Amazon

Exam Questions AWS-Certified-Solutions-Architect-Professional

Amazon AWS Certified Solutions Architect Professional

NEW QUESTION 1
- (Exam Topic 2)
A company needs to optimize the cost of backups for Amazon Elastic File System (Amazon EFS). A solutions architect has already configured a backup plan in AWS Backup for the EFS backups. The backup plan contains a rule with a lifecycle configuration to transition EFS backups to cold storage after 7 days and to keep the backups for an additional 90 days.
After I month, the company reviews its EFS storage costs and notices an increase in the EFS backup costs. The EFS backup cold storage produces almost double the cost of the EFS warm backup storage.
What should the solutions architect do to optimize the cost?

A. Modify the backup rule's lifecycle configuration to move the EFS backups to cold storage after 1 day.Set the backup retention period to 30 days.
B. Modify the backup rule's lifecycle configuration to move the EFS backups to cold storage after 8 days.Set the backup retention period to 30 days.
C. Modify the backup rule's lifecycle configuration to move the EFS backups to cold storage after 1 day.Set the backup retention period to 90 days.
D. Modify the backup rule's lifecycle configuration to move the EFS backups to cold storage after 8 days.Set the backup retention period to 98 days.

Answer: A

Explanation:
The cost of EFS backup cold storage is $0.01 per GB-month, whereas the cost of EFS backup warm storage is $0.05 per GB-month1. Therefore, moving the backups to cold storage as soon as possible will reduce the storage cost. However, cold storage backups must be retained for a minimum of 90 day2s, otherwise they incur a pro-rated charge equal to the storage charge for the remaining days1. Therefore, setting the backup retention period to 30 days will incur a penalty of 60 days of cold storage cost for each backup deleted. This penalty will still be lower than keeping the backups in warm storage for 7 days and then in cold storage for 83 days, which is the current configuration. Therefore, option A is the most cost-effective solution.

NEW QUESTION 2
- (Exam Topic 2)
A company has VPC flow logs enabled for its NAT gateway. The company is seeing Action = ACCEPT for inbound traffic that comes from public IP address 198.51.100.2 destined for a private Amazon EC2 instance.
A solutions architect must determine whether the traffic represents unsolicited inbound connections from the internet. The first two octets of the VPC CIDR block are 203.0.
Which set of steps should the solutions architect take to meet these requirements?

A. Open the AWS CloudTrail consol
B. Select the log group that contains the NAT gateway's elastic network interface and the private instance's elastic network interfac
C. Run a query to filter with the destination address set as "like 203.0" and the source address set as "like 198.51.100.2". Run the stats command to filter the sum of bytes transferred by the source address and the destination address.
D. Open the Amazon CloudWatch consol
E. Select the log group that contains the NAT gateway's elastic network interface and the private instance's elastic network interfac
F. Run a query to filter with the destination address set as "like 203.0" and the source address set as "like 198.51.100.2". Run the stats command to filter the sum of bytes transferred by the source address and the destination address.
G. Open the AWS CloudTrail consol
H. Select the log group that contains the NAT gateway's elastic network interface and the private instance's elastic network interfac
I. Run a query to filter with the destination address set as "like 198.51.100.2" and the source address set as "like 203.0". Run the stats command to filter the sum of bytes transferred by the source address and the destination address.
J. Open the Amazon CloudWatch consol
K. Select the log group that contains the NAT gateway's elastic network interface and the private instance's elastic network interfac
L. Run a query to filter with the destination address set as "like 198.51.100.2" and the source address set as "like 203.0". Run the stats command to filter the sum of bytes transferred by the source address and the destination address.

Answer: D

Explanation:
https://aws.amazon.com/premiumsupport/knowledge-center/vpc-analyze-inbound-traffic-nat-gateway/ by Cloudxie says "select appropriate log"

NEW QUESTION 3
- (Exam Topic 2)
A company has loT sensors that monitor traffic patterns throughout a large city. The company wants to read and collect data from the sensors and perform aggregations on the data.
A solutions architect designs a solution in which the loT devices are streaming to Amazon Kinesis Data Streams. Several applications are reading from the stream. However, several consumers are experiencing throttling and are periodically and are periodically encountering a RealProvisioned Throughput Exceeded error.
Which actions should the solution architect take to resolve this issue? (Select THREE.)

A. Reshard the stream to increase the number of shards s in the stream.
B. Use the Kinesis Producer Library KPL). Adjust the polling frequency.
C. Use consumers with the enhanced fan-out feature.
D. Reshard the stream to reduce the number of shards in the stream.
E. Use an error retry and exponential backoff mechanism in the consumer logic.
F. Configure the stream to use dynamic partitioning.

Answer: ACE

Explanation:
https://repost.aws/knowledge-center/kinesis-readprovisionedthroughputexceeded Follow Data Streams best practices
To mitigate ReadProvisionedThroughputExceeded exceptions, apply these best practices:
• Reshard your stream to increase the number of shards in the stream.
• Use consumers with enhanced fan-out. For more information about enhanced fan-out, see Developing custom consumers with dedicated throughput (enhanced fan-out).
• Use an error retry and exponential backoff mechanism in the consumer logic if ReadProvisionedThroughputExceeded exceptions are encountered. For consumer applications that use an AWS SDK, the requests are retried by default.

NEW QUESTION 4
- (Exam Topic 2)
A company wants to refactor its retail ordering web application that currently has a load-balanced Amazon EC2 instance fleet for web hosting, database API services, and business logic. The company needs to create a decoupled, scalable architecture with a mechanism for retaining failed orders while also minimizing operational costs.
Which solution will meet these requirements?

A. Use Amazon S3 for web hosting with Amazon API Gateway for database API service
B. Use Amazon Simple Queue Service (Amazon SQS) for order queuin
C. Use Amazon Elastic Container Service (Amazon ECS) for business logic with Amazon SQS long polling for retaining failed orders.
D. Use AWS Elastic Beanstalk for web hosting with Amazon API Gateway for database API service
E. Use Amazon MQ for order queuin
F. Use AWS Step Functionsfor business logic with Amazon S3 Glacier Deep Archive for retaining failed orders.
G. Use Amazon S3 for web hosting with AWS AppSync for database API service
H. Use Amazon Simple Queue Service (Amazon SQS) for order queuin
I. Use AWS Lambda for business logic with an Amazon SQS dead-letter queue for retaining failed orders.
J. Use Amazon Lightsail for web hosting with AWS AppSync for database API service
K. Use Amazon Simple Email Service (Amazon SES) for order queuin
L. UseAmazon Elastic Kubernetes Service (Amazon EKS) for business logic with Amazon OpenSearch Service for retaining failed orders.

Answer: C

Explanation:
•Use Amazon S3 for web hosting with AWS AppSync for database API services. Use Amazon Simple Queue Service (Amazon SQS) for order queuing. Use AWS Lambda for business logic with an Amazon SQS dead-letter queue for retaining failed orders.
This solution will allow you to:
•Host a static website on Amazon S3 without provisioning or managing servers1.
•Use AWS AppSync to create a scalable GraphQL API that connects to your database and other data sources1.
•Use Amazon SQS to decouple and scale your order processing microservices1.
•Use AWS Lambda to run code for your business logic without provisioning or managing servers1.
•Use an Amazon SQS dead-letter queue to retain messages that can’t be processed by your Lambda function1.

NEW QUESTION 5
- (Exam Topic 2)
A company is using AWS CloudFormation to deploy its infrastructure. The company is concerned that, if a production CloudFormation stack is deleted, important data stored in Amazon RDS databases or Amazon EBS volumes might also be deleted.
How can the company prevent users from accidentally deleting data in this way?

A. Modify the CloudFormation templates to add a DeletionPolicy attribute to RDS and EBS resources.
B. Configure a stack policy that disallows the deletion of RDS and EBS resources.
C. Modify 1AM policies to deny deleting RDS and EBS resources that are tagged with an "awsrcloudformation: stack-name" tag.
D. Use AWS Config rules to prevent deleting RDS and EBS resources.

Answer: A

Explanation:
With the DeletionPolicy attribute you can preserve or (in some cases) backup a resource when its stack is deleted. You specify a DeletionPolicy attribute for each resource that you want to control. If a resource has no DeletionPolicy attribute, AWS CloudFormation deletes the resource by default. To keep a resource when its stack is deleted, specify Retain for that resource. You can use retain for any resource. For example, you can retain a nested stack, Amazon S3 bucket, or EC2 instance so that you can continue to use or modify those resources after you delete their stacks.
https://docs.aws.amazon.com/AWSCloudFormation/latest/UserGuide/aws-attribute-deletionpolicy.html

NEW QUESTION 6
- (Exam Topic 2)
A solutions architect needs to define a reference architecture for a solution for three-tier applications with web. application, and NoSQL data layers. The reference architecture must meet the following requirements:
• High availability within an AWS Region
• Able to fail over in 1 minute to another AWS Region for disaster recovery
• Provide the most efficient solution while minimizing the impact on the user experience Which combination of steps will meet these requirements? (Select THREE.)

A. Use an Amazon Route 53 weighted routing policy set to 100/0 across the two selected Region
B. Set Time to Live (TTL) to 1 hour.
C. Use an Amazon Route 53 failover routing policy for failover from the primary Region to the disaster recovery Regio
D. Set Time to Live (TTL) to 30 seconds.
E. Use a global table within Amazon DynamoDB so data can be accessed in the two selected Regions.
F. Back up data from an Amazon DynamoDB table in the primary Region every 60 minutes and then write the data to Amazon S3. Use S3 Cross-Region replication to copy the data from the primary Region to the disaster recovery Regio
G. Have a script import the data into DynamoDB in a disaster recovery scenario.
H. Implement a hot standby model using Auto Scaling groups for the web and application layers across multiple Availability Zones in the Region
I. Use zonal Reserved Instances for the minimum number of servers and On-Demand Instances for any additional resources.
J. Use Auto Scaling groups for the web and application layers across multiple Availability Zones in the Region
K. Use Spot Instances for the required resources.

Answer: BCE

Explanation:
The requirements can be achieved by using an Amazon DynamoDB database with a global table. DynamoDB is a NoSQL database so it fits the requirements. A global table also allows both reads and writes to occur in both Regions. For the web and application tiers Auto Scaling groups should be configured. Due to the 1-minute RTO these must be configured in an active/passive state. The best pricing model to lower price but ensure resources are available when needed is to use a combination of zonal reserved instances and on-demand instances. To failover between the Regions, a Route 53 failover routing policy can be configured with a

TTL configured on the record of 30 seconds. This will mean clients must resolve against Route 53 every 30 seconds to get the latest record. In a failover scenario the clients would be redirected to the secondary site if the primary site is unhealthy.

NEW QUESTION 7
- (Exam Topic 2)
A company is designing a new website that hosts static content. The website will give users the ability to upload and download large files. According to company requirements, all data must be encrypted in transit and at rest. A solutions architect is building the solution by using Amazon S3 and Amazon CloudFront.
Which combination of steps will meet the encryption requirements? (Select THREE.)

A. Turn on S3 server-side encryption for the S3 bucket that the web application uses.
B. Add a policy attribute of "aws:SecureTransport": "true" for read and write operations in the S3 ACLs.
C. Create a bucket policy that denies any unencrypted operations in the S3 bucket that the web application uses.
D. Configure encryption at rest on CloudFront by using server-side encryption with AWS KMS keys (SSE-KMS).
E. Configure redirection of HTTP requests to HTTPS requests in CloudFront.
F. Use the RequireSSL option in the creation of presigned URLs for the S3 bucket that the web application uses.

Answer: ACE

Explanation:
Turning on S3 server-side encryption for the S3 bucket that the web application uses will enable encrypting the data at rest using Amazon S3 managed keys (SSE-S3)1. Creating a bucket policy that denies any unencrypted operations in the S3 bucket that the web application uses will enable enforcing encryption for all requests to the bucket2. Configuring redirection of HTTP requests to HTTPS requests in CloudFront will enable encrypting the data in transit using SSL/TLS3.

NEW QUESTION 8
- (Exam Topic 2)
A company uses AWS Organizations to manage more than 1.000 AWS accounts. The company has created a new developer organization. There are 540 developer member accounts that must be moved to the new developer organization. All accounts are set up with all the required Information so that each account can be operated as a standalone account.
Which combination of steps should a solutions architect take to move all of the developer accounts to the new developer organization? (Select THREE.)

A. Call the MoveAccount operation in the Organizations API from the old organization's management account to migrate the developer accounts to the new developer organization.
B. From the management account, remove each developer account from the old organization using the RemoveAccountFromOrganization operation in the Organizations API.
C. From each developer account, remove the account from the old organization using theRemoveAccountFromOrganization operation in the Organizations API.
D. Sign in to the new developer organization's management account and create a placeholder member account that acts as a target for the developer account migration.
E. Call the InviteAccountToOrganization operation in the Organizations API from the new developer organization's management account to send invitations to the developer accounts.
F. Have each developer sign in to their account and confirm to join the new developer organization.

Answer: BEF

Explanation:
"This operation can be called only from the organization's management account. Member accounts can remove themselves with LeaveOrganization instead."
https://docs.aws.amazon.com/organizations/latest/APIReference/API_RemoveAccountFromOrganization.html

NEW QUESTION 9
- (Exam Topic 2)
A financial services company loaded millions of historical stock trades into an Amazon DynamoDB table. The table uses on-demand capacity mode. Once each day at midnight, a few million new records are loaded into the table. Application read activity against the table happens in bursts throughout the day. and a limited set of keys are repeatedly looked up. The company needs to reduce costs associated with DynamoDB.
Which strategy should a solutions architect recommend to meet this requirement?

A. Deploy an Amazon ElastiCache cluster in front of the DynamoDB table.
B. Deploy DynamoDB Accelerator (DAX). Configure DynamoDB auto scalin
C. Purchase Savings Plans in Cost Explorer
D. Use provisioned capacity mod
E. Purchase Savings Plans in Cost Explorer.
F. Deploy DynamoDB Accelerator (DAX). Use provisioned capacity mod
G. Configure DynamoDB auto scaling.

Answer: D

Explanation:
https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/HowItWorks.ReadWriteCapacityMode.h

NEW QUESTION 10
- (Exam Topic 2)
A company is migrating a document processing workload to AWS. The company has updated many applications to natively use the Amazon S3 API to store, retrieve, and modify documents that a processing server generates at a rate of approximately 5 documents every second. After the document processing is finished, customers can download the documents directly from Amazon S3.
During the migration, the company discovered that it could not immediately update the processing server that generates many documents to support the S3 API. The server runs on Linux and requires fast local access to the files that the server generates and modifies. When the server finishes processing, the files must be available to the public for download within 30 minutes.
Which solution will meet these requirements with the LEAST amount of effort?

A. Migrate the application to an AWS Lambda functio
B. Use the AWS SDK for Java to generate, modify, and access the files that the company stores directly in Amazon S3.

C. Set up an Amazon S3 File Gateway and configure a file share that is linked to the document store.Mount the file share on an Amazon EC2 instance by using NF
D. When changes occur in Amazon S3, initiate a RefreshCache API call to update the S3 File Gateway.
E. Configure Amazon FSx for Lustre with an import and export polic
F. Link the new file system to an S3 bucke
G. Install the Lustre client and mount the document store to an Amazon EC2 instance by using NFS.
H. Configure AWS DataSync to connect to an Amazon EC2 instanc
I. Configure a task to synchronize the generated files to and from Amazon S3.

Answer: C

Explanation:
The company should configure Amazon FSx for Lustre with an import and export policy. The company should link the new file system to an S3 bucket. The company should install the Lustre client and mount the document store to an Amazon EC2 instance by using NFS. This solution will meet the requirements with the least amount of effort because Amazon FSx for Lustre is a fully managed service that provides a
high-performance file system optimized for fast processing of workloads such as machine learning, high
performance computing, video processing, financial modeling, and electronic design automation1. Amazon FSx for Lustre can be linked to an S3 bucket and can import data from and export data to the bucket2. The import and export policy can be configured to automatically import new or changed objects from S3 and export new or changed files to S33. This will ensure that the files are available to the public for download within 30 minutes. Amazon FSx for Lustre supports NFS version 3.0 protocol for Linux clients.
The other options are not correct because:

- Migrating the application to an AWS Lambda function would require a lot of effort and may not be feasible for the existing server that generates many documents. Lambda functions have limitations on execution time, memory, disk space, and network bandwidth.
- Setting up an Amazon S3 File Gateway would not work because S3 File Gateway does not support write-back caching, which means that files written to the file share are uploaded to S3 immediately and are not available locally until they are downloaded again. This would not provide fast local access to the files that the server generates and modifies.
- Configuring AWS DataSync to connect to an Amazon EC2 instance would not meet the requirement of making the files available to the public for download within 30 minutes. DataSync is a service that transfers data between on-premises storage systems and AWS storage services over the internet or AWS Direct Connect. DataSync tasks can be scheduled to run at specific times or intervals, but they are not triggered by file changes.

References:

- https://aws.amazon.com/fsx/lustre/
- https://docs.aws.amazon.com/fsx/latest/LustreGuide/create-fs-linked-data-repo.html
- https://docs.aws.amazon.com/fsx/latest/LustreGuide/import-export-data-repositories.html
- https://docs.aws.amazon.com/fsx/latest/LustreGuide/mounting-on-premises.html
- https://docs.aws.amazon.com/lambda/latest/dg/gettingstarted-limits.html
- https://docs.aws.amazon.com/storagegateway/latest/userguide/StorageGatewayConcepts.html
- https://docs.aws.amazon.com/datasync/latest/userguide/what-is-datasync.html

NEW QUESTION 10
- (Exam Topic 2)
A company's interactive web application uses an Amazon CloudFront distribution to serve images from an Amazon S3 bucket. Occasionally, third-party tools ingest corrupted images into the S3 bucket. This image corruption causes a poor user experience in the application later. The company has successfully implemented and tested Python logic to detect corrupt images.
A solutions architect must recommend a solution to integrate the detection logic with minimal latency between the ingestion and serving.
Which solution will meet these requirements?

A. Use a Lambda@Edge function that is invoked by a viewer-response event.
B. Use a Lambda@Edge function that is invoked by an origin-response event.
C. Use an S3 event notification that invokes an AWS Lambda function.
D. Use an S3 event notification that invokes an AWS Step Functions state machine.

Answer: B

Explanation:
This solution will allow the detection logic to be run as soon as the image is uploaded to the S3 bucket, before it is served to users via the CloudFront distribution. This way, the detection logic can quickly identify any corrupted images and prevent them from being served to users, minimizing latency between ingestion and serving.
Reference: AWS Lambda@Edge documentation:
https://docs.aws.amazon.com/lambda/latest/dg/lambda-edge.html You can use Lambda@Edge to run your code in response to CloudFront events, such as a viewer request, an origin request, a response, or an error.

NEW QUESTION 14
- (Exam Topic 2)
A company uses AWS Organizations with a single OU named Production to manage multiple accounts All accounts are members of the Production OU Administrators use deny list SCPs in the root of the organization to manage access to restricted services.
The company recently acquired a new business unit and invited the new unit's existing AWS account to the organization Once onboarded the administrators of the new business unit discovered that they are not able to update existing AWS Config rules to meet the company's policies.
Which option will allow administrators to make changes and continue to enforce the current policies without introducing additional long-term maintenance?

A. Remove the organization's root SCPs that limit access to AWS Config Create AWS Service Catalog products for the company's standard AWS Config rules and deploy them throughout the organization, including the new account.
B. Create a temporary OU named Onboarding for the new account Apply an SCP to the Onboarding OU to allow AWS Config actions Move the new account to the Production OU when adjustments to AWS Config are complete
C. Convert the organization's root SCPs from deny list SCPs to allow list SCPs to allow the required services only Temporarily apply an SCP to the organization's root that allows AWS Config actions forprincipals only in the new account.
D. Create a temporary OU named Onboarding for the new account Apply an SCP to the Onboarding OU to allow AWS Config action
E. Move the organization's root SCP to the Production O
F. Move the new account to the Production OU when adjustments to AWS Config are complete.

Answer: D

Explanation:
An SCP at a lower level can't add a permission after it is blocked by an SCP at a higher level. SCPs can only filter; they never add permissions. SO you need to create a new OU for the new account assign an SCP, and move the root SCP to Production OU. Then move the new account to production OU when AWS config is done.

NEW QUESTION 17
- (Exam Topic 2)
A solutions architect at a large company needs to set up network security tor outbound traffic to the internet from all AWS accounts within an organization in AWS Organizations. The organization has more than 100 AWS accounts, and the accounts route to each other by using a centralized AWS Transit Gateway. Each account has both an internet gateway and a NAT gateway tor outbound traffic to the internet The company deploys resources only into a single AWS Region.
The company needs the ability to add centrally managed rule-based filtering on all outbound traffic to the internet for all AWS accounts in the organization. The peak load of outbound traffic will not exceed 25 Gbps in each Availability Zone.
Which solution meets these requirements?

A. Create a new VPC for outbound traffic to the interne
B. Connect the existing transit gateway to the new VP
C. Configure a new NAT gatewa
D. Create an Auto Scaling group of Amazon EC2 instances that run an open-source internet proxy for rule-based filtering across all Availability Zones in the Regio
E. Modify all default routes to point to the proxy's Auto Scaling group.
F. Create a new VPC for outbound traffic to the interne
G. Connect the existing transit gateway to the new VP
H. Configure a new NAT gatewa
I. Use an AWSNetwork Firewall firewall for rule-based filterin
J. Create Network Firewall endpoints in each Availability Zon
K. Modify all default routes to point to the Network Firewall endpoints.
L. Create an AWS Network Firewall firewall for rule-based filtering in each AWS accoun
M. Modify all default routes to point to the Network Firewall firewalls in each account.
N. In each AWS account, create an Auto Scaling group of network-optimized Amazon EC2 instances that run an open-source internet proxy for rule-based filterin
O. Modify all default routes to point to the proxy's Auto Scaling group.

Answer: B

Explanation:
https://aws.amazon.com/blogs/networking-and-content-delivery/deployment-models-for-aws-network-firewall/

NEW QUESTION 21
- (Exam Topic 2)
A company is implementing a serverless architecture by using AWS Lambda functions that need to access a Microsoft SQL Server DB instance on Amazon RDS. The company has separate environments for development and production, including a clone of the database system.
The company's developers are allowed to access the credentials for the development database. However, the credentials for the production database must be encrypted with a key that only members of the IT security team's IAM user group can access. This key must be rotated on a regular basis.
What should a solutions architect do in the production environment to meet these requirements?

A. Store the database credentials in AWS Systems Manager Parameter Store by using a SecureString parameter that is encrypted by an AWS Key Management Service (AWS KMS) customer managed ke
B. Attach a role to each Lambda function to provide access to the SecureString paramete
C. Restrict access to the Securestring parameter and the customer managed key so that only the IT security team can access the parameter and the key.
D. Encrypt the database credentials by using the AWS Key Management Service (AWS KMS) default Lambda ke
E. Store the credentials in the environment variables of each Lambda functio
F. Load the credentials from the environment variables in the Lambda cod
G. Restrict access to the KMS key o that only the IT security team can access the key.
H. Store the database credentials in the environment variables of each Lambda functio
I. Encrypt the environment variables by using an AWS Key Management Service (AWS KMS) customer managed ke
J. Restrict access to the customer managed key so that only the IT security team can access the key.
K. Store the database credentials in AWS Secrets Manager as a secret that is associated with an AWS Key Management Service (AWS KMS) customermanaged ke
L. Attach a role to each Lambda function to provide access to the secre
M. Restrict access to the secret and the customer managed key so that only the IT security team can access the secret and the key.

Answer: D

Explanation:
Storing the database credentials in AWS Secrets Manager as a secret that is associated with an AWS Key Management Service (AWS KMS) customer managed key will enable encrypting and managing the credentials securely1. AWS Secrets Manager helps you to securely encrypt, store, and retrieve credentials for your databases and other services2. Attaching a role to each Lambda function to provide access to the secret will enable retrieving the credentials programmatically1. Restricting access to the secret and the customer managed key so that only members of the IT security team's IAM user group can access them will enable meeting the security requirements1.

NEW QUESTION 25
- (Exam Topic 2)
A company has a few AWS accounts for development and wants to move its production application to AWS. The company needs to enforce Amazon Elastic Block Store (Amazon EBS) encryption at rest current production accounts and future production accounts only. The company needs a solution that includes built-in blueprints and guardrails.
Which combination of steps will meet these requirements? (Choose three.)

A. Use AWS CloudFormation StackSets to deploy AWS Config rules on production accounts.
B. Create a new AWS Control Tower landing zone in an existing developer accoun
C. Create OUs for account

D. Add production and development accounts to production and development OUs, respectively.
E. Create a new AWS Control Tower landing zone in the company's management accoun
F. Add production and development accounts to production and development OU
G. respectively.
H. Invite existing accounts to join the organization in AWS Organization
I. Create SCPs to ensure compliance.
J. Create a guardrail from the management account to detect EBS encryption.
K. Create a guardrail for the production OU to detect EBS encryption.

Answer: CDF

Explanation:
https://docs.aws.amazon.com/controltower/latest/userguide/controls.html https://docs.aws.amazon.com/controltower/latest/userguide/strongly-recommended-controls.html#ebs-enable-en AWS is now transitioning the previous term 'guardrail' new term 'control'.

NEW QUESTION 29
- (Exam Topic 2)
A software-as-a-service (SaaS) provider exposes APIs through an Application Load Balancer (ALB). The ALB connects to an Amazon Elastic Kubernetes Service (Amazon EKS) cluster that is deployed in the
us-east-I Region. The exposed APIs contain usage of a few non-standard REST methods: LINK, UNLINK, LOCK, and UNLOCK.
Users outside the United States are reporting long and inconsistent response times for these APIs. A solutions architect needs to resolve this problem with a solution that minimizes operational overhead.
Which solution meets these requirements?

A. Add an Amazon CloudFront distributio
B. Configure the ALB as the origin.
C. Add an Amazon API Gateway edge-optimized API endpoint to expose the API
D. Configure the ALB as the target.
E. Add an accelerator in AWS Global Accelerato
F. Configure the ALB as the origin.
G. Deploy the APIs to two additional AWS Regions: eu-west-l and ap-southeast-2. Add latency-based routing records in Amazon Route 53.

Answer: C

Explanation:
Adding an accelerator in AWS Global Accelerator will enable improving the performance of the APIs for local and global users1. AWS Global Accelerator is a service that uses the AWS global network to route traffic to the optimal regional endpoint based on health, client location, and policies1. Configuring the ALB as the origin will enable connecting the accelerator to the ALB that exposes the APIs2. AWS Global Accelerator supports non-standard REST methods such as LINK, UNLINK, LOCK, and UNLOCK3.

NEW QUESTION 30
- (Exam Topic 2)
A company is updating an application that customers use to make online orders. The number of attacks on the application by bad actors has increased recently. The company will host the updated application on an Amazon Elastic Container Service (Amazon ECS) cluster. The company will use Amazon DynamoDB to store application data. A public Application Load Balancer (ALB) will provide end users with access to the application. The company must prevent prevent attacks and ensure business continuity with minimal service interruptions during an ongoing attack.
Which combination of steps will meet these requirements MOST cost-effectively? (Select TWO.)

A. Create an Amazon CloudFront distribution with the ALB as the origi
B. Add a custom header and random value on the CloudFront domai
C. Configure the ALB to conditionally forward traffic if the header and value match.
D. Deploy the application in two AWS Region
E. Configure Amazon Route 53 to route to both Regions with equal weight.
F. Configure auto scaling for Amazon ECS task
G. Create a DynamoDB Accelerator (DAX) cluster.
H. Configure Amazon ElastiCache to reduce overhead on DynamoDB.
I. Deploy an AWS WAF web ACL that includes an appropriate rule grou
J. Associate the web ACL with the Amazon CloudFront distribution.

Answer: AE

Explanation:
The company should create an Amazon CloudFront distribution with the ALB as the origin. The company should add a custom header and random value on the CloudFront domain. The company should configure the ALB to conditionally forward traffic if the header and value match. The company should also deploy an AWS WAF web ACL that includes an appropriate rule group. The company should associate the web ACL with the Amazon CloudFront distribution. This solution will meet the requirements most cost-effectively because Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally with low latency, high transfer speeds, all within a
developer-friendly environment1. By creating an Amazon CloudFront distribution with the ALB as the origin, the company can improve the performance and availability of its application by caching static content at edge locations closer to end users. By adding a custom header and random value on the CloudFront domain, the company can prevent direct access to the ALB and ensure that only requests from CloudFront are forwarded to the ECS tasks. By configuring the ALB to conditionally forward traffic if the header and value match, the company can implement origin access identity (OAI) for its ALB origin. OAI is a feature that enables you to restrict access to your content by requiring users to access your content through CloudFront URLs2. By deploying an AWS WAF web ACL that includes an appropriate rule group, the company can prevent attacks and ensure business continuity with minimal service interruptions during an ongoing attack. AWS WAF is a web application firewall that lets you monitor and control web requests that are forwarded to your web applications. You can use AWS WAF to define customizable web security rules that control which traffic can access your web applications and which traffic should be blocked3. By associating the web ACL with the Amazon CloudFront distribution, the company can apply the web security rules to all requests that are forwarded by CloudFront.
The other options are not correct because:

- Deploying the application in two AWS Regions and configuring Amazon Route 53 to route to both Regions with equal weight would not prevent attacks or ensure business continuity. Amazon Route 53 is a highly available and scalable cloud Domain Name System (DNS) web service that routes end users to Internet applications by translating names like www.example.com into numeric IP addresses4. However, routing traffic to multiple Regions would not protect against attacks or provide failover in case of an outage. It would also increase operational complexity and costs compared to using CloudFront and AWS WAF.

- Configuring auto scaling for Amazon ECS tasks and creating a DynamoDB Accelerator (DAX) cluster would not prevent attacks or ensure business continuity. Auto scaling is a feature that enables you to automatically adjust your ECS tasks based on demand or a schedule. DynamoDB Accelerator (DAX) is a fully managed, highly available, in-memory cache for DynamoDB that delivers up to a 10x performance improvement. However, these features would not protect against attacks or provide failover in case of an outage. They would also increase operational complexity and costs compared to using CloudFront and AWS WAF.
- Configuring Amazon ElastiCache to reduce overhead on DynamoDB would not prevent attacks or ensure business continuity. Amazon ElastiCache is a fully managed in-memory data store service that makes it easy to deploy, operate, and scale popular open-source compatible in-memory data stores. However, this service would not protect against attacks or provide failover in case of an outage. It would also increase operational complexity and costs compared to using CloudFront and AWS WAF.

References:

- https://aws.amazon.com/cloudfront/
- https://aws.amazon.com/waf/
- https://aws.amazon.com/route53/
- https://aws.amazon.com/dynamodb/dax/
- https://aws.amazon.com/elasticache/

NEW QUESTION 33

- (Exam Topic 2)
A solutions architect needs to review the design of an Amazon EMR cluster that is using the EMR File System (EMRFS). The cluster performs tasks that are critical to business needs. The cluster is running Amazon EC2 On-Demand Instances at all times tor all task, primary, and core nodes. The EMR tasks run each morning, starting at 1 ;00 AM. and take 6 hours to finish running. The amount of time to complete the processing is not a priority because the data is not referenced until late in the day.
The solutions architect must review the architecture and suggest a solution to minimize the compute costs. Which solution should the solutions architect recommend to meet these requirements?

A. Launch all task, primary, and core nodes on Spool Instances in an instance flee
B. Terminate the cluster, including all instances, when the processing is completed.
C. Launch the primary and core nodes on On-Demand Instance
D. Launch the task nodes on Spot Instances in an instance flee
E. Terminate the cluster, including all instances, when the processing is complete
F. Purchase Compute Savings Plans to cover the On-Demand Instance usage.
G. Continue to launch all nodes on On-Demand Instance
H. Terminate the cluster, including all instances, when the processing is complete
I. Purchase Compute Savings Plans to cover the On-Demand Instance usage
J. Launch the primary and core nodes on On-Demand Instance
K. Launch the task nodes on Spot Instances in an instance flee
L. Terminate only the task node instances when the processing is complete
M. Purchase Compute Savings Plans to cover the On-Demand Instance usage.

Answer: A

Explanation:
Amazon EC2 Spot Instances offer spare compute capacity at steep discounts compared to On-Demand prices. Spot Instances can be interrupted by EC2 with two minutes of notification when EC2 needs the capacity back. Amazon EMR can handle Spot interruptions gracefully by decommissioning the nodes and redistributing the tasks to other nodes. By launching all nodes on Spot Instances in an instance fleet, the solutions architect can minimize the compute costs of the EMR cluster. An instance fleet is a collection of EC2 instances with different types and sizes that EMR automatically provisions to meet a defined target capacity. By terminating the cluster when the processing is completed, the solutions architect can avoid paying for idle resources. References:

- https://docs.aws.amazon.com/emr/latest/ManagementGuide/emr-managed-scaling.html
- https://docs.aws.amazon.com/emr/latest/ManagementGuide/emr-instance-fleet.html
- https://aws.amazon.com/blogs/big-data/optimizing-amazon-emr-for-resilience-and-cost-with-capacity-opt

NEW QUESTION 37

- (Exam Topic 2)
A company is running a critical stateful web application on two Linux Amazon EC2 instances behind an Application Load Balancer (ALB) with an Amazon RDS for MySQL database The company hosts the DNS records for the application in Amazon Route 53 A solutions architect must recommend a solution to improve the resiliency of the application
The solution must meet the following objectives:
• Application tier RPO of 2 minutes. RTO of 30 minutes
• Database tier RPO of 5 minutes RTO of 30 minutes
The company does not want to make significant changes to the existing application architecture The company must ensure optimal latency after a failover
Which solution will meet these requirements?

A. Configure the EC2 instances to use AWS Elastic Disaster Recovery Create a cross-Region read replica for the RDS DB instance Create an ALB in a second AWS Region Create an AWS Global Accelerator endpoint and associate the endpoint with the ALBs Update DNS records to point to the Global Accelerator endpoint
B. Configure the EC2 instances to use Amazon Data Lifecycle Manager (Amazon DLM) to take snapshots of the EBS volumes Configure RDS automated backups Configure backup replication to a second AWS Region Create an ALB in the second Region Create an AWS Global Accelerator endpoint, and associate the endpoint with the ALBs Update DNS records to point to the Global Accelerator endpoint
C. Create a backup plan in AWS Backup for the EC2 instances and RDS DB instance Configure backup replication to a second AWS Region Create an ALB in the second Region Configure an Amazon CloudFront distribution in front of the ALB Update DNS records to point to CloudFront
D. Configure the EC2 instances to use Amazon Data Lifecycle Manager (Amazon DLM) to take snapshots of the EBS volumes Create a cross-Region read replica for the RDS DB instance Create an ALB in a second AWS Region Create an AWS Global Accelerator endpoint and associate the endpoint with the ALBs

Answer: B

Explanation:

This option meets the RPO and RTO requirements for both the application and database tiers and uses tools like Amazon DLM and RDS automated backups to create and manage the backups. Additionally, it uses Global Accelerator to ensure low latency after failover by directing traffic to the closest healthy endpoint.

NEW QUESTION 38
- (Exam Topic 2)
A global manufacturing company plans to migrate the majority of its applications to AWS. However, the company is concerned about applications that need to remain within a specific country or in the company's central on-premises data center because of data regulatory requirements or requirements for latency of single-digit milliseconds. The company also is concerned about the applications that it hosts in some of its factory sites, where limited network infrastructure exists.
The company wants a consistent developer experience so that its developers can build applications once and deploy on premises, in the cloud, or in a hybrid architecture.
The developers must be able to use the same tools, APIs, and services that are familiar to them. Which solution will provide a consistent hybrid experience to meet these requirements?

A. Migrate all applications to the closest AWS Region that is complian
B. Set up an AWS Direct Connect connection between the central on-premises data center and AW
C. Deploy a Direct Connect gateway.
D. Use AWS Snowball Edge Storage Optimized devices for the applications that have data regulatory requirements or requirements for latency of single-digit millisecond
E. Retain the devices on premise
F. Deploy AWS Wavelength to host the workloads in the factory sites.
G. Install AWS Outposts for the applications that have data regulatory requirements or requirements for latency of single-digit millisecond
H. Use AWS Snowball Edge Compute Optimized devices to host the workloads in the factory sites.
I. Migrate the applications that have data regulatory requirements or requirements for latency ofsingle-digit milliseconds to an AWS Local Zon
J. Deploy AWS Wavelength to host the workloads in the factory sites.

Answer: C

Explanation:
Installing AWS Outposts for the applications that have data regulatory requirements or requirements for latency of single-digit milliseconds will provide a fully managed service that extends AWS infrastructure, services, APIs, and tools to customer premises1. AWS Outposts allows customers to run some AWS services locally and connect to a broad range of services available in the local AWS Region1. Using AWS Snowball Edge Compute Optimized devices to host the workloads in the factory sites will provide local compute and storage resources for locations with limited network infrastructure2. AWS Snowball Edge devices can run Amazon EC2 instances and AWS Lambda functions locally and sync data with AWS when network connectivity is available2.

NEW QUESTION 43
- (Exam Topic 2)
A company is running an application on Amazon EC2 instances in the AWS Cloud. The application is using a MongoDB database with a replica set as its data tier. The MongoDB database is installed on systems in the company's on-premises data center and is accessible through an AWS Direct Connect connection to the data center environment.
A solutions architect must migrate the on-premises MongoDB database to Amazon DocumentDB (with MongoDB compatibility).
Which strategy should the solutions architect choose to perform this migration?

A. Create a fleet of EC2 instance
B. Install MongoDB Community Edition on the EC2 instances, and create a databas
C. Configure continuous synchronous replication with the database that is running in theon-premises data center.
D. Create an AWS Database Migration Service (AWS DMS) replication instanc
E. Create a source endpoint for the on-premises MongoDB database by using change data capture (CDC). Create a target endpoint for the Amazon DocumentDB databas
F. Create and run a DMS migration task.
G. Create a data migration pipeline by using AWS Data Pipelin
H. Define data nodes for the on-premises MongoDB database and the Amazon DocumentDB databas
I. Create a scheduled task to run the data pipeline.
J. Create a source endpoint for the on-premises MongoDB database by using AWS Glue crawlers.Configure continuous asynchronous replication between the MongoDB database and the Amazon DocumentDB database.

Answer: B

Explanation:
https://aws.amazon.com/getting-started/hands-on/move-to-managed/migrate-mongodb-to-documentdb/

NEW QUESTION 45
- (Exam Topic 2)
A company wants to optimize AWS data-transfer costs and compute costs across developer accounts within the company's organization in AWS Organizations Developers can configure VPCs and launch Amazon EC2 instances in a single AWS Region The EC2 instances retrieve approximately 1 TB of data each day from Amazon S3
The developer activity leads to excessive monthly data-transfer charges and NAT gateway processing charges between EC2 instances and S3 buckets, along with high compute costs The company wants to proactively enforce approved architectural patterns for any EC2 instance and VPC infrastructure that developers deploy within the AWS accounts The company does not want this enforcement to negatively affect the speed at which the developers can perform their tasks
Which solution will meet these requirements MOST cost-effectively?

A. Create SCPs to prevent developers from launching unapproved EC2 instance types Provide the developers with an AWS CloudFormation template to deploy an approved VPC configuration with S3 interface endpoints Scope the developers* IAM permissions so that the developers can launch VPC resources only with CloudFormation
B. Create a daily forecasted budget with AWS Budgets to monitor EC2 compute costs and S3 data-transfer costs across the developer accounts When the forecasted cost is 75% of the actual budget cost, send an alert to the developer teams If the actual budget cost is 100%. create a budget action to terminate the developers' EC2 instances and VPC infrastructure
C. Create an AWS Service Catalog portfolio that users can use to create an approved VPC configuration with S3 gateway endpoints and approved EC2 instances Share the portfolio with the developer accounts Configure an AWS Service Catalog launch constraint to use an approved IAM role Scope the developers' IAM permissions to allow access only to AWS Service Catalog
D. Create and deploy AWS Config rules to monitor the compliance of EC2 and VPC resources in the developer AWS accounts If developers launch unapproved

EC2 instances or if developers create VPCs without S3 gateway endpoints perform a remediation action to terminate the unapproved resources

Answer: C

Explanation:
This solution allows developers to quickly launch resources using pre-approved configurations and instance types, while also ensuring that the resources launched comply with the company's architectural patterns. This can help reduce data transfer and compute costs associated with the resources. Using AWS Service Catalog also allows the company to control access to the approved configurations and resources through the use of IAM roles, while also allowing developers to quickly provision resources without negatively affecting their ability to perform their tasks.
Reference:
AWS Service Catalog: https://aws.amazon.com/service-catalog/ AWS Service Catalog Constraints:
https://docs.aws.amazon.com/servicecatalog/latest/adminguide/constraints.html
AWS Service Catalog Launch Constraints: https://docs.aws.amazon.com/servicecatalog/latest/adminguide/launch-constraints.html

NEW QUESTION 46
- (Exam Topic 2)
A company is running a containerized application in the AWS Cloud. The application is running by using Amazon Elastic Container Service (Amazon ECS) on a set of Amazon EC2 instances. The EC2 instances run in an Auto Scaling group.
The company uses Amazon Elastic Container Registry (Amazon ECR) to store its container images. When a new image version is uploaded, the new image version receives a unique tag.
The company needs a solution that inspects new image versions for common vulnerabilities and exposures. The solution must automatically delete new image tags that have Critical or High severity findings. The solution also must notify the development team when such a deletion occurs.
Which solution meets these requirements?

A. Configure scan on push on the repository Use Amazon EventBridge to invoke an AWS Step Functions state machine when a scan is complete for images that have Critical or High severity finding
B. Use the Step Functions state machine to delete the image tag for those images and to notify the development team through Amazon Simple Notification Service (Amazon SNS).
C. Configure scan on push on the repository Configure scan results to be pushed to an Amazon Simple Queue Service (Amazon SQS) queu
D. Invoke an AWS Lambda function when a new message is added to the SQS queu
E. Use the Lambda function to delete the image tag for images that have Critical or High seventy finding
F. Notify the development team by using Amazon Simple Email Service (Amazon SES).
G. Schedule an AWS Lambda function to start a manual image scan every hou
H. Configure Amazon EventBridge to invoke another Lambda function when a scan is complet
I. Use the second Lambda function to delete the image tag for images that have Critical or High severity finding
J. Notify the development team by using Amazon Simple Notification Service (Amazon SNS).
K. Configure periodic image scan on the repositor
L. Configure scan results to be added lo an Amazon Simple Queue Service (Amazon SQS) queu
M. Invoke an AWS Step Functions state machine when a new message is added to the SQS queu
N. Use the Step Functions state machine to delete the image tag for images that have Critical or High severity finding
O. Notify the development team by using Amazon Simple Email Service (Amazon SES).

Answer: A

Explanation:
https://docs.aws.amazon.com/AmazonECR/latest/userguide/ecr-eventbridge.html "Activating an AWS Step Functions state machine"
https://docs.aws.amazon.com/step-functions/latest/dg/tutorial-creating-lambda-state-machine.html

NEW QUESTION 47
- (Exam Topic 2)
A company is running a web application in a VPC. The web application runs on a group of Amazon EC2 instances behind an Application Load Balancer (ALB). The ALB is using AWS WAF.
An external customer needs to connect to the web application. The company must provide IP addresses to all external customers.
Which solution will meet these requirements with the LEAST operational overhead?

A. Replace the ALB with a Network Load Balancer (NLB). Assign an Elastic IP address to the NLB.
B. Allocate an Elastic IP addres
C. Assign the Elastic IP address to the ALProvide the Elastic IP address to the customer.
D. Create an AWS Global Accelerator standard accelerato
E. Specify the ALB as the accelerator's endpoint.Provide the accelerator's IP addresses to the customer.
F. Configure an Amazon CloudFront distributio
G. Set the ALB as the origi
H. Ping the distribution's DNS name to determine the distribution's public IP addres
I. Provide the IP address to the customer.

Answer: C

Explanation:
https://docs.aws.amazon.com/global-accelerator/latest/dg/about-accelerators.alb-accelerator.html Option A is wrong. AWS WAF does not support associating with NLB.
https://docs.aws.amazon.com/waf/latest/developerguide/waf-chapter.html Option B is wrong. An ALB does not support an Elastic IP address.
https://aws.amazon.com/elasticloadbalancing/features/

NEW QUESTION 49
- (Exam Topic 2)
A company runs an intranet application on premises. The company wants to configure a cloud backup of the application. The company has selected AWS Elastic Disaster Recovery for this solution.
The company requires that replication traffic does not travel through the public internet. The application also must not be accessible from the internet. The company does not want this solution to consume all available network bandwidth because other applications require bandwidth.
Which combination of steps will meet these requirements? (Select THREE.)

A. Create a VPC that has at least two private subnets, two NAT gateways, and a virtual private gateway.
B. Create a VPC that has at least two public subnets, a virtual private gateway, and an internet gateway.
C. Create an AWS Site-to-Site VPN connection between the on-premises network and the target AWS network.
D. Create an AWS Direct Connect connection and a Direct Connect gateway between the on-premises network and the target AWS network.
E. During configuration of the replication servers, select the option to use private IP addresses for data replication.
F. During configuration of the launch settings for the target servers, select the option to ensure that the Recovery instance's private IP address matches the source server's private IP address.

Answer: BDE

Explanation:
AWS Elastic Disaster Recovery (AWS DRS) is a service that minimizes downtime and data loss with fast, reliable recovery of on-premises and cloud-based applications using affordable storage, minimal compute, and point-in-time recovery1. Users can set up AWS DRS on their source servers to initiate secure data replication to a staging area subnet in their AWS account, in the AWS Region they select. Users can then launch recovery instances on AWS within minutes, using the most up-to-date server state or a previous point in time.
To configure a cloud backup of the application with AWS DRS, users need to create a VPC that has at least
two public subnets, a virtual private gateway, and an internet gateway. A VPC is a logically isolated section of the AWS Cloud where users can launch AWS resources in a virtual network that they define2. A public subnet is a subnet that has a route to an internet gateway3. A virtual private gateway is the VPN concentrator on the Amazon side of the Site-to-Site VPN connection4. An internet gateway is a horizontally scaled, redundant, and highly available VPC component that allows communication between instances in the VPC and the internet. Users need to create at least two public subnets for redundancy and high availability. Users need to create a virtual private gateway and attach it to the VPC to enable VPN connectivity between the on-premises network and the target AWS network. Users need to create an internet gateway and attach it to the VPC to enable internet access for the replication servers.
To ensure that replication traffic does not travel through the public internet, users need to create an AWS Direct Connect connection and a Direct Connect gateway between the on-premises network and the target AWS network. AWS Direct Connect is a service that establishes a dedicated network connection from an on-premises network to one or more VPCs. A Direct Connect gateway is a globally available resource that allows users to connect multiple VPCs across different Regions to their on-premises networks using one or more Direct Connect connections. Users need to create an AWS Direct Connect connection between their on-premises network and an AWS Region. Users need to create a Direct Connect gateway and associate it with their VPC and their Direct Connect connection.
To ensure that the application is not accessible from the internet, users need to select the option to use private IP addresses for data replication during configuration of the replication servers. This option configures the replication servers with private IP addresses only, without assigning any public IP addresses or Elastic IP addresses. This way, the replication servers can only communicate with other resources within the VPC or through VPN connections.
Option A is incorrect because creating a VPC that has at least two private subnets, two NAT gateways, and a virtual private gateway is not necessary or cost-effective. A private subnet is a subnet that does not have a route to an internet gateway3. A NAT gateway is a highly available, managed Network Address Translation (NAT) service that enables instances in a private subnet to connect to the internet or other AWS services, but prevents the internet from initiating connections with those instances. Users do not need to create private subnets or NAT gateways for this use case, as they can use public subnets with private IP addresses for data replication.
Option C is incorrect because creating an AWS Site-to-Site VPN connection between the on-premises network and the target AWS network will not ensure that replication traffic does not travel through the public
internet. A Site-to-Site VPN connection consists of two VPN tunnels between an on-premises customer
gateway device and a virtual private gateway in your VPC4. The VPN tunnels are encrypted using IPSec protocols, but they still use public IP addresses for communication. Users need to use AWS Direct Connect instead of Site-to-Site VPN for this use case.
Option F is incorrect because selecting the option to ensure that the Recovery instance’s private IP address matches the source server’s private IP address during configuration of the launch settings for the target servers will not ensure that the application is not accessible from the internet. This option configures the Recovery instance with an identical private IP address as its source server when launched in drills or recovery mode. However, this option does not prevent assigning public IP addresses or Elastic IP addresses to the Recovery instance. Users need to select the option to use private IP addresses for data replication instead.

NEW QUESTION 52
- (Exam Topic 2)
A company is building a hybrid environment that includes servers in an on-premises data center and in the AWS Cloud. The company has deployed Amazon EC2 instances in three VPCs. Each VPC is in a different AWS Region. The company has established an AWS Direct Connect connection to the data center from the Region that is closest to the data center.
The company needs the servers in the on-premises data center to have access to the EC2 instances in all three VPCs. The servers in the on-premises data center also must have access to AWS public services.
Which combination of steps will meet these requirements with the LEAST cost? (Select TWO.)

A. Create a Direct Connect gateway in the Region that is closest to the data cente
B. Attach the Direct Connect connection to the Direct Connect gatewa
C. Use the
D. Direct Connect gateway to connect the VPCs in the other two Regions.
E. Set up additional Direct Connect connections from the on-premises data center to the other two Regions.
F. Create a private VI
G. Establish an AWS Site-to-Site VPN connection over the private VIF to the VPCs in the other two Regions.
H. Create a public VI
I. Establish an AWS Site-to-Site VPN connection over the public VIF to the VPCs in the other two Regions.
J. Use VPC peering to establish a connection between the VPCs across the Region
K. Create a private VIF with the existing Direct Connect connection to connect to the peered VPCs.

Answer: AE

Explanation:
A Direct Connect gateway allows you to connect multiple VPCs across different Regions to a Direct Connect connection1. A public VIF allows you to access AWS public services such as EC21. A Site-to-Site VPN connection over the public VIF provides encryption and redundancy for the traffic between the on-premises data center and the VPCs2. This solution is cheaper than setting up additional Direct Connect connections or using a private VIF with VPC peering.

NEW QUESTION 54
- (Exam Topic 2)
A company has millions of objects in an Amazon S3 bucket. The objects are in the S3 Standard storage class. All the S3 objects are accessed frequently. The number of users and applications that access the objects is increasing rapidly. The objects are encrypted with server-side encryption with AWS KMS Keys (SSE-KMS).
A solutions architect reviews the company's monthly AWS invoice and notices that AWS KMS costs are increasing because of the high number of requests from Amazon S3. The solutions architect needs to optimize costs with minimal changes to the application.

Which solution will meet these requirements with the LEAST operational overhead?

A. Create a new S3 bucket that has server-side encryption with customer-provided keys (SSE-C) as the encryption typ
B. Copy the existing objects to the new S3 bucke
C. Specify SSE-C.
D. Create a new S3 bucket that has server-side encryption with Amazon S3 managed keys (SSE-S3) as the encryption typ
E. Use S3 Batch Operations to copy the existing objects to the new S3 bucke
F. Specify SSE-S3.
G. Use AWS CloudHSM to store the encryption key
H. Create a new S3 bucke
I. Use S3 Batch Operations to copy the existing objects to the new S3 bucke
J. Encrypt the objects by using the keys from CloudHSM.
K. Use the S3 Intelligent-Tiering storage class for the S3 bucke
L. Create an S3 Intelligent-Tiering archive configuration to transition objects that are not accessed for 90 days to S3 Glacier Deep Archive.

Answer: B

Explanation:
To reduce the volume of Amazon S3 calls to AWS KMS, use Amazon S3 bucket keys, which are protected encryption keys that are reused for a limited time in Amazon S3. Bucket keys can reduce costs for AWS KMS requests by up to 99%. You can configure a bucket key for all objects in an Amazon S3 bucket, or for a specific object in an Amazon S3 bucket. https://docs.aws.amazon.com/fr_fr/kms/latest/developerguide/services-s3.html

NEW QUESTION 58
- (Exam Topic 2)
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 VPC
B. Create a Route 53 inbound resolver in the shared services VP
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 VPC
E. Deploy an Amazon EC2 conditional forwarder in the shared services VP
F. Attach all VPCs to the transit gateway and create forwarding rules in theon-premises DNS server for cloud.example.com that point to the conditional forwarder.
G. Associate the private hosted zone to the shared services VP
H. Create a Route 53 outbound resolver in the shared services VP
I. Attach all VPCs to the transit gateway and create forwarding rules in theon-premises DNS server for cloud.example.com that point to the outbound resolver.
J. Associate the private hosted zone to the shared services VP
K. Create a Route 53 inbound resolver in the shared services VP
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: A

Explanation:
Amazon Route 53 Resolver is a managed DNS resolver service from Route 53 that helps to create conditional forwarding rules to redirect query traffic1. By associating the private hosted zone to all the VPCs, the solutions architect can enable DNS resolution for cloud.example.com within the VPCs. By creating a Route 53 inbound resolver in the shared services VPC, the solutions architect can enable DNS resolution for cloud.example.com from on-premises systems. By attaching all VPCs to the transit gateway, the solutions architect can enable connectivity between the VPCs and the on-premises network through AWS Direct Connect. By creating forwarding rules in the on-premises DNS server for cloud.example.com that point to the inbound resolver, the solutions architect can direct DNS queries for cloud.example.com to the Route 53 Resolver endpoint in AWS. This solution will provide the highest performance as it leverages Route 53 Resolver’s optimized routing and caching capabilities.
References: 1: https://aws.amazon.com/route53/resolver/

NEW QUESTION 63
- (Exam Topic 2)
A company operates an on-premises software-as-a-service (SaaS) solution that ingests several files daily. The company provides multiple public SFTP endpoints to its customers to facilitate the file transfers. The customers add the SFTP endpoint IP addresses to their firewall allow list for outbound traffic. Changes to the SFTP endmost IP addresses are not permitted.
The company wants to migrate the SaaS solution to AWS and decrease the operational overhead of the file transfer service.
Which solution meets these requirements?

A. Register the customer-owned block of IP addresses in the company's AWS accoun
B. Create Elastic IP addresses from the address pool and assign them to an AWS Transfer for SFTP endpoin
C. Use AWS Transfer to store the files in Amazon S3.
D. Add a subnet containing the customer-owned block of IP addresses to a VPC Create Elastic IP addresses from the address pool and assign them to an Application Load Balancer (ALB). Launch EC2 instances hosting FTP services in an Auto Scaling group behind the AL
E. Store the files in attached Amazon Elastic Block Store (Amazon EBS) volumes.
F. Register the customer-owned block of IP addresses with Amazon Route 53. Create alias records inRoute 53 that point to a Network Load Balancer (NLB). Launch EC2 instances hosting FTP services in an Auto Scaling group behind the NL
G. Store the files in Amazon S3.
H. Register the customer-owned block of IP addresses in the company's AWS accoun
I. Create Elastic IP addresses from the address pool and assign them to an Amazon S3 VPC endpoin
J. Enable SFTP support on the S3 bucket.

Answer: A

Explanation:
Bring your own IP addresses (BYOIP) You can bring part or all of your publicly routable IPv4 or IPv6 address range from your on-premises network to your AWS account. You continue to own the address range, but AWS advertises it on the internet by default. After you bring the address range to AWS, it appears in your AWS account as an address pool. https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ec2-byoip.html AWS Transfer for SFTP enables you to easily move your file transfer workloads that use the Secure Shell File Transfer Protocol (SFTP) to AWS without needing to modify your applications or manage any SFTP servers. https://aws.amazon.com/about-aws/whats-new/2018/11/aws-transfer-for-sftp-fully-managed-sftp-for-s3/

NEW QUESTION 68
- (Exam Topic 2)
A company wants to run a custom network analysis software package to inspect traffic as traffic leaves and enters a VPC. The company has deployed the solution by using AWS Cloud Formation on three Amazon EC2 instances in an Auto Scaling group. All network routing has been established to direct traffic to the EC2 instances.
Whenever the analysis software stops working, the Auto Scaling group replaces an instance. The network routes are not updated when the instance replacement occurs.
Which combination of steps will resolve this issue? {Select THREE.)

A. Create alarms based on EC2 status check metrics that will cause the Auto Scaling group to replace the failed instance.
B. Update the Cloud Formation template to install the Amazon CloudWatch agent on the EC2 instances.Configure the CloudWatch agent to send process metrics for the application.
C. Update the Cloud Formation template to install AWS Systems Manager Agent on the EC2 instances.Configure Systems Manager Agent to send process metrics for the application.
D. Create an alarm for the custom metric in Amazon CloudWatch for the failure scenario
E. Configure the alarm to publish a message to an Amazon Simple Notification Service {Amazon SNS) topic.
F. Create an AWS Lambda function that responds to the Amazon Simple Notification Service (Amazon SNS) message to take the instance out of servic
G. Update the network routes to point to the replacement instance.
H. In the Cloud Formation template, write a condition that updates the network routes when a replacement instance is launched.

Answer: BDE

NEW QUESTION 70
- (Exam Topic 2)
A telecommunications company is running an application on AWS. The company has set up an AWS Direct Connect connection between the company's on-premises data center and AWS. The company deployed the application on Amazon EC2 instances in multiple Availability Zones behind an internal Application Load Balancer (ALB). The company's clients connect from the on-premises network by using HTTPS. The TLS terminates in the ALB. The company has multiple target groups and uses path-based routing to forward requests based on the URL path.
The company is planning to deploy an on-premises firewall appliance with an allow list that is based on IP address. A solutions architect must develop a solution to allow traffic flow to AWS from the on-premises network so that the clients can continue to access the application.
Which solution will meet these requirements?

A. Configure the existing ALB to use static IP addresse
B. Assign IP addresses in multiple Availability Zones to the AL
C. Add the ALB IP addresses to the firewall appliance.
D. Create a Network Load Balancer (NLB). Associate the NLB with one static IP addresses in multiple Availability Zone
E. Create an ALB-type target group for the NLB and add the existing ALAdd the NLB IP addresses to the firewall applianc
F. Update the clients to connect to the NLB.
G. Create a Network Load Balancer (NLB). Associate the LNB with one static IP addresses in multiple Availability Zone
H. Add the existing target groups to the NL
I. Update the clients to connect to the NL
J. Delete the ALB Add the NLB IP addresses to the firewall appliance.
K. Create a Gateway Load Balancer (GWLB). Assign static IP addresses to the GWLB in multiple Availability Zone
L. Create an ALB-type target group for the GWLB and add the existing AL
M. Add the GWLB IP addresses to the firewall applianc
N. Update the clients to connect to the GWLB.

Answer: B

Explanation:
The company should create a Network Load Balancer (NLB) and associate it with one static IP address in multiple Availability Zones. The company should also create an ALB-type target group for the NLB and add the existing ALB. The company should add the NLB IP addresses to the firewall appliance and update the clients to connect to the NLB. This solution will allow traffic flow to AWS from the on-premises network by using static IP addresses that can be added to the firewall appliance's allow list. The NLB will forward requests to the ALB, which will use path-based routing to forward requests to the target groups.

NEW QUESTION 73
- (Exam Topic 2)
A company has a website that runs on Amazon EC2 instances behind an Application Load Balancer (ALB). The instances are in an Auto Scaling group. The ALB is associated with an AWS WAF web ACL.
The website often encounters attacks in the application layer. The attacks produce sudden and significant increases in traffic on the application server. The access logs show that each attack originates from different IP addresses. A solutions architect needs to implement a solution to mitigate these attacks.
Which solution will meet these requirements with the LEAST operational overhead?

A. Create an Amazon CloudWatch alarm that monitors server acces
B. Set a threshold based on access by IP addres
C. Configure an alarm action that adds the IP address to the web ACL's deny list.
D. Deploy AWS Shield Advanced in addition to AWS WA
E. Add the ALB as a protected resource.
F. Create an Amazon CloudWatch alarm that monitors user IP addresse
G. Set a threshold based on access by IP addres
H. Configure the alarm to invoke an AWS Lambda function to add a deny rule in the application server's subnet route table for any IP addresses that activate the alarm.
I. Inspect access logs to find a pattern of IP addresses that launched the attack

J. Use an Amazon Route 53 geolocation routing policy to deny traffic from the countries that host those IP addresses.

Answer: C

Explanation:
"The AWS WAF API supports security automation such as blacklisting IP addresses that exceed request limits, which can be useful for mitigating HTTP flood attacks." >
https://aws.amazon.com/blogs/security/how-to-protect-dynamic-web-applications-against-ddos-attacks-by-using

NEW QUESTION 75
- (Exam Topic 2)
A company runs a customer service center that accepts calls and automatically sends all customers a managed, interactive, two-way experience survey by text message.
The applications that support the customer service center run on machines that the company hosts in an on-premises data center. The hardware that the company uses is old, and the company is experiencing downtime with the system. The company wants to migrate the system to AWS to improve reliability.
Which solution will meet these requirements with the LEAST ongoing operational overhead?

A. Use Amazon Connect to replace the old call center hardwar
B. Use Amazon Pinpoint to send text message surveys to customers.
C. Use Amazon Connect to replace the old call center hardwar
D. Use Amazon Simple Notification Service (Amazon SNS) to send text message surveys to customers.
E. Migrate the call center software to Amazon EC2 instances that are in an Auto Scaling grou
F. Use the EC2 instances to send text message surveys to customers.
G. Use Amazon Pinpoint to replace the old call center hardware and to send text message surveys to customers.

Answer: A

Explanation:
Amazon Connect is a cloud-based contact center service that allows you to set up a virtual call center for your business. It provides an easy-to-use interface for managing customer interactions through voice and chat. Amazon Connect integrates with other AWS services, such as Amazon S3 and Amazon Kinesis, to help you collect, store, and analyze customer data for insights into customer behavior and trends. On the other hand, Amazon Pinpoint is a marketing automation and analytics service that allows you to engage with your customers across different channels, such as email, SMS, push notifications, and voice. It helps you create personalized campaigns based on user behavior and enables you to track user engagement and retention. While both services allow you to communicate with your customers, they serve different purposes. Amazon Connect is focused on customer support and service, while Amazon Pinpoint is focused on marketing and engagement.

NEW QUESTION 78
- (Exam Topic 2)
A company wants to containerize a multi-tier web application and move the application from an on-premises data center to AWS. The application includes web. application, and database tiers. The company needs to make the application fault tolerant and scalable. Some frequently accessed data must always be available across application servers. Frontend web servers need session persistence and must scale to meet increases in traffic.
Which solution will meet these requirements with the LEAST ongoing operational overhead?

A. Run the application on Amazon Elastic Container Service (Amazon ECS) on AWS Fargat
B. Use Amazon Elastic File System (Amazon EFS) for data that is frequently accessed between the web and application tier
C. Store the frontend web server session data in Amazon Simple Queue Service (Amazon SOS).
D. Run the application on Amazon Elastic Container Service (Amazon ECS) on Amazon EC2. Use Amazon ElastiCache for Redis to cache frontend web server session dat
E. Use Amazon Elastic Block Store (Amazon EBS) with Multi-Attach on EC2 instances that are distributed across multiple Availability Zones.
F. Run the application on Amazon Elastic Kubernetes Service (Amazon EKS). Configure Amazon EKS to use managed node group
G. Use ReplicaSets to run the web servers and application
H. Create an Amazon Elastic File System (Amazon EFS) Me syste
I. Mount the EFS file system across all EKS pods to store frontend web server session data.
J. Deploy the application on Amazon Elastic Kubernetes Service (Amazon EKS) Configure Amazon EKS to use managed node group
K. Run the web servers and application as Kubernetes deployments in the EKS cluste
L. Store the frontend web server session data in an Amazon DynamoDB tabl
M. Create an Amazon Elastic File System (Amazon EFS) volume that all applications will mount at the time of deployment.

Answer: D

Explanation:
Deploying the application on Amazon EKS with managed node groups simplifies the operational overhead of managing the Kubernetes cluster. Running the web servers and application as Kubernetes deployments ensures that the desired number of pods are always running and can scale up or down as needed. Storing the frontend web server session data in an Amazon DynamoDB table provides a fast, scalable, and durable storage option that can be accessed across multiple Availability Zones. Creating an Amazon EFS volume that all applications will mount at the time of deployment allows the application to share data that is frequently accessed between the web and application tiers. References:
- https://docs.aws.amazon.com/eks/latest/userguide/managed-node-groups.html
- https://docs.aws.amazon.com/eks/latest/userguide/deployments.html
- https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Introduction.html
- https://docs.aws.amazon.com/efs/latest/ug/mounting-fs.html

NEW QUESTION 80
- (Exam Topic 2)
A company runs its sales reporting application in an AWS Region in the United States. The application uses an Amazon API Gateway Regional API and AWS Lambda functions to generate on-demand reports from data in an Amazon RDS for MySQL database. The frontend of the application is hosted on Amazon S3 and is accessed by users through an Amazon CloudFront distribution. The company is using Amazon Route 53 as the DNS service for the domain. Route 53 is configured with a simple routing policy to route traffic to the API Gateway API.
In the next 6 months, the company plans to expand operations to Europe. More than 90% of the database traffic is read-only traffic. The company has already

deployed an API Gateway API and Lambda functions in the new Region.
A solutions architect must design a solution that minimizes latency for users who download reports. Which solution will meet these requirements?

A. Use an AWS Database Migration Service (AWS DMS) task with full load to replicate the primary database in the original Region to the database in the new Regio
B. Change the Route 53 record to latency-based routing to connect to the API Gateway API.
C. Use an AWS Database Migration Service (AWS DMS) task with full load plus change data capture (CDC) to replicate the primary database in the original Region to the database in the new Regio
D. Change the Route 53 record to geolocation routing to connect to the API Gateway API.
E. Configure a cross-Region read replica for the RDS database in the new Regio
F. Change the Route 53 record to latency-based routing to connect to the API Gateway API.
G. Configure a cross-Region read replica for the RDS database in the new Regio
H. Change the Route 53 record to geolocation routing to connect to the API

Answer: C

Explanation:
The company should configure a cross-Region read replica for the RDS database in the new Region. The company should change the Route 53 record to latency-based routing to connect to the API Gateway API. This solution will meet the requirements because a cross-Region read replica is a feature that enables you to create a MariaDB, MySQL, Oracle, PostgreSQL, or SQL Server read replica in a different Region from the source DB instance. You can use cross-Region read replicas to improve availability and disaster recovery, scale out globally, or migrate an existing database to a new Region1. By creating a cross-Region read replica for the RDS database in the new Region, the company can have a standby copy of its primary database that can serve read-only traffic from users in Europe. A latency-based routing policy is a feature that enables you to route traffic based on the latency between your users and your resources. You can use latency-based routing to route traffic to the resource that provides the best latency2. By changing the Route 53 record to latency-based routing, the company can minimize latency for users who download reports by connecting them to the API Gateway API in the Region that provides the best response time.
The other options are not correct because:

- Using AWS Database Migration Service (AWS DMS) to replicate the primary database in the original Region to the database in the new Region would not be as cost-effective or simple as using a
cross-Region read replica. AWS DMS is a service that enables you to migrate relational databases, data
warehouses, NoSQL databases, and other types of data stores. You can use AWS DMS to perform one-time migrations or continuous data replication with high availability and consolidate databases into
a petabyte-scale data warehouse3. However, AWS DMS requires more configuration and management than creating a cross-Region read replica, which is fully managed by Amazon RDS. AWS DMS also incurs additional charges for replication instances and tasks.
- Creating an Amazon API Gateway Data API service integration with Amazon Redshift would not help with disaster recovery or minimizing latency. The Data API is a feature that enables you to query your Amazon Redshift cluster using HTTP requests, without needing a persistent connection or a SQL client. It is useful for building applications that interact with Amazon Redshift, but not for replicating or recovering data from an RDS database.
- Creating an AWS Data Exchange datashare by connecting AWS Data Exchange to the Redshift cluster would not help with disaster recovery or minimizing latency. AWS Data Exchange is a service that makes it easy for AWS customers to exchange data in the cloud. You can use AWS Data Exchange to subscribe to a diverse selection of third-party data products or offer your own data products to other AWS customers. A datashare is a feature that enables you to share live and secure access to your Amazon Redshift data across your accounts or with third parties without copying or moving the underlying data. It is useful for sharing query results and views with other users, but not for replicating or recovering data from an RDS database.

References:

- https://aws.amazon.com/dms/
- https://docs.aws.amazon.com/redshift/latest/mgmt/data-api.html
- https://aws.amazon.com/data-exchange/
- https://docs.aws.amazon.com/redshift/latest/dg/datashare-overview.html

NEW QUESTION 82
- (Exam Topic 2)
A company runs a processing engine in the AWS Cloud The engine processes environmental data from logistics centers to calculate a sustainability index The company has millions of devices in logistics centers that are spread across Europe The devices send information to the processing engine through a RESTful API The API experiences unpredictable bursts of traffic The company must implement a solution to process all data that the devices send to the processing engine Data loss is unacceptable
Which solution will meet these requirements?

A. Create an Application Load Balancer (ALB) for the RESTful API Create an Amazon Simple Queue Service (Amazon SQS) queue Create a listener and a target group for the ALB Add the SQS queue as the target Use a container that runs in Amazon Elastic Container Service (Amazon ECS) with the Fargate launch type to process messages in the queue
B. Create an Amazon API Gateway HTTP API that implements the RESTful API Create an Amazon Simple Queue Service (Amazon SQS) queue Create an API Gateway service integration with the SQS queue Create an AWS Lambda function to process messages in the SQS queue
C. Create an Amazon API Gateway REST API that implements the RESTful API Create a fleet of Amazon EC2 instances in an Auto Scaling group Create an API Gateway Auto Scaling group proxy integration Use the EC2 instances to process incoming data
D. Create an Amazon CloudFront distribution for the RESTful API Create a data stream in Amazon Kinesis Data Streams Set the data stream as the origin for the distribution Create an AWS Lambda function to consume and process data in the data stream

Answer: A

Explanation:
it will use the ALB to handle the unpredictable bursts of traffic and route it to the SQS queue. The SQS queue will act as a buffer to store incoming data temporarily and the container running in Amazon ECS with the Fargate launch type will process messages in the queue. This approach will ensure that all data is processed and prevent data loss.

NEW QUESTION 85
- (Exam Topic 2)
A company provides auction services for artwork and has users across North America and Europe. The company hosts its application in Amazon EC2 instances in the us-east-1 Region. Artists upload photos of their work as large-size, high-resolution image files from their mobile phones to a centralized Amazon S3 bucket created in the us-east-l Region. The users in Europe are reporting slow performance for their Image uploads.
How can a solutions architect improve the performance of the image upload process?

A. Redeploy the application to use S3 multipart uploads.
B. Create an Amazon CloudFront distribution and point to the application as a custom origin
C. Configure the buckets to use S3 Transfer Acceleration.
D. Create an Auto Scaling group for the EC2 instances and create a scaling policy.

Answer: C

Explanation:
Transfer acceleration. S3 Transfer Acceleration utilizes the Amazon CloudFront global network of edge
locations to accelerate the transfer of data to and from S3 buckets. By enabling S3 Transfer Acceleration on the centralized S3 bucket, the users in Europe will experience faster uploads as their data will be routed through the closest CloudFront edge location.

NEW QUESTION 86
- (Exam Topic 2)
A company is running a compute workload by using Amazon EC2 Spot Instances that are in an Auto Scaling group. The launch template uses two placement groups and a single instance type.
Recently, a monitoring system reported Auto Scaling instance launch failures that correlated with longer wait times for system users. The company needs to improve the overall reliability of the workload.
Which solution will meet this requirement?

A. Replace the launch template with a launch configuration to use an Auto Scaling group that uses attribute-based instance type selection.
B. Create a new launch template version that uses attribute-based instance type selectio
C. Configure the Auto Scaling group to use the new launch template version.
D. Update the launch template Auto Scaling group to increase the number of placement groups.
E. Update the launch template to use a larger instance type.

Answer: B

Explanation:
https://docs.aws.amazon.com/autoscaling/ec2/userguide/create-asg-instance-type-requirements.html#use-attribut

NEW QUESTION 88
- (Exam Topic 2)
A company processes environment data. The has a 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 send in real time.
Which solution will meet these requirements?

A. Use Amazon Kinesis Data Firehouse 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 firehouse to send the data to Amazon Keyspaces (for Apache Cassandra).

Answer: B

Explanation:
Amazon Kinesis Data Streams is a service that enables real-time data ingestion and processing. Amazon DynamoDB is a NoSQL database that does not require fixed schemas for storage. By using Kinesis Data Streams and DynamoDB, the company can send the JSON data to a database that can handle schemaless data in real time. References:

- https://docs.aws.amazon.com/streams/latest/dev/introduction.html
- https://docs.aws.amazon.com/amazondynamodb/latest/developerguide/Introduction.html

NEW QUESTION 92
- (Exam Topic 1)
A solutions architect is investigating an issue in which a company cannot establish new sessions in Amazon Workspaces. An initial analysis indicates that the issue involves user profiles. The Amazon Workspaces environment is configured to use Amazon FSx for Windows File Server as the profile share storage. The FSx for Windows File Server file system is configured with 10 TB of storage.
The solutions architect discovers that the file system has reached its maximum capacity. The solutions architect must ensure that users can regain access. The solution also must prevent the problem from occurring again.
Which solution will meet these requirements?

A. Remove old user profiles to create spac
B. Migrate the user profiles to an Amazon FSx for Lustre file system.
C. Increase capacity by using the update-file-system comman
D. Implement an Amazon CloudWatch metric that monitors free spac
E. Use Amazon EventBridge to invoke an AWS Lambda function to increase capacity as required.
F. Monitor the file system by using the FreeStorageCapacity metric in Amazon CloudWatc
G. Use AWS Step Functions to increase the capacity as required.
H. Remove old user profiles to create spac
I. Create an additional FSx for Windows File Server file system.Update the user profile redirection for 50% of the users to use the new file system.

Answer: B

Explanation:
- It can prevent the issue from happening again by monitoring the file system with the FreeStorageCapacity metric in Amazon CloudWatch and using Amazon EventBridge to invoke an AWS Lambda function to increase the capacity as required. This ensures that the file system always has enough free space to store user profiles and avoids reaching maximum capacity.

NEW QUESTION 93
- (Exam Topic 1)
A start up company hosts a fleet of Amazon EC2 instances in private subnets using the latest Amazon Linux 2 AMI. The company's engineers rely heavily on SSH access to the instances for troubleshooting.
The company's existing architecture includes the following:
• A VPC with private and public subnets, and a NAT gateway
• Site-to-Site VPN for connectivity with the on-premises environment
• EC2 security groups with direct SSH access from the on-premises environment
The company needs to increase security controls around SSH access and provide auditing of commands executed by the engineers.
Which strategy should a solutions architect use?

A. Install and configure EC2 Instance Connect on the fleet of EC2 instance
B. Remove all security group rules attached to EC2 instances that allow inbound TCP on port 22. Advise the engineers to remotely access the instances by using the EC2 Instance Connect CLI.
C. Update the EC2 security groups to only allow inbound TCP on port 22 to the IP addresses of the engineer's device
D. Install the Amazon CloudWatch agent on all EC2 instances and send operating system audit logs to CloudWatch Logs.
E. Update the EC2 security groups to only allow inbound TCP on port 22 to the IP addresses of the engineer's device
F. Enable AWS Config for EC2 security group resource change
G. Enable AWS Firewall Manager and apply a security group policy that automatically remediates changes to rules.
H. Create an IAM role with the AmazonSSMManagedInstanceCore managed policy attache
I. Attach the IAM role to all the EC2 instance
J. Remove all security group rules attached to the EC2 instances that allow inbound TCP on port 22. Have the engineers install the AWS Systems Manager Session Manager plugin for their devices and remotely access the instances by using the start-session API call from Systems Manager.

Answer: D

Explanation:
Allows client machines to be able to connect to Session Manager using the AWS CLI instead of going through the AWS EC2 or AWS Server Manager console. https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager-working-with-install-plugin.ht https://docs.aws.amazon.com/systems-manager/latest/userguide/session-manager-working-with-install-plugin.ht

NEW QUESTION 96
- (Exam Topic 1)
A solutions architect is auditing the security setup of an AWS Lambda function for a company. The Lambda function retrieves the latest changes from an Amazon Aurora database. The Lambda function and the database run in the same VPC. Lambda environment variables are providing the database credentials to the Lambda function.
The Lambda function aggregates data and makes the data available in an Amazon S3 bucket that is configured for server-side encryption with AWS KMS managed encryption keys (SSE-KMS). The data must not travel across the internet. If any database credentials become compromised, the company needs a solution that minimizes the impact of the compromise.
What should the solutions architect recommend to meet these requirements?

A. Enable IAM database authentication on the Aurora DB cluste
B. Change the IAM role for the Lambda function to allow the function to access the database by using IAM database authenticatio
C. Deploy a gateway VPC endpoint for Amazon S3 in the VPC.
D. Enable IAM database authentication on the Aurora DB cluste
E. Change the IAM role for the Lambda function to allow the function to access the database by using IAM database authenticatio
F. Enforce HTTPS on the connection to Amazon S3 during data transfers.
G. Save the database credentials in AWS Systems Manager Parameter Stor
H. Set up password rotation on the credentials in Parameter Stor
I. Change the IAM role for the Lambda function to allow the function to access Parameter Stor
J. Modify the Lambda function to retrieve the credentials from Parameter Stor
K. Deploy a gateway VPC endpoint for Amazon S3 in the VPC.
L. Save the database credentials in AWS Secrets Manage
M. Set up password rotation on the credentials in Secrets Manage
N. Change the IAM role for the Lambda function to allow the function to access Secrets Manage
O. Modify the Lambda function to retrieve the credentials Om Secrets Manage
P. Enforce HTTPS on the connection to Amazon S3 during data transfers.

Answer: A

Explanation:
https://docs.aws.amazon.com/AmazonRDS/latest/AuroraUserGuide/UsingWithRDS.IAMDBAuth.html

NEW QUESTION 99
- (Exam Topic 1)
A company is developing a new service that will be accessed using TCP on a static port A solutions architect must ensure that the service is highly available, has redundancy across Availability Zones, and is accessible using the DNS name myservice.com, which is publicly accessible The service must use fixed address assignments so other companies can add the addresses to their allow lists.
Assuming that resources are deployed in multiple Availability Zones in a single Region, which solution will meet these requirements?

A. Create Amazon EC2 instances with an Elastic IP address for each instance Create a Network Load Balancer (NLB) and expose the static TCP port Register EC2instances with the NLB Create a new name server record set named my service com, and assign the Elastic IP addresses of the EC2 instances to the record set Provide the Elastic IP addresses of the EC2 instances to the other companies to add to their allow lists
B. Create an Amazon ECS cluster and a service definition for the application Create and assign public IP addresses for the ECS cluster Create a Network Load Balancer (NLB) and expose the TCP port Create atarget group and assign the ECS cluster name to the NLB Create a new A record set named my service com and assign the public IP addresses of the ECS cluster to the record set Provide the public IP addresses of the ECS cluster to the other companies to add to their allow lists
C. Create Amazon EC2 instances for the service Create one Elastic IP address for each Availability Zone Create a Network Load Balancer (NLB) and expose the assigned TCP port Assign the Elastic IP addresses to the NLB for each Availability Zone Create a target group and register the EC2 instances with the NLB Create a new A (alias) record set named my service com, and assign the NLB DNS name to the record set.
D. Create an Amazon ECS cluster and a service definition for the application Create and assign public IP address for each host in the cluster Create an Application

Load Balancer (ALB) and expose the static TCP port Create a target group and assign the ECS service definition name to the ALB Create a new CNAME record set and associate the public IP addresses to the record set Provide the Elastic IP addresses of the Amazon EC2 instances to the other companies to add to their allow lists

Answer: C

Explanation:
https://docs.aws.amazon.com/Route53/latest/DeveloperGuide/routing-to-elb-load-balancer.html
Create a Network Load Balancer (NLB) and expose the assigned TCP port. Assign the Elastic IP addresses to the NLB for each Availability Zone. Create a target group and register the EC2 instances with the NLB. Create a new A (alias) record set named my.service.com, and assign the NLB DNS name to the record set. As it uses the NLB as the resource in the A-record, traffic will be routed through the NLB, and it will automatically route the traffic to the healthy instances based on the health checks and also it provides the fixed address assignments as the other companies can add the NLB's Elastic IP addresses to their allow lists.

NEW QUESTION 103
- (Exam Topic 1)
A company is developing a new serverless API by using Amazon API Gateway and AWS Lambda. The company integrated the Lambda functions with API Gateway to use several shared libraries and custom classes.
A solutions architect needs to simplify the deployment of the solution and optimize for code reuse. Which solution will meet these requirements?

A. Deploy the shared libraries and custom classes into a Docker imag
B. Store the image in an S3 bucket.Create a Lambda layer that uses the Docker image as the sourc
C. Deploy the API's Lambda functions as Zip package
D. Configure the packages to use the Lambda layer.
E. Deploy the shared libraries and custom classes to a Docker imag
F. Upload the image to Amazon Elastic Container Registry (Amazon ECR). Create a Lambda layer that uses the Docker image as the sourc
G. Deploy the API's Lambda functions as Zip package
H. Configure the packages to use the Lambda layer.
I. Deploy the shared libraries and custom classes to a Docker container in Amazon Elastic Container Service (Amazon ECS) by using the AWS Fargate launch typ
J. Deploy the API's Lambda functions as Zip package
K. Configure the packages to use the deployed container as a Lambda layer.
L. Deploy the shared libraries, custom classes, and code for the API's Lambda functions to a Docker imag
M. Upload the image to Amazon Elastic Container Registry (Amazon ECR). Configure the API's Lambda functions to use the Docker image as the deployment package.

Answer: B

Explanation:
Deploying the shared libraries and custom classes to a Docker image and uploading the image to Amazon Elastic Container Registry (Amazon ECR) and creating a Lambda layer that uses the Docker image as the source. Then, deploying the API's Lambda functions as Zip packages and configuring the packages to use the Lambda layer would meet the requirements for simplifying the deployment and optimizing for code reuse.
A Lambda layer is a distribution mechanism for libraries, custom runtimes, and other function dependencies. It allows you to manage your in-development function code separately from your dependencies, this way you can easily update your dependencies without having to update your entire function code.
By deploying the shared libraries and custom classes to a Docker image and uploading the image to Amazon Elastic Container Registry (ECR), it makes it easy to manage and version the dependencies. This way, the company can use the same version of the dependencies across different Lambda functions.
By creating a Lambda layer that uses the Docker image as the source, the company can configure the API's Lambda functions to use the layer, reducing the need to include the dependencies in each function package, and making it easy to update the dependencies across all functions at once.
Reference:
AWS Lambda Layers documentation: https://docs.aws.amazon.com/lambda/latest/dg/configuration-layers.html
AWS Elastic Container Registry (ECR) documentation: https://aws.amazon.com/ecr/ Building Lambda Layers with Docker documentation: https://aws.amazon.com/blogs/compute/building-lambda-layers-with-docker/

NEW QUESTION 108
- (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 lo 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 owne
B. Add each business unit to an Amazon SNS topic for each aler
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 owne
E. Add each business unit to an Amazon SNS topic for each aler
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 lhat are grouped by application, environment, and owne
H. Add each business unit to an Amazon SNS topic for each aler
I. Use the AWS Billing and Cost Management dashboard in each account to create monthly reports for each businessunit.
J. Enable AWS Cost and Usage Reports in the organization's master account and configure reports grouped by application, environment, and owne
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 109

- (Exam Topic 1)
An application is using an Amazon RDS for MySQL Multi-AZ DB instance in the us-east-1 Region. After a failover test, the application lost the connections to the database and could not re-establish the connections. After a restart of the application, the application re-established the connections.
A solutions architect must implement a solution so that the application can re-establish connections to the database without requiring a restart.
Which solution will meet these requirements?

A. Create an Amazon Aurora MySQL Serverless v1 DB instanc
B. Migrate the RDS DB instance to the Aurora Serverless v1 DB instanc
C. Update the connection settings in the application to point to the Aurora reader endpoint.
D. Create an RDS prox
E. Configure the existing RDS endpoint as a targe
F. Update the connection settings in the application to point to the RDS proxy endpoint.
G. Create a two-node Amazon Aurora MySQL DB cluste
H. Migrate the RDS DB instance to the Aurora DB cluste
I. Create an RDS prox
J. Configure the existing RDS endpoint as a targe
K. Update the connection settings in the application to point to the RDS proxy endpoint.
L. Create an Amazon S3 bucke
M. Export the database to Amazon S3 by using AWS Database Migration Service (AWS DMS). Configure Amazon Athena to use the S3 bucket as a data stor
N. Install the latest Open Database Connectivity (ODBC) driver for the applicatio
O. Update the connection settings in the application to point to the Athena endpoint

Answer: B

Explanation:
Amazon RDS Proxy is a fully managed database proxy service for Amazon Relational Database Service (RDS) that makes applications more scalable, resilient, and secure. It allows applications to pool and share connections to an RDS database, which can help reduce database connection overhead, improve scalability, and provide automatic failover and high availability.

NEW QUESTION 110
- (Exam Topic 1)
A company runs a content management application on a single Windows Amazon EC2 instance in a development environment. The application reads and writes static content to a 2 TB Amazon Elastic Block Store (Amazon EBS) volume that is attached to the instance as the root device. The company plans to deploy this application in production as a highly available and fault-tolerant solution that runs on at least three EC2 instances across multiple Availability Zones.
A solutions architect must design a solution that joins all the instances that run the application to an Active Directory domain. The solution also must implement Windows ACLs to control access to file contents. The application always must maintain exactly the same content on all running instances at any given point in time.
Which solution will meet these requirements with the LEAST management overhead?

A. Create an Amazon Elastic File System (Amazon EFS) file shar
B. Create an Auto Scaling group that extends across three Availability Zones and maintains a minimum size of three instance
C. Implement a user data script to install the application, join the instance to the AD domain, and mount the EFS file share.
D. Create a new AMI from the current EC2 instance that is runnin
E. Create an Amazon FSx for Lustre file syste
F. Create an Auto Scaling group that extends across three Availability Zones and maintains a minimum size of three instance
G. Implement a user data script to join the instance to the AD domain and mount the FSx for Lustre file system.
H. Create an Amazon FSx for Windows File Server file syste
I. Create an Auto Scaling group that extends across three Availability Zones and maintains a minimum size of three instance
J. Implement a user data script to install the application and mount the FSx for Windows File Server file syste
K. Perform a seamless domain join to join the instance to the AD domain.
L. Create a new AMI from the current EC2 instance that is runnin
M. Create an Amazon Elastic File System (Amazon EFS) file syste
N. Create an Auto Scaling group that extends across three Availability Zones and maintains a minimum size of three instance
O. Perform a seamless domain join to join the instance to the AD domain.

Answer: C

Explanation:
https://docs.aws.amazon.com/fsx/latest/WindowsGuide/what-is.html https://docs.aws.amazon.com/directoryservice/latest/admin-guide/ms_ad_join_instance.html

NEW QUESTION 113
- (Exam Topic 1)
A solutions architect needs to advise a company on how to migrate its on-premises data processing application to the AWS Cloud. Currently, users upload input files through a web portal. The web server then stores the uploaded files on NAS and messages the processing server over a message queue. Each media file can take up to 1 hour to process. The company has determined that the number of media files awaiting processing is significantly higher during business hours, with the number of files rapidly declining after business hours.
What is the MOST cost-effective migration recommendation?

A. Create a queue using Amazon SQ
B. Configure the existing web server to publish to the new queue.When there are messages in the queue, invoke an AWS Lambda function to pull requests from the queue and process the file
C. Store the processed files in an Amazon S3 bucket.
D. Create a queue using Amazon
E. Configure the existing web server to publish to the new queu
F. When there are messages in the queue, create a new Amazon EC2 instance to pull requests from the queue and process the file
G. Store the processed files in Amazon EF
H. Shut down the EC2 instance after the task is complete.
I. Create a queue using Amazon M
J. Configure the existing web server to publish to the new queue.When there are messages in the queue, invoke an AWS Lambda function to pull requests from the queue and process the file
K. Store the processed files in Amazon EFS.

L. Create a queue using Amazon SO
M. Configure the existing web server to publish to the new queu
N. Use Amazon EC2 instances in an EC2 Auto Scaling group to pull requests from the queue and process the file
O. Scale the EC2 instances based on the SOS queue lengt
P. Store the processed files in an Amazon S3 bucket.

Answer: D

Explanation:
https://aws.amazon.com/blogs/compute/operating-lambda-performance-optimization-part-1/

NEW QUESTION 116
- (Exam Topic 1)
A company uses AWS Organizations for a multi-account setup in the AWS Cloud. The company uses AWS Control Tower for governance and uses AWS Transit Gateway for VPC connectivity across accounts.
In an AWS application account, the company's application team has deployed a web application that uses AWS Lambda and Amazon RDS. The company's database administrators have a separate DBA account and use the account to centrally manage all the databases across the organization. The database administrators use an Amazon EC2 instance that is deployed in the DBA account to access an RDS database that is deployed in the application account.
The application team has stored the database credentials as secrets in AWS Secrets Manager in the application account. The application team is manually sharing the secrets with the database administrators. The secrets are encrypted by the default AWS managed key for Secrets Manager in the application account. A solutions architect needs to implement a solution that gives the database administrators access to the database and eliminates the need to manually share the secrets.
Which solution will meet these requirements?

A. Use AWS Resource Access Manager (AWS RAM) to share the secrets from the application account with the DBA accoun
B. In the DBA account, create an IAM role that is named DBA-Admi
C. Grant the role the required permissions to access the shared secret
D. Attach the DBA-Admin role to the EC2 instance for access to the cross-account secrets.
E. In the application account, create an IAM role that is named DBA-Secre
F. Grant the role the required permissions to access the secret
G. In the DBA account, create an IAM role that is named DBA-Admi
H. Grant the DBA-Admin role the required permissions to assume the DBA-Secret role in the application accoun
I. Attach the DBA-Admin role to the EC2 instance for access to the cross-account secrets.
J. In the DBA account, create an IAM role that is named DBA-Admi
K. Grant the role the required permissions to access the secrets and the default AWS managed key in the application accoun
L. In the application account, attach resource-based policies to the key to allow access from the DBA accoun
M. Attach the DBA-Admin role to the EC2 instance for access to the cross-account secrets.
N. In the DBA account, create an IAM role that is named DBA-Admi
O. Grant the role the required permissions to access the secrets in the application accoun
P. Attach an SCP to the application account to allow access to the secrets from the DBA accoun
Q. Attach the DBA-Admin role to the EC2 instance for access to the cross-account secrets.

Answer: B

Explanation:
> Option B is correct because creating an IAM role in the application account that has permissions to access the secrets and creating an IAM role in the DBA account that has permissions to assume the role in the application account eliminates the need to manually share the secrets. This approach uses cross-account IAM roles to grant access to the secrets in the application account. The database administrators can assume the role in the application account from their EC2 instance in the DBA
account and retrieve the secrets without having to store them locally or share them manually2
References: 1: https://docs.aws.amazon.com/ram/latest/userguide/what-is.html 2:
https://docs.aws.amazon.com/IAM/latest/UserGuide/tutorial_cross-account-with-roles.html 3:
https://docs.aws.amazon.com/kms/latest/developerguide/concepts.html : https://docs.aws.amazon.com/secretsmanager/latest/userguide/tutorials_basic.html :
https://docs.aws.amazon.com/IAM/latest/UserGuide/introduction.html

NEW QUESTION 117
- (Exam Topic 1)
An international delivery company hosts a delivery management system on AWS. Drivers use the system to upload confirmation of delivery. Confirmation includes the recipient's signature or a photo of the package with the recipient. The driver's handheld device uploads signatures and photos through FTP to a single Amazon EC2 instance. Each handheld device saves a file in a directory based on the signed-in user, and the file name matches the delivery number. The EC2 instance then adds metadata to the file after querying a central database to pull delivery information. The file is then placed in Amazon S3 for archiving.
As the company expands, drivers report that the system is rejecting connections. The FTP server is having problems because of dropped connections and memory issues. In response to these problems, a system engineer schedules a cron task to reboot the EC2 instance every 30 minutes. The billing team reports that files are not always in the archive and that the central system is not always updated.
A solutions architect needs to design a solution that maximizes scalability to ensure that the archive always receives the files and that systems are always updated. The handheld devices cannot be modified, so the company cannot deploy a new application.
Which solution will meet these requirements?

A. Create an AMI of the existing EC2 instanc
B. Create an Auto Scaling group of EC2 instances behind an Application Load Balance
C. Configure the Auto Scaling group to have a minimum of three instances.
D. Use AWS Transfer Family to create an FTP server that places the files in Amazon Elastic File System (Amazon EFS). Mount the EFS volume to the existing EC2 instanc
E. Point the EC2 instance to the new path for file processing.
F. Use AWS Transfer Family to create an FTP server that places the files in Amazon S3. Use an S3 event notification through Amazon Simple Notification Service (Amazon SNS) to invoke an AWS Lambda functio
G. Configure the Lambda function to add the metadata and update the delivery system.
H. Update the handheld devices to place the files directly in Amazon S3. Use an S3 event notification through Amazon Simple Queue Service (Amazon SQS) to invoke an AWS Lambda functio
I. Configure the Lambda function to add the metadata and update the delivery system.

Answer: C

Explanation:
Using AWS Transfer Family to create an FTP server that places the files in Amazon S3 and using S3 event notifications through Amazon Simple Notification Service (Amazon SNS) to invoke an AWS Lambda function will ensure that the archive always receives the files and that the central system is always updated. This solution maximizes scalability and eliminates the need for manual intervention, such as rebooting the EC2 instance.

NEW QUESTION 119

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