3-object-lock/>

Create an S3 bucket with Object Lock enabled. Store statements in S3 Intelligent-Tiering. Enable compliance mode with a default retention period of 2 years. Define an S3 Lifecycle policy to move the data to S3 Glacier after 2 years. Attach an S3 Glacier Vault Lock policy with deny delete permissions for archives less than 7 years old.

<https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lock-overview.html>

NEW QUESTION 71

- (Exam Topic 1)

A company is migrating an application to AWS. It wants to use fully managed services as much as possible during the migration. The company needs to store large, important documents within the application with the following requirements:

- * 1. The data must be highly durable and available.
- * 2. The data must always be encrypted at rest and in transit.
- * 3. The encryption key must be managed by the company and rotated periodically.

Which of the following solutions should the solutions architect recommend?

- A. Deploy the storage gateway to AWS in file gateway mode
- B. Use Amazon EBS volume encryption using an AWS KMS key to encrypt the storage gateway volumes.
- C. Use Amazon S3 with a bucket policy to enforce HTTPS for connections to the bucket and to enforce server-side encryption and AWS KMS for object encryption.
- D. Use Amazon DynamoDB with SSL to connect to DynamoDB
- E. Use an AWS KMS key to encrypt DynamoDB objects at rest.
- F. Deploy instances with Amazon EBS volumes attached to store this data
- G. Use EBS volume encryption using an AWS KMS key to encrypt the data.

Answer: B

Explanation:

Use Amazon S3 with a bucket policy to enforce HTTPS for connections to the bucket and to enforce server-side encryption and AWS KMS for object encryption.

NEW QUESTION 72

- (Exam Topic 1)

A company has a project that is launching Amazon EC2 instances that are larger than required. The project's account cannot be part of the company's

organization in AWS Organizations due to policy restrictions to keep this activity outside of corporate IT. The company wants to allow only the launch of t3.small EC2 instances by developers in the project's account. These EC2 instances must be restricted to the us-east-2 Region. What should a solutions architect do to meet these requirements?

- A. Create a new developer account
- B. Move all EC2 instances, users, and assets into us-east-2. Add the account to the company's organization in AWS Organization
- C. Enforce a tagging policy that denotes Region affinity.
- D. Create an SCP that denies the launch of all EC2 instances except I3.small EC2 instances in us-east-2. Attach the SCP to the project's account.
- E. Create and purchase a t3.small EC2 Reserved Instance for each developer in us-east-2. Assign each developer a specific EC2 instance with their name as the tag.
- F. Create an IAM policy than allows the launch of only t3.small EC2 instances in us-east-2. Attach the policy to the roles and groups that the developers use in the project's account.

Answer: D

NEW QUESTION 77

- (Exam Topic 1)

A solution architect needs to deploy an application on a fleet of Amazon EC2 instances. The EC2 instances run in private subnets in An Auto Scaling group. The application is expected to generate logs at a rate of 100 MB each second on each of the EC2 instances.

The logs must be stored in an Amazon S3 bucket so that an Amazon EMR cluster can consume them for further processing The logs must be quickly accessible for the first 90 days and should be retrievable within 48 hours thereafter.

What is the MOST cost-effective solution that meets these requirements?

- A. Set up an S3 copy job to write logs from each EC2 instance to the S3 bucket with S3 Standard storage Use a NAT instance within the private subnets to connect to Amazon S3. Create S3 Lifecycle policies to move logs that are older than 90 days to S3 Glacier.
- B. Set up an S3 sync job to copy logs from each EC2 instance to the S3 bucket with S3 Standard storage Use a gateway VPC endpoint for Amazon S3 to connect to Amazon S3. Create S3 Lifecycle policies to move logs that are older than 90 days to S3 Glacier Deep Archive
- C. Set up an S3 batch operation to copy logs from each EC2 instance to the S3 bucket with S3 Standardstorage Use a NAT gateway with the private subnets to connect to Amazon S3 Create S3 Lifecycle policies to move logs that are older than 90 days to S3 Glacier Deep Archive
- D. Set up an S3 sync job to copy logs from each EC2 instance to the S3 bucket with S3 Standard storage Use a gateway VPC endpoint for Amazon S3 to connect to Amazon S3. Create S3 Lifecycle policies to move logs that are older than 90 days to S3 Glacier

Answer: C

NEW QUESTION 81

- (Exam Topic 1)

A company wants to migrate an application to Amazon EC2 from VMware Infrastructure that runs in an on-premises data center. A solutions architect must preserve the software and configuration settings during the migration.

What should the solutions architect do to meet these requirements?

- A. Configure the AWS DataSync agent to start replicating the data store to Amazon FSx for Windows File Server Use the SMB share to host the VMware data stor
- B. Use VM Import/Export to move the VMs to Amazon EC2.
- C. Use the VMware vSphere client to export the application as an image in Open Virealization Format (OVF) format Create an Amazon S3 bucket to store the image in the destination AWS Regio
- D. Create and apply an IAM role for VM Import Use the AWS CLI to run the EC2 import command.
- E. Configure AWS Storage Gateway for files service to export a Common Internet File System (CIFSJ shar
- F. Create a backup copy to the shared folde
- G. Sign in to the AWS Management Console and create an AMI from the backup copy Launch an EC2 instance that is based on the AMI.
- H. Create a managed-instance activation for a hybrid environment in AWS Systems Manage
- I. Download and install Systems Manager Agent on the on-premises VM Register the VM with Systems Manager to be a managed instance Use AWS Backup to create a snapshot of the VM and create an AM
- J. Launch an EC2 instance that is based on the AMI

Answer: B

Explanation:

<https://docs.aws.amazon.com/vm-import/latest/userguide/vmimport-image-import.html>

- Export an OVF Template
- Create / use an Amazon S3 bucket for storing the exported images. The bucket must be in the Region where you want to import your VMs.
- Create an IAM role named vmimport.
- You'll use AWS CLI to run the import commands. <https://aws.amazon.com/premiumsupport/knowledge-center/import-instances/>

NEW QUESTION 86

- (Exam Topic 1)

A company's AWS architecture currently uses access keys and secret access keys stored on each instance to access AWS services. Database credentials are hard-coded on each instance. SSH keys for command-line remote access are stored in a secured Amazon S3 bucket. The company has asked its solutions architect to improve the security posture of the architecture without adding operational complexity.

Which combination of steps should the solutions architect take to accomplish this? (Select THREE.)

- A. Use Amazon EC2 instance profiles with an IAM role.
- B. Use AWS Secrets Manager to store access keys and secret access keys.
- C. Use AWS Systems Manager Parameter Store to store database credentials.
- D. Use a secure fleet of Amazon EC2 bastion hosts (or remote access.
- E. Use AWS KMS to store database credentials.
- F. Use AWS Systems Manager Session Manager tor remote access

Answer: ACF

Explanation:

<https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager.html>

NEW QUESTION 89

- (Exam Topic 1)

A company has an internal application running on AWS that is used to track and process shipments in the company's warehouse. Currently, after the system receives an order, it emails the staff the information needed to ship a package. Once the package is shipped, the staff replies to the email and the order is marked as shipped.

The company wants to stop using email in the application and move to a serverless application model. Which architecture solution meets these requirements?

- A. Use AWS Batch to configure the different tasks required to ship a package
- B. Have AWS Batch trigger an AWS Lambda function that creates and prints a shipping label
- C. Once that label is scanned
- D. as it leaves the warehouse, have another Lambda function move the process to the next step in the AWS Batch job.
- E. When a new order is created, store the order information in Amazon SQS
- F. Have AWS Lambda check the queue every 5 minutes and process any needed work
- G. When an order needs to be shipped, have Lambda print the label in the warehouse
- H. Once the label has been scanned, as it leaves the warehouse, have an Amazon EC2 instance update Amazon S3.
- I. Update the application to store new order information in Amazon DynamoDB
- J. When a new order is created, trigger an AWS Step Functions workflow, mark the orders as "in progress," and print a package label to the warehouse
- K. Once the label has been scanned and fulfilled, the application will trigger an AWS Lambda function that will mark the order as shipped and complete the workflow.
- L. Store new order information in Amazon EFS
- M. Have instances pull the new information from the NFS and send that information to printers in the warehouse
- N. Once the label has been scanned, as it leaves the warehouse, have Amazon API Gateway call the instances to remove the order information from Amazon EFS.

Answer: C

NEW QUESTION 94

- (Exam Topic 1)

A company runs an application on AWS. An AWS Lambda function uses credentials to authenticate to an Amazon RDS for MySQL DB instance. A security risk assessment identified that these credentials are not frequently rotated. Also, encryption at rest is not enabled for the DB instance. The security team requires that both of these issues be resolved.

Which strategy should a solutions architect recommend to remediate these security risks?

- A. Configure the Lambda function to store and retrieve the database credentials in AWS Secrets Manager and enable rotation of the credential
- B. Take a snapshot of the DB instance and encrypt a copy of that snapshot
- C. Replace the DB instance with a new DB instance that is based on the encrypted snapshot.
- D. Enable IAM DB authentication on the DB instance
- E. Grant the Lambda execution role access to the DB instance
- F. Modify the DB instance and enable encryption.
- G. Enable IAM DB authentication on the DB instance
- H. Grant the Lambda execution role access to the DB instance
- I. Create an encrypted read replica of the DB instance
- J. Promote the encrypted read replica to be the new primary node.
- K. Configure the Lambda function to store and retrieve the database credentials as encrypted AWS Systems Manager Parameter Store parameter
- L. Create another Lambda function to automatically rotate the credential
- M. Create an encrypted read replica of the DB instance
- N. Promote the encrypted read replica to be the new primary node.

Answer: A

Explanation:

Parameter store can store DB credentials as secure string but CANNOT rotate secrets, hence, go with A + Cannot enable encryption on existing MySQL RDS instance, must create a new encrypted one from unencrypted snapshot.

<https://aws.amazon.com/blogs/security/rotate-amazon-rds-database-credentials-automatically-with-aws-secrets/> Encrypting a unencrypted instance of DB or creating an encrypted replica of an unencrypted DB instance are not possible. Hence A is the only solution possible.

<https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Overview.Encryption.html#Overview.Encryption>.

NEW QUESTION 97

- (Exam Topic 1)

A company is running an application on Amazon EC2 instances in three environments; development, testing, and production. The company uses AMIs to deploy the EC2 instances. The company builds the AMIs by using custom deployment scripts and infrastructure orchestration tools for each release in each environment.

The company is receiving errors in its deployment process. Errors appear during operating system package downloads and during application code installation from a third-party Git hosting service. The company needs deployments to become more reliable across all environments.

Which combination of steps will meet these requirements? (Select THREE).

- A. Mirror the application code to an AWS CodeCommit Git repository
- B. Use the repository to build EC2 AMIs.
- C. Produce multiple EC2 AMIs
- D. one for each environment, for each release.
- E. Produce one EC2 AMI for each release for use across all environments.
- F. Mirror the application code to a third-party Git repository that uses Amazon S3 storage
- G. Use the repository for deployment.
- H. Replace the custom scripts and tools with AWS CodeBuild
- I. Update the infrastructure deployment process to use EC2 Image Builder.

Answer: ACE

NEW QUESTION 102

- (Exam Topic 1)

A finance company hosts a data lake in Amazon S3. The company receives financial data records over SFTP each night from several third parties. The company runs its own SFTP server on an Amazon EC2 instance in a public subnet of a VPC. After the files are uploaded, they are moved to the data lake by a cron job that runs on the same instance. The SFTP server is reachable on DNS `sftp.examWe.com` through the use of Amazon Route 53. What should a solutions architect do to improve the reliability and scalability of the SFTP solution?

- A. Move the EC2 instance into an Auto Scaling group
- B. Place the EC2 instance behind an Application Load Balancer (ALB). Update the DNS record `sftp.example.com` in Route 53 to point to the ALB.
- C. Migrate the SFTP server to AWS Transfer for SFTP
- D. Update the DNS record `sftp.example.com` in Route 53 to point to the server endpoint hostname.
- E. Migrate the SFTP server to a file gateway in AWS Storage Gateway
- F. Update the DNS record `sftp.example.com` in Route 53 to point to the file gateway endpoint.
- G. Place the EC2 instance behind a Network Load Balancer (NLB). Update the DNS record `sftp.example.com` in Route 53 to point to the NLB.

Answer: B

NEW QUESTION 106

- (Exam Topic 1)

An ecommerce website running on AWS uses an Amazon RDS for MySQL DB instance with General Purpose SSD storage. The developers chose an appropriate instance type based on demand, and configured 100 GB of storage with a sufficient amount of free space.

The website was running smoothly for a few weeks until a marketing campaign launched. On the second day of the campaign, users reported long wait times and time outs. Amazon CloudWatch metrics indicated that both reads and writes to the DB instance were experiencing long response times. The CloudWatch metrics show 40% to 50% CPU and memory utilization, and sufficient free storage space is still available. The application server logs show no evidence of database connectivity issues.

What could be the root cause of the issue with the marketing campaign?

- A. It exhausted the I/O credit balance due to provisioning low disk storage during the setup phase.
- B. It caused the data in the tables to change frequently, requiring indexes to be rebuilt to optimize queries.
- C. It exhausted the maximum number of allowed connections to the database instance.
- D. It exhausted the network bandwidth available to the RDS for MySQL DB instance.

Answer: A

Explanation:

"When using General Purpose SSD storage, your DB instance receives an initial I/O credit balance of 5.4 million I/O credits. This initial credit balance is enough to sustain a burst performance of 3,000 IOPS for 30 minutes."

<https://aws.amazon.com/blogs/database/how-to-use-cloudwatch-metrics-to-decide-between-general-purpose-or>

NEW QUESTION 110

- (Exam Topic 1)

A company is hosting a single-page web application in the AWS Cloud. The company is using Amazon CloudFront to reach its goal audience. The CloudFront distribution has an Amazon S3 bucket that is configured as its origin. The static files for the web application are stored in this S3 bucket.

The company has used a simple routing policy to configure an Amazon Route 53 A record. The record points to the CloudFront distribution. The company wants to use a canary deployment release strategy for new versions of the application.

What should a solutions architect recommend to meet these requirements?

- A. Create a second CloudFront distribution for the new version of the application
- B. Update the Route 53 record to use a weighted routing policy.
- C. Create a Lambda@Edge function
- D. Configure the function to implement a weighting algorithm and rewrite the URL to direct users to a new version of the application.
- E. Create a second S3 bucket and a second CloudFront origin for the new S3 bucket. Create a CloudFront origin group that contains both origins. Configure origin weighting for the origin group.
- F. Create two Lambda@Edge functions
- G. Use each function to serve one of the application versions. Set up a CloudFront weighted Lambda@Edge invocation policy.

Answer: A

NEW QUESTION 115

- (Exam Topic 2)

A company's solution architect is designing a disaster recovery (DR) solution for an application that runs on AWS. The application uses PostgreSQL 11.7 as its database. The company has an RPO of 30 seconds. The solution architect must design a DR solution with the primary database in the us-east-1 Region and the database in the us-west-2 Region.

What should the solution architect do to meet these requirements with minimum application change?

- A. Migrate the database to Amazon RDS for PostgreSQL in us-east-1. Set up a read replica in us-west-2. Set the managed RPO for the RDS database to 30 seconds.
- B. Migrate the database to Amazon RDS for PostgreSQL in us-east-1. Set up a standby replica in an Availability Zone in us-west-2. Set the managed RPO for the RDS database to 30 seconds.
- C. Migrate the database to an Amazon Aurora PostgreSQL global database with the primary Region as us-east-1 and the secondary Region as us-west-2. Set the managed RPO for the Aurora database to 30 seconds.
- D. Migrate the database to Amazon DynamoDB in us-east-1. Set up global tables with replica tables that are created in us-west-2.

Answer: A

NEW QUESTION 118

- (Exam Topic 2)

A company wants to migrate its website from an on-premises data center onto AWS. At the same time, it wants to migrate the website to a containerized microservice-based architecture to improve the availability and cost efficiency. The company's security policy states that privileges and network permissions must be configured according to best practice, using least privilege.

A solutions architect must create a containerized architecture that meets the security requirements and has deployed the application to an Amazon ECS cluster.

What steps are required after the deployment to meet the requirements'? (Select TWO.)

- A. Create tasks using the bridge network mode
- B. Create tasks using the awsvpc network mode
- C. Apply security groups to Amazon EC2 instances and use IAM roles for EC2 instances to access other resources
- D. Apply security groups to the tasks, and pass IAM credentials into the container at launch time to access other resources
- E. Apply security groups to the tasks; and use IAM roles for tasks to access other resources

Answer: BE

NEW QUESTION 122

- (Exam Topic 2)

A company has a new security policy. The policy requires the company to log any event that retrieves data from Amazon S3 buckets. The company must save these audit logs in a dedicated S3 bucket. The company created the audit logs S3 bucket in an AWS account that is designated for centralized logging. The S3 bucket has a bucket policy that allows write-only cross-account access. A solutions architect must ensure that all S3 object-level access is being logged for current S3 buckets and future S3 buckets. Which solution will meet these requirements?

- A. Enable server access logging for all current S3 bucket
- B. Use the audit logs S3 bucket as a destination for audit logs
- C. Enable replication between all current S3 buckets and the audit logs S3 bucket. Enable S3 Versioning in the audit logs S3 bucket
- D. Configure S3 Event Notifications for all current S3 buckets to invoke an AWS Lambda function every time objects are accessed. Store Lambda logs in the audit logs S3 bucket.
- E. Enable AWS CloudTrail
- F. and use the audit logs S3 bucket to store logs. Enable data event logging for S3 event sources, current S3 buckets, and future S3 buckets.

Answer: D

NEW QUESTION 126

- (Exam Topic 2)

A development team is deploying new APIs as serverless applications within a company. The team is currently using the AWS Management Console to provision Amazon API Gateway, AWS Lambda, and Amazon DynamoDB resources. A solutions architect has been tasked with automating the future deployments of these serverless APIs.

How can this be accomplished?

- A. Use AWS CloudFormation with a Lambda-backed custom resource to provision API Gateway. Use the `MfS::DynamoDB::Table` and `AWS::Lambda::Function` resources to create the Amazon DynamoDB table and Lambda functions. Write a script to automate the deployment of the CloudFormation template.
- B. Use the AWS Serverless Application Model to define the resources. Upload a YAML template and application files to the code repository. Use AWS CodePipeline to connect to the code repository and to create an action to build using AWS CodeBuild.
- C. Use the AWS CloudFormation deployment provider in CodePipeline to deploy the solution.
- D. Use AWS CloudFormation to define the serverless application.
- E. Implement versioning on the Lambda functions and create aliases to point to the version.
- F. When deploying, configure weights to implement shifting traffic to the newest version, and gradually update the weights as traffic moves over.
- G. Commit the application code to the AWS CodeCommit code repository.
- H. Use AWS CodePipeline and connect to the CodeCommit code repository. Use AWS CodeBuild to build and deploy the Lambda functions using AWS CodeDeploy. Specify the deployment preference type in CodeDeploy to gradually shift traffic over to the new version.

Answer: B

NEW QUESTION 130

- (Exam Topic 2)

A company is planning to migrate an application from on-premises to the AWS Cloud. The company will begin the migration by moving the application's underlying data storage to AWS. The application data is stored on a shared file system on-premises, and the application servers connect to the shared file system through SMB.

A solutions architect must implement a solution that uses an Amazon S3 bucket for shared storage. Until the application is fully migrated and code is rewritten to use native Amazon S3 APIs, the application must continue to have access to the data through SMB. The solutions architect must migrate the application data to AWS to its new location while still allowing the on-premises application to access the data.

Which solution will meet these requirements?

- A. Create a new Amazon FSx for Windows File System. Configure AWS DataSync with one location for the on-premises file share and one location for the new Amazon FSx file system. Create a new DataSync task to copy the data from the on-premises file share location to the Amazon FSx file system.
- B. Create an S3 bucket for the application.
- C. Copy the data from the on-premises storage to the S3 bucket.
- D. Deploy an AWS Server Migration Service (AWS SMS) VM to the on-premises environment.
- E. Use AWS SMS to migrate the file storage server from on-premises to an Amazon EC2 instance.
- F. Create an S3 bucket for the application.
- G. Deploy a new AWS Storage Gateway. Mount the gateway on on-premises V.
- H. Create a new file share that stores data in the S3 bucket and is associated with the file gateway.
- I. Copy the data from the on-premises storage to the new file gateway endpoint.

Answer: A

NEW QUESTION 135

- (Exam Topic 2)

A company has an organization in AWS Organizations that has a large number of AWS accounts. One of the AWS accounts is designated as a transit account and has a transit gateway that is shared with all of the other AWS accounts. AWS Site-to-Site VPN connections are configured between all of the company's global offices and the transit account. The company has AWS Config enabled on all of its accounts.

The company's networking team needs to centrally manage a list of internal IP address ranges that belong to the global offices. Developers will reference this list to gain access to applications securely.

Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Create a JSON file that is hosted in Amazon S3 and that lists all of the internal IP address ranges. Configure an Amazon Simple Notification Service (Amazon SNS) topic in each of the accounts that can be involved when the JSON file is updated.
- B. Subscribe an AWS Lambda function to the SNS topic to update all relevant security group rules with the updated IP address ranges.
- C. Create a new AWS Config managed rule that contains all of the internal IP address ranges. Use the rule to check the security groups in each of the accounts to ensure compliance with the list of IP address ranges.
- D. Configure the rule to automatically remediate any noncompliant security group that is detected.
- E. In the transit account, create a VPC prefix list with all of the internal IP address range.
- F. Use AWS Resource Access Manager to share the prefix list with all of the other accounts.
- G. Use the shared prefix list to configure security group rules in the other accounts.
- H. In the transit account, create a security group with all of the internal IP address range.
- I. Configure the security groups in the other accounts to reference the transit account's security group by using a nested security group reference of `*<transit-account-id>./sg-1a2b3c4d`.

Answer: C

NEW QUESTION 139

- (Exam Topic 2)

A company has a web application that allows users to upload short videos. The videos are stored on Amazon EBS volumes and analyzed by custom recognition software for categorization.

The website contains static content that has variable traffic with peaks in certain months. The architecture consists of Amazon EC2 instances running in an Auto Scaling group for the web application and EC2 instances running in an Auto Scaling group to process an Amazon SQS queue. The company wants to re-architect the application to reduce operational overhead using AWS managed services where possible and remove dependencies on third-party software. Which solution meets these requirements?

- A. Use Amazon ECS containers for the web application and Spot Instances for the Auto Scaling group that processes the SQS queue.
- B. Replace the custom software with Amazon Rekognition to categorize the videos.
- C. Store the uploaded videos in Amazon EFS and mount the file system to the EC2 instances for the web application.
- D. Process the SQS queue with an AWS Lambda function that calls the Amazon Rekognition API to categorize the videos.
- E. Host the web application in Amazon S3. Store the uploaded videos in Amazon S3. Use S3 event notifications to publish events to the SQS queue. Process the SQS queue with an AWS Lambda function that calls the Amazon Rekognition API to categorize the videos.
- F. Use AWS Elastic Beanstalk to launch EC2 instances in an Auto Scaling group for the web application and launch a worker environment to process the SQS queue. Replace the custom software with Amazon Rekognition to categorize the videos.

Answer: D

NEW QUESTION 144

- (Exam Topic 2)

A retail company is running an application that stores invoice files in an Amazon S3 bucket and metadata about the files in an Amazon DynamoDB table. The application software runs in both us-east-1 and eu-west-1. The S3 bucket and DynamoDB table are in us-east-1. The company wants to protect itself from data corruption and loss of connectivity to either Region. Which option meets these requirements?

- A. Create a DynamoDB global table to replicate data between us-east-1 and eu-west-1. Enable continuous backup on the DynamoDB table in us-east-1. Enable versioning on the S3 bucket.
- B. Create an AWS Lambda function triggered by Amazon CloudWatch Events to make regular backups of the DynamoDB table. Set up S3 cross-region replication from us-east-1 to eu-west-1. Set up MFA delete on the S3 bucket in us-east-1.
- C. Create a DynamoDB global table to replicate data between us-east-1 and eu-west-1. Enable versioning on the S3 bucket. Implement strict ACLs on the S3 bucket.
- D. Create a DynamoDB global table to replicate data between us-east-1 and eu-west-1. Enable continuous backup on the DynamoDB table in us-east-1. Set up S3 cross-region replication from us-east-1 to eu-west-1.

Answer: B

NEW QUESTION 147

- (Exam Topic 2)

A Solutions Architect is constructing a containerized .NET Core application for AWS Fargate. The application's backend needs a high-availability version of Microsoft SQL Server. All application levels must be extremely accessible. The credentials associated with the SQL Server connection string should not be saved to disk inside the .NET Core front-end containers.

Which tactics should the Solutions Architect use to achieve these objectives?

- A. Set up SQL Server to run in Fargate with Service Auto Scaling.
- B. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to SQL Server running in Fargate.
- C. Specify the ARN of the secret in AWS Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string.
- D. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- E. Create a Multi-AZ deployment of SQL Server on Amazon RDS.
- F. Create a secret in AWS Secrets Manager for the credentials to the RDS database.
- G. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to the RDS database in Secrets Manager.
- H. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string.
- I. Set up the .NET Core service in Fargate using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- J. Create an Auto Scaling group to run SQL Server on Amazon EC2. Create a secret in AWS Secrets Manager for the credentials to SQL Server running on EC2. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to SQL Server on EC2. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be injected into the containers as environment variables on startup for reading into the application to construct the connection string.
- K. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.
- L. Create a Multi-AZ deployment of SQL Server on Amazon RDS.
- M. Create a secret in AWS Secrets Manager for the credentials to the RDS database.
- N. Create non-persistent empty storage for the .NET Core containers in the Fargate task definition to store the sensitive information.

- O. Create an Amazon ECS task execution role that allows the Fargate task definition to get the secret value for the credentials to the RDS database in Secrets Manager
- P. Specify the ARN of the secret in Secrets Manager in the secrets section of the Fargate task definition so the sensitive data can be written to the non-persistent empty storage on startup for reading into the application to construct the connection string
- Q. Set up the .NET Core service using Service Auto Scaling behind an Application Load Balancer in multiple Availability Zones.

Answer: B

Explanation:

Secrets Manager natively supports SQL Server on RDS. No real need to create additional 'ephemeral storage' to fetch credentials, as these can be injected to containers as environment variables. <https://aws.amazon.com/premiumsupport/knowledge-center/ecs-data-security-container-task/>

NEW QUESTION 148

- (Exam Topic 2)

A solutions architect has been assigned to migrate a 50 TB Oracle data warehouse that contains sales data from on-premises to Amazon Redshift. Major updates to the sales data occur on the final calendar day of the month. For the remainder of the month, the data warehouse only receives minor daily updates and is primarily used for reading and reporting. Because of this, the migration process must start on the first day of the month and must be complete before the next set of updates occur. This provides approximately 30 days to complete the migration and ensure that the minor daily changes have been synchronized with the Amazon Redshift data warehouse. Because the migration cannot impact normal business network operations, the bandwidth allocated to the migration for moving data over the internet is 50 Mbps. The company wants to keep data migration costs low.

Which steps will allow the solutions architect to perform the migration within the specified timeline?

- A. Install Oracle database software on an Amazon EC2 instance. Configure VPN connectivity between AWS and the company's data center. Configure the Oracle database running on Amazon EC2 to join the Oracle Real Application Clusters (RAC). When the Oracle database on Amazon EC2 finishes synchronizing, create an AWS DMS ongoing replication task to migrate the data from the Oracle database on Amazon EC2 to Amazon Redshift. Verify the data migration is complete and perform the cut over to Amazon Redshift.
- B. Create an AWS Snowball import job. Export a backup of the Oracle data warehouse. Copy the exported data to the Snowball device. Return the Snowball device to AWS. Create an Amazon RDS for Oracle database and restore the backup file to that RDS instance. Create an AWS DMS task to migrate the data from the RDS for Oracle database to Amazon Redshift. Copy daily incremental backups from Oracle in the data center to the RDS for Oracle database over the internet. Verify the data migration is complete and perform the cut over to Amazon Redshift.
- C. Install Oracle database software on an Amazon EC2 instance. To minimize the migration time, configure VPN connectivity between AWS and the company's data center by provisioning a 1 Gbps AWS Direct Connect connection. Configure the Oracle database running on Amazon EC2 to be a read replica of the data center Oracle database. Start the synchronization process between the company's on-premises data center and the Oracle database on Amazon EC2. When the Oracle database on Amazon EC2 is synchronized with the on-premises database, create an AWS DMS ongoing replication task from the Oracle database read replica that is running on Amazon EC2 to Amazon Redshift. Verify the data migration is complete and perform the cut over to Amazon Redshift.
- D. Create an AWS Snowball import job.
- E. Configure a server in the company's data center with an extraction agent.
- F. Use AWS SCT to manage the extraction agent and convert the Oracle schema to an Amazon Redshift schema.
- G. Create a new project in AWS SCT using the registered data extraction agent.
- H. Create a local task and an AWS DMS task in AWS SCT with replication of ongoing changes.
- I. Copy data to the Snowball device and return the Snowball device to AWS.
- J. Allow AWS DMS to copy data from Amazon S3 to Amazon Redshift.
- K. Verify that the data migration is complete and perform the cut over to Amazon Redshift.

Answer: D

Explanation:

Create an AWS Snowball import job. Configure a server in the company's data center with an extraction agent. Use AWS SCT to manage the extraction agent and convert the Oracle schema to an Amazon Redshift schema. Create a new project in AWS SCT using the registered data extraction agent. Create a local task and an AWS DMS task in AWS SCT with replication of ongoing changes. Copy data to the Snowball device and return the Snowball device to AWS. Allow AWS DMS to copy data from Amazon S3 to Amazon Redshift. Verify that the data migration is complete and perform the cut over to Amazon Redshift. <https://aws.amazon.com/getting-started/hands-on/migrate-oracle-to-amazon-redshift/>

NEW QUESTION 150

- (Exam Topic 2)

A company is migrating its infrastructure to the AWS Cloud. The company must comply with a variety of regulatory standards for different projects. The company needs a multi-account environment.

A solutions architect needs to prepare the baseline infrastructure. The solution must provide a consistent baseline of management and security but it must allow flexibility for different compliance requirements within various AWS accounts. The solution also needs to integrate with the existing on-premises Active Directory Federation Services (AD FS) server.

Which solution meets these requirements with the LEAST amount of operational overhead?

- A. Create an organization in AWS Organizations. Create a single SCP for least privilege access across all accounts. Create a single OU for all accounts. Configure an IAM identity provider for federation with the on-premises AD FS server. Configure a central logging account with a defined process for log generating services to send log events to the central account.
- B. Enable AWS Config in the central account with conformance packs for all accounts.
- C. Create an organization in AWS Organizations. Enable AWS Control Tower on the organization.
- D. Review included guardrails for SCP.
- E. Check AWS Config for areas that require additions. Add OUs as necessary. Connect AWS Single Sign-On to the on-premises AD FS server.
- F. Create an organization in AWS Organizations. Create SCPs for least privilege access. Create an OU structure, and use it to group AWS accounts. Connect AWS Single Sign-On to the on-premises AD FS server.
- G. Configure a central logging account with a defined process for log generating services to send log events to the central account. Enable AWS Config in the central account with aggregators and conformance packs.
- H. Create an organization in AWS Organizations. Enable AWS Control Tower on the organization. Review included guardrails for SCP.
- I. Check AWS Config for areas that require additions. Configure an IAM identity provider for federation with the on-premises AD FS server.

Answer: A

NEW QUESTION 151

- (Exam Topic 2)

A digital marketing company has multiple AWS accounts that belong to various teams. The creative team uses an Amazon S3 bucket in its AWS account to securely store images and media files that are used as content for the company's marketing campaigns. The creative team wants to share the S3 bucket with the strategy team so that the strategy team can view the objects.

A solutions architect has created an IAM role that is named strategy_reviewer in the Strategy account. The solutions architect also has set up a custom AWS Key Management Service (AWS KMS) key in the Creative account and has associated the key with the S3 bucket. However, when users from the Strategy account assume the IAM role and try to access objects in the S3 bucket, they receive an Account.

The solutions architect must ensure that users in the Strategy account can access the S3 bucket. The solution must provide these users with only the minimum permissions that they need.

Which combination of steps should the solutions architect take to meet these requirements? (Select THREE.)

- A. Create a bucket policy that includes read permissions for the S3 bucket
- B. Set the principal of the bucket policy to the account ID of the Strategy account
- C. Update the strategy_reviewer IAM role to grant full permissions for the S3 bucket and to grant decrypt permissions for the custom KMS key.
- D. Update the custom KMS key policy in the Creative account to grant decrypt permissions to the strategy_reviewer IAM role.
- E. Create a bucket policy that includes read permissions for the S3 bucket
- F. Set the principal of the bucket policy to an anonymous user.
- G. Update the custom KMS key policy in the Creative account to grant encrypt permissions to the strategy_reviewer IAM role.
- H. Update the strategy_reviewer IAM role to grant read permissions for the S3 bucket and to grant decrypt permissions for the custom KMS key

Answer: ACE

NEW QUESTION 154

- (Exam Topic 2)

A gaming company created a game leaderboard by using a Multi-AZ deployment of an Amazon RDS database. The number of users is growing, and the queries to get individual player rankings are getting slower over time. The company expects a surge in users for an upcoming version and wants to optimize the design for scalability and performance.

Which solution will meet these requirements?

- A. Migrate the database to Amazon DynamoDB
- B. Store the leader different table
- C. Use Apache HiveQL JOIN statements to build the leaderboard
- D. Keep the leaderboard data in the RDS DB instance
- E. Provision a Multi-AZ deployment of an Amazon ElastiCache for Redis cluster.
- F. Stream the leaderboard data by using Amazon Kinesis Data Firehose with an Amazon S3 bucket as the destination
- G. Query the S3 bucket by using Amazon Athena for the leaderboard.
- H. Add a read-only replica to the RDS DB instance
- I. Add an RDS Proxy database proxy.

Answer: C

NEW QUESTION 159

- (Exam Topic 2)

A company recently deployed a new application that runs on a group of Amazon EC2 Linux instances in a VPC. In a peered VPC the company launched an EC2 Linux instance that serves as a bastion host. The security group of the application instances allows access only on TCP port 22 from the private IP of the bastion host. The security group of the bastion host allows access to TCP port 22 from 0.0.0.0/0 so that system administrators can use SSH to remotely log in to the application instances from several branch offices.

While looking through operating system logs on the bastion host, a cloud engineer notices thousands of failed SSH logins to the bastion host from locations around the world. The cloud engineer wants to change how remote access is granted to the application instances and wants to meet the following requirements:

- Eliminate brute-force SSH login attempts
- Retain a log of commands run during an SSH session
- Retain the ability to forward ports

Which solution meets these requirements for remote access to the application instances?

- A. Configure the application instances to communicate with AWS Systems Manager. Grant access to the system administrators to use Session Manager to establish a session with the application instances. Terminate the bastion host.
- B. Update the security group of the bastion host to allow traffic from only the public IP addresses of the branch offices.
- C. Configure an AWS Client VPN endpoint and provision each system administrator with a certificate to establish a VPN connection to the application VPC. Update the security group of the application instances to allow traffic from only the Client VPN IPv4 CIDR.
- D. Terminate the bastion host.
- E. Configure the application instances to communicate with AWS Systems Manager.
- F. Grant access to the system administrators to issue commands to the application instances by using Systems Manager Run Command.
- G. Terminate the bastion host.

Answer: A

Explanation:

"Session Manager removes the need to open inbound ports, manage SSH keys, or use bastion hosts" Ref: <https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager.html>

NEW QUESTION 164

- (Exam Topic 2)

A company is running its solution on AWS in a manually created VPC. The company is using AWS CloudFormation to provision other parts of the infrastructure. According to a new requirement, the company must manage all infrastructure in an automatic way.

What should the company do to meet this new requirement with the LEAST effort?

- A. Create a new AWS Cloud Development Kit (AWS CDK) stack that strictly provisions the existing VPC resources and configuration
- B. Use AWS CDK to import the VPC into the stack and to manage the VPC.
- C. Create a CloudFormation stack set that creates the VPC
- D. Use the stack set to import the VPC into the stack.
- E. Create a new CloudFormation template that strictly provisions the existing VPC resources and configuration

- F. From the CloudFormation console, create a new stack by importing the existing resources.
- G. Create a new CloudFormation template that creates the VP
- H. Use the AWS Serverless Application Model (AWS SAM) CLI to import the VPC.

Answer: D

NEW QUESTION 166

- (Exam Topic 2)

A company is configuring connectivity to a multi-account AWS environment to support application workloads that serve users in a single geographic region. The workloads depend on a highly available, on-premises legacy system deployed across two locations. It is critical for the AWS workloads to maintain connectivity to the legacy system, and a minimum of 5 Gbps of bandwidth is required. All application workloads within AWS must have connectivity with one another. Which solution will meet these requirements?

- A. Configure multiple AWS Direct Connect (DX) 10 Gbps dedicated connections from a DX partner for each on-premises location. Create private virtual interfaces on each connection for each AWS account VPC. Associate each private virtual interface with a virtual private gateway attached to each VPC.
- B. Configure multiple AWS Direct Connect (DX) 10 Gbps dedicated connections from two DX partners for each on-premises location. Create and attach a virtual private gateway for each AWS account VPC.
- C. Create a DX gateway in a central network account and associate it with the virtual private gateways. Create a public virtual interface on each DX connection and associate the interface with the DX gateway.
- D. Configure multiple AWS Direct Connect (DX) 10 Gbps dedicated connections from two DX partners for each on-premises location. Create a transit gateway and a DX gateway in a central network account.
- E. Create a transit virtual interface for each DX interface and associate them with the DX gateway.
- F. Create a gateway association between the DX gateway and the transit gateway.
- G. Configure multiple AWS Direct Connect (DX) 10 Gbps dedicated connections from a DX partner for each on-premises location. Create and attach a virtual private gateway for each AWS account VPC.
- H. Create a transit gateway in a central network account and associate it with the virtual private gateways. Create a transit virtual interface on each DX connection and attach the interface to the transit gateway.

Answer: B

NEW QUESTION 171

- (Exam Topic 2)

A company's site reliability engineer is performing a review of Amazon FSx for Windows File Server deployments within an account that the company acquired. Company policy states that all Amazon FSx file systems must be configured to be highly available across Availability Zones. During the review, the site reliability engineer discovers that one of the Amazon FSx file systems used a deployment type of Single-AZ. A solutions architect needs to minimize downtime while aligning this Amazon FSx file system with company policy. What should the solutions architect do to meet these requirements?

- A. Reconfigure the deployment type to Multi-AZ for this Amazon FSx file system.
- B. Create a new Amazon FSx file system with a deployment type of Multi-AZ.
- C. Use AWS DataSync to transfer data to the new Amazon FSx file system.
- D. Point users to the new location.
- E. Create a second Amazon FSx file system with a deployment type of Single-AZ. Use AWS DataSync to keep the data in sync.
- F. Switch users to the second Amazon FSx file system in the event of failure.
- G. Use the AWS Management Console to take a backup of the Amazon FSx file system. Create a new Amazon FSx file system with a deployment type of Multi-AZ. Restore the backup to the new Amazon FSx file system.
- H. Point users to the new location.

Answer: B

NEW QUESTION 176

- (Exam Topic 2)

A company's solutions architect is reviewing a web application that runs on AWS. The application references static assets in an Amazon S3 bucket in the us-east-1 Region. The company needs resiliency across multiple AWS Regions. The company already has created an S3 bucket in a second Region. Which solution will meet these requirements with the LEAST operational overhead?

- A. Configure the application to write each object to both S3 buckets.
- B. Set up an Amazon Route 53 public hosted zone with a record set by using a weighted routing policy for each S3 bucket.
- C. Configure the application to reference the objects by using the Route 53 DNS name.
- D. Create an AWS Lambda function to copy objects from the S3 bucket in us-east-1 to the S3 bucket in the second Region.
- E. Invoke the Lambda function each time an object is written to the S3 bucket in us-east-1. Set up an Amazon CloudFront distribution with an origin group that contains the two S3 buckets as origins.
- F. Configure replication on the S3 bucket in us-east-1 to replicate objects to the S3 bucket in the second Region. Set up an Amazon CloudFront distribution with an origin group that contains the two S3 buckets as origins.
- G. Configure replication on the S3 bucket in us-east-1 to replicate objects to the S3 bucket in the second Region.
- H. If failover is required, update the application code to load S3 objects from the S3 bucket in the second Region.

Answer: D

NEW QUESTION 181

- (Exam Topic 2)

A company runs an IoT platform on AWS. IoT sensors in various locations send data to the company's Node.js API servers on Amazon EC2 instances running behind an Application Load Balancer. The data is stored in an Amazon RDS MySQL DB instance that uses a 4 TB General Purpose SSD volume. The number of sensors the company has deployed in the field has increased over time and is expected to grow significantly. The API servers are consistently overloaded, and RDS metrics show high write latency. Which of the following steps together will resolve the issues permanently and enable growth as new sensors are provisioned, while keeping this platform cost-efficient? (Select TWO.)

- A. Resize the MySQL General Purpose SSD storage to 6 TB to improve the volume's IOPS.

- B. Re-architect the database tier to use Amazon Aurora instead of an RDS MySQL DB instance and add read replicas
- C. Leverage Amazon Kinesis Data Streams and AWS Lambda to ingest and process the raw data
- D. Use AWS X-Ray to analyze and debug application issues and add more API servers to match the load
- E. Re-architect the database tier to use Amazon DynamoDB instead of an RDS MySQL DB instance

Answer: CE

NEW QUESTION 186

- (Exam Topic 2)

A financial services company in North America plans to release a new online web application to its customers on AWS . The company will launch the application in the us-east-1 Region on Amazon EC2 instances. The application must be highly available and must dynamically scale to meet user traffic. The company also wants to implement a disaster recovery environment for the application in the us-west-1 Region by using active-passive failover.

Which solution will meet these requirements?

- A. Create a VPC in us-east-1 and a VPC in us-west-1 Configure VPC peering In the us-east-1 VP
- B. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in both VPCs Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs Place the Auto Scaling group behind the ALB.
- C. Create a VPC in us-east-1 and a VPC in us-west-1. In the us-east-1 VP
- D. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VP
- E. Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC Place the Auto Scaling group behind the ALB Set up the same configuration in the us-west-1 VPC
- F. Create an Amazon Route 53 hosted zone Create separate records for each ALB Enable health checks to ensure high availability between Regions.
- G. Create a VPC in us-east-1 and a VPC in us-west-1 In the us-east-1 VP
- H. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in that VPC Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in the us-east-1 VPC Place the Auto Scaling group behind the ALB Set up the same configuration in the us-west-1 VPC Create an Amazon Route 53 hosted zon
- I. Create separate records for each ALB Enable health checks and configure a failover routing policy for each record.
- J. Create a VPC in us-east-1 and a VPC in us-west-1 Configure VPC peering In the us-east-1 VP
- K. create an Application Load Balancer (ALB) that extends across multiple Availability Zones in Create an Auto Scaling group that deploys the EC2 instances across the multiple Availability Zones in both VPCs Place the Auto Scaling group behind the ALB Create an Amazon Route 53 host.. Create a record for the ALB.

Answer: C

NEW QUESTION 188

- (Exam Topic 2)

A company is running an application in the AWS Cloud. The application uses AWS Lambda functions and Amazon Elastic Container Service (Amazon ECS) containers that run with AWS Fargate technology as its primary compute. The load on the application is irregular. The application experiences long periods of no usage, followed by sudden and significant increases and decreases in traffic. The application is write-heavy and stores data in an Amazon Aurora MySQL database. The database runs on an Amazon RDS memory optimized D8 instance that is not able to handle the load.

What is the MOST cost-effective way for the company to handle the sudden and significant changes in traffic?

- A. Add additional read replicas to the databas
- B. Purchase Instance Savings Plans and RDS Reserved Instances.
- C. Migrate the database to an Aurora multi-master DB cluste
- D. Purchase Instance Savings Plans.
- E. Migrate the database to an Aurora global database Purchase Compute Savings Plans and RDS Reserved Instances
- F. Migrate the database to Aurora Serverless v1. Purchase Compute Savings Plans

Answer: D

NEW QUESTION 190

- (Exam Topic 2)

A company processes environmental data. The company has set up sensors to provide a continuous stream of data from different areas in a city. The data is available in JSON format.

The company wants to use an AWS solution to send the data to a database that does not require fixed schemas for storage. The data must be sent in real time.

Which solution will meet these requirements?

- A. Use Amazon Kinesis Data Firehose to send the data to Amazon Redshift.
- B. Use Amazon Kinesis Data Streams to send the data to Amazon DynamoDB
- C. Use Amazon Managed Streaming for Apache Kafka (Amazon MSK) to send the data to Amazon Aurora.
- D. Use Amazon Kinesis Data Firehose to send the data to Amazon Keyspaces (for Apache Cassandra).

Answer: B

NEW QUESTION 194

- (Exam Topic 2)

A company has developed a new release of a popular video game and wants to make it available for public download. The new release package is approximately 5 GB in size. The company provides downloads for existing releases from a Linux-based, publicly facing FTP site hosted in an on-premises data center. The company expects the new release will be downloaded by users worldwide The company wants a solution that provides improved download performance and low transfer costs, regardless of a user's location.

Which solutions will meet these requirements?

- A. Store the game files on Amazon EBS volumes mounted on Amazon EC2 instances within an Auto Scaling group Configure an FTP service on the EC2 instances Use an Application Load Balancer in front of the Auto Scaling grou
- B. Publish the game download URL for users to download the package.
- C. Store the game files on Amazon EFS volumes that are attached to Amazon EC2 instances within an Auto Scaling group Configure an FTP service on each of the EC2 instances Use an Application Load Balancer in front of the Auto Scaling group Publish the game download URL for users to download the package
- D. Configure Amazon Route 53 and an Amazon S3 bucket for website hosting Upload the game files to the S3 bucket Use Amazon CloudFront for the website Publish the game download URL for users to download the package.

E. Configure Amazon Route 53 and an Amazon S3 bucket for website hosting Upload the game files to the S3 bucket Set Requester Pays for the S3 bucket Publish the game download URL for users to download the package

Answer: C

NEW QUESTION 199

- (Exam Topic 2)

A company has used infrastructure as code (IaC) to provision a set of two Amazon EC2 instances. The instances have remained the same for several years. The company's business has grown rapidly in the past few months. In response, the company's operations team has implemented an Auto Scaling group to manage the sudden increases in traffic Company policy requires a monthly installation of security updates on all operating systems that are running. The most recent security update required a reboot. As a result the Auto Scaling group terminated the instances and replaced them with new, unpatched instances. Which combination of steps should a solutions architect recommend to avoid a recurrence of this issue? (Select TWO)

- A. Modify the Auto Scaling group by setting the Update policy to target the oldest launch configuration for replacement.
- B. Create a new Auto Scaling group before the next patch maintenance During the maintenance window patch both groups and reboot the instances.
- C. Create an Elastic Load Balancer in front of the Auto Scaling group Configure monitoring to ensure that target group health checks return healthy after the Auto Scaling group replaces the terminated instances
- D. Create automation scripts to patch an AM
- E. update the launch configuration, and invoke an Auto Scaling instance refresh.
- F. Create an Elastic Load Balancer in front of the Auto Scaling group Configure termination protection on the instances.

Answer: AC

NEW QUESTION 204

- (Exam Topic 2)

A company that designs multiplayer online games wants to expand its user base outside of Europe. The company transfers a significant amount of UDP traffic to Keep all the live and interactive sessions of the games The company has plans for rapid expansion and wants to build its architecture to provide an optimized online experience to its users Which architecture will meet these requirements with the LOWEST latency for users"

- A. Set up a Multi-AZ environment in a single AWS Region Use Amazon CloudFront to cache user sessions
- B. Set up environments in multiple AWS Regions Create an accelerator in AWS Global Accelerator, and add endpoints from different Regions to it
- C. Set up environments in multiple AWS Regions Use Amazon Route 53. and select latency-based routing
- D. Set up a Multi-AZ environment in a single AWS Region
- E. Use AWS Lambda@Edge to update sessions closer to the users

Answer: B

NEW QUESTION 208

- (Exam Topic 2)

A software company is using three AWS accounts for each of its 10 development teams The company has developed an AWS CloudFormation standard VPC template that includes three NAT gateways The template is added to each account for each team The company is concerned that network costs will increase each time a new development team is added A solutions architect must maintain the reliability of the company's solutions and minimize operational complexity What should the solutions architect do to reduce the network costs while meeting these requirements?

- A. Create a single VPC with three NAT gateways in a shared services account Configure each account VPC with a default route through a transit gateway to the NAT gateway in the shared services account VPC Remove all NAT gateways from the standard VPC template
- B. Create a single VPC with three NAT gateways in a shared services account Configure each account VPC with a default route through a VPC peering connection to the NAT gateway in the shared services account VPC Remove all NAT gateways from the standard VPC template
- C. Remove two NAT gateways from the standard VPC template Rely on the NAT gateway SLA to cover reliability for the remaining NAT gateway.
- D. Create a single VPC with three NAT gateways in a shared services account Configure a Site-to-Site VPN connection from each account to the shared services account Remove all NAT gateways from the standard VPC template

Answer: A

NEW QUESTION 211

- (Exam Topic 2)

A company has a media metadata extraction pipeline running on AWS. Notifications containing a reference to a file Amazon S3 are sent to an Amazon Simple Notification Service (Amazon SNS) topic The pipeline consists of a number of AWS Lambda functions that are subscribed to the SNS topic The Lambda functions extract the S3 file and write metadata to an Amazon RDS PostgreSQL DB instance.

Users report that updates to the metadata are sometimes slow to appear or are lost. During these times, the CPU utilization on the database is high and the number of failed Lambda invocations increases.

Which combination of actions should a solutions architect take to resolve this issue? (Select TWO.)

- A. Enable message delivery status on the SNS topic Configure the SNS topic delivery policy to enable retries with exponential backoff
- B. Create an Amazon Simple Queue Service (Amazon SQS) FIFO queue and subscribe the queue to the SNS topic Configure the Lambda functions to consume messages from the SQS queue.
- C. Create an RDS proxy for the RDS instance Update the Lambda functions to connect to the RDS instance using the proxy.
- D. Enable the RDS Data API for the RDS instance
- E. Update the Lambda functions to connect to the RDS instance using the Data API
- F. Create an Amazon Simple Queue Service (Amazon SQS) standard queue for each Lambda function and subscribe the queues to the SNS topic
- G. Configure the Lambda functions to consume messages from their respective SQS queue.

Answer: CE

NEW QUESTION 212

- (Exam Topic 2)

A company is deploying a distributed in-memory database on a fleet of Amazon EC2 instances. The fleet consists of a primary node and eight worker nodes. The

primary node is responsible for monitoring cluster health, accepting user requests, distributing user requests to worker nodes and sending an aggregate response back to a client. Worker nodes communicate with each other to replicate data partitions.

The company requires the lowest possible networking latency to achieve maximum performance. Which solution will meet these requirements?

- A. Launch memory optimized EC2 instances in a partition placement group
- B. Launch compute optimized EC2 instances in a partition placement group
- C. Launch memory optimized EC2 instances in a cluster placement group
- D. Launch compute optimized EC2 instances in a spread placement group.

Answer: B

NEW QUESTION 215

- (Exam Topic 2)

A software company has deployed an application that consumes a REST API by using Amazon API Gateway. AWS Lambda functions, and an Amazon DynamoDB table. The application is showing an increase in the number of errors during PUT requests. Most of the PUT calls come from a small number of clients that are authenticated with specific API keys.

A solutions architect has identified that a large number of the PUT requests originate from one client. The API is noncritical, and clients can tolerate retries of unsuccessful calls. However, the errors are displayed to customers and are causing damage to the API's reputation.

What should the solutions architect recommend to improve the customer experience?

- A. Implement retry logic with exponential backoff and irregular variation in the client application
- B. Ensure that the errors are caught and handled with descriptive error messages.
- C. Implement API throttling through a usage plan at the API Gateway level
- D. Ensure that the client application handles code 429 replies without error.
- E. Turn on API caching to enhance responsiveness for the production stage
- F. Run 10-minute load tests. Verify that the cache capacity is appropriate for the workload.
- G. Implement reserved concurrency at the Lambda function level to provide the resources that are needed during sudden increases in traffic.

Answer: A

NEW QUESTION 218

- (Exam Topic 2)

A company runs a serverless application in a single AWS Region. The application accesses external URLs and extracts metadata from those sites. The company uses an Amazon Simple Notification Service (Amazon SNS) topic to publish URLs to an Amazon Simple Queue Service (Amazon SQS) queue. An AWS Lambda function uses the queue as an event source and processes the URLs from the queue. Results are saved to an Amazon S3 bucket.

The company wants to process each URL in other Regions to compare possible differences in site localization. URLs must be published from the existing Region.

Results must be written to the existing S3 bucket in the current Region.

Which combination of changes will produce multi-Region deployment that meets these requirements? (Select TWO.)

- A. Deploy the SQS queue with the Lambda function to other Regions.
- B. Subscribe the SNS topic in each Region to the SQS queue.
- C. Subscribe the SQS queue in each Region to the SNS topics in each Region.
- D. Configure the SQS queue to publish URLs to SNS topics in each Region.
- E. Deploy the SNS topic and the Lambda function to other Regions.

Answer: CD

NEW QUESTION 220

- (Exam Topic 2)

A company is running an application in the AWS Cloud. The application consists of microservices that run on a fleet of Amazon EC2 instances in multiple Availability Zones behind an Application Load Balancer. The company recently added a new REST API that was implemented in Amazon API Gateway. Some of the older microservices that run on EC2 instances need to call this new API.

The company does not want the API to be accessible from the public internet and does not want proprietary data to traverse the public internet.

What should a solutions architect do to meet these requirements?

- A. Create an AWS Site-to-Site VPN connection between the VPC and the API Gateway. Use API Gateway to generate a unique API key for each microservice.
- B. Configure the API methods to require the key.
- C. Create an interface VPC endpoint for API Gateway, and set an endpoint policy to only allow access to the specific API. Add a resource policy to API Gateway to only allow access from the VPC endpoint. Change the API Gateway endpoint type to private.
- D. Modify the API Gateway to use IAM authentication. Update the IAM policy for the IAM role that is assigned to the EC2 instances to allow access to the API Gateway. Move the API Gateway into a new VPC. Deploy a transit gateway and connect the VPCs.
- E. Create an accelerator in AWS Global Accelerator and connect the accelerator to the API Gateway. Update the route table for all VPC subnets with a route to the created Global Accelerator endpoint IP address.
- F. Add an API key for each service to use for authentication.

Answer: B

NEW QUESTION 221

- (Exam Topic 2)

A company wants to deploy an API to AWS. The company plans to run the API on AWS Fargate behind a load balancer. The API requires the use of header-based routing and must be accessible from on-premises networks through an AWS Direct Connect connection and a private VIF.

The company needs to add the client IP addresses that connect to the API to an allow list in AWS. The company also needs to add the IP addresses of the API to the allow list. The company's security team will allow /27 CIDR ranges to be added to the allow list. The solution must minimize complexity and operational overhead.

Which solution will meet these requirements?

- A. Create a new Network Load Balancer (NLB) in the same subnets as the Fargate task deployments. Create a security group that includes only the client IP addresses that need access to the API.
- B. Attach the new security group to the Fargate task.

- C. Provide the security team with the NLB's IP addresses for the allow list.
- D. Create two new /27 subnet
- E. Create a new Application Load Balancer (ALB) that extends across the new subnet
- F. Create a security group that includes only the client IP addresses that need access to the AP
- G. Attach the security group to the AL
- H. Provide the security team with the new subnet IP ranges for the allow list.
- I. Create two new '27 subnet
- J. Create a new Network Load Balancer (NLB) that extends across the new subnet
- K. Create a new Application Load Balancer (ALB) within the new subnet
- L. Create a security group that includes only the client IP addresses that need access to the AP
- M. Attach the security group to the AL
- N. Add the ALB's IP addresses as targets behind the NL
- O. Provide the security team with the NLB's IP addresses for the allow list.
- P. Create a new Application Load Balancer (ALB) in the same subnets as the Fargate task deployments. Create a security group that includes only the client IP addresses that need access to the AP
- Q. Attach the security group to the AL
- R. Provide the security team with the ALB's IP addresses for the allow list.

Answer: A

NEW QUESTION 225

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