Exams Question SA-3

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Created time	@June 7, 2024 9:18 PM
Tags	

A gov agency has a requirement to store documents that will be accessed by a serverless application. The documents will be accessed frequently for the first 3 months, and rarely after that. The documents must be retained for 7 years. What is the MOST cost-effective solution to meet these requirements?

☐ Store the documents in an encrypted EBS volume and create a cron job to delete the documents after 7 years.

☐ Store the documents in Amazon EFS. Create a cron job to move the documents that are older than 3 months to Amazon S3 Glacier. Create an AWS Lambda function to delete the documents in S3 Glacier that are older than 7 years.

☑ ~~Store the documents in a secured Amazon S3 bucket with a lifecycle policy to move the documents that are older than 3 months to Amazon S3 Glacier, then expire the documents from Amazon S3 Glacier that are more than 7 years old.~~

☐ Store the documents in a secured Amazon S3 bucket with a lifecycle policy to move the documents that are older than 3 months to Amazon S3 Glacier. Create an AWS Lambda function to delete the documents in S3 Glacier that are older than 7 years.

Managing your storage lifecycle - Amazon Simple Storage Service

Learn how to use Amazon Simple Storage Service (Amazon S3) to store and retrieve any amount of data from anywhere. This guide explains Amazon S3 concepts, such as buckets, objects, and related

https://docs.aws.amazon.com/AmazonS3/latest/userguide/object-lifecycle-mgmt.html

2. **A video production company is planning to move some of its workloads to the AWS Cloud. The company will require around 5 TB of storage for video processing with the maximum possible I/O performance. They also require over**

400 TB of extremely durable storage for storing video files and 800 TB of storage for long-term archival. Which combinations of services should a Solutions Architect use to meet these requirements?

☐ Amazon EC2 instance store for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage.

☐ Amazon EBS for maximum performance, Amazon S3 for durable data storage, and Amazon S3 Glacier for archival storage.

☐ Amazon EC2 instance store for maximum performance, Amazon EFS for durable data storage, and Amazon S3 for archival storage.

☐ Amazon EBS for maximum performance, Amazon EFS for durable data storage, and Amazon S3 Glacier for archival storage.

Amazon EC2 instance store - Amazon Elastic Compute Cloud

Use Amazon EC2 to configure, launch, and manage virtual servers in the AWS cloud.

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html

3. A database administrator updates the password in the Amazon RDS database to comply with security policies. Shortly after the update, several Lambda functions that access this database start failing, and the user receives error messages indicating invalid credentials. Upon investigation, a solutions architect discovers that the affected Lambda functions use hard-coded credentials, posing security risks. The architect needs to address the errors and enhance credential security. Which two solutions can the solutions architect implement to address the errors and improve credential security for the Lambda functions with the least development effort? (Select TWO.)

   ☐ Use AWS Secrets Manager to securely store the database credentials, and update the Lambda functions to retrieve the credentials dynamically from Secrets Manager.

   ☐ Implement AWS IAM roles and policies to grant the necessary permissions to the Lambda functions for accessing the RDS database securely without hard-coded credentials

   ☐ Update the Lambda functions to retrieve the database credentials from environment variables stored securely in AWS Systems Manager Parameter Store.

- [ ] Modify the Lambda functions to encrypt the hard-coded credentials using AWS KMS (Key Management Service) before storing them in the source code.
- [ ] Use AWS Identity Federation to authenticate the Lambda functions with the RDS database and avoid credential storage.

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4. A company uses Amazon EC2 Reserved Instances to run its data processing workload. The nightly job typically takes 7 hours to run and must finish within a 10-hour time window. The company anticipates temporary increases in demand at the end of each month that will cause the job to run over the time limit with the capacity of the current resources. Once started, the processing job cannot be interrupted before
completion. The company wants to implement a solution that would provide increased resource capacity as cost-effectively as possible.

- [x] ~~Deploy On-Demand Instances during periods of high demand.~~
- [ ] Create a second EC2 reservation for additional instances.
- [ ] Deploy Spot Instances during periods of high demand.
- [ ] Increase the EC2 instance size in the EC2 reservation to support the increased workload.

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5. A company has a two-tier application architecture that runs in public and private subnets. Amazon EC2 instances running the web application are in the public subnet and an EC2 instance for the database runs on the private subnet. The web application instances and the database are running in a single Availability Zone (AZ). Which combination of steps should a solutions architect take to provide high availability for this architecture? (Select TWO.)

- [ ] Create new public and private subnets in the same AZ.
- [x] ~~Create an Amazon EC2 Auto Scaling group and Application Load Balancer spanning multiple AZs for the web application instances.~~
- [ ] Add the existing web application instances to an Auto Scaling group behind an Application Load Balancer.
- [ ] Create new public and private subnets in a new AZ. Create a database using an EC2 instance in the public subnet in the new AZ. Migrate the old database contents to the new database.

- [x] ~~Create new public and private subnets in the same VPC, each in a new AZ. Create an Amazon RDS Multi-AZ DB instance in the private subnets. Migrate the old database contents to the new DB instance~~

6. ***To manage a large number of AWS accounts in a better way, you create a new AWS Organization and invite multiple accounts. You only enable the "Consolidated billing" out of the two feature sets (All features and consolidated billing) available in the AWS Organizations. Which of the following is the primary benefit of using the Consolidated billing feature?***

   - [ ] Apply SCPs to restrict the services that IAM users can access
   - [ ] Configure tag policies to maintain consistent tags for resources in the organization's accounts
   - [ ] Configure a policy to prevent IAM users in the organization from disabling AWS Cloud Trail
   - [x] ~~Combine the usage across all accounts to share the volume pricing discounts~~

7. ***A financial institute has deployed a critical web application in the AWS cloud. The management team is looking for a resilient solution with RTO/RPO in ten minutes during a disaster.*** **They have budget concerns, and the cost of provisioning the backup infrastructure should not be very high.** ***As a solution architect, you have been assigned to work on setting a resilient solution meeting the RTO/RPO requirements within the cost constraints.*** **Which strategy is suited perfectly?**

   - [ ] Multi-Site Active/Active
   - [ ] Warm Standby
   - [ ] Backup & Restore
   - [x] ~~Pilot Light~~

8. ***A new application is deployed in an Amazon EC2 instance which is launched in a private subnet of Amazon VPC. This application will be fetching data from Amazon S3 as well as from Amazon DynamoDB. The communication between the Amazon EC2 instance and Amazon S3 as well as with Amazon DynamoDB should be secure and should not transverse over internet links. The connectivity should also support accessing data in Amazon S3 from an***

on-premises network in the future.What design can be implemented to have secure connectivity?

☑ ~~Access Amazon DynamoDB from an instance in a private subnet using a gateway endpoint. Access Amazon S3 from an instance in a private subnet using an interface endpoint.~~

☐ Access Amazon S3 and Amazon DynamoDB from an instance in a private subnet using a private NAT gateway.

☐ Access Amazon S3 and Amazon DynamoDB from an instance in a private subnet using a public NAT gateway.

☐ Access Amazon S3 and Amazon DynamoDB from an instance in a private subnet using a gateway endpoint.

AWS PrivateLink for Amazon S3 - Amazon Simple Storage Service

Connect to Amazon S3 by using AWS PrivateLink interface VPC endpoints in your virtual private cloud (VPC).

https://docs.aws.amazon.com/AmazonS3/latest/userguide/privatelink-interface-endpoints.html#types-of-vpc-endpoints-for-s3

9. ***Which of the following is not a category in AWS Trusted Advisor service checks?***

   A. Cost Optimization

   B. Fault Tolerance

   C. Service Limits

   ☑ ~~D. Network Optimization~~

10. A website runs a custom web application that receives a burst of traffic each day at noon. The users upload new pictures and content daily, but have been complaining of timeouts. The architecture uses Amazon EC2 Auto Scaling groups, and the application consistently takes 1 minute to initiate upon boot up before responding to user requests. How should a solutions architect redesign the architecture to better respond to changing traffic?

    ☐ Configure a Network Load Balancer with a slow start configuration.

- [ ] Configure Amazon ElastiCache for Redis to offload direct requests from the EC2 instances.
- [x] ~~Configure an Auto Scaling step scaling policy with an EC2 instance warm up condition.~~
- [ ] Configure Amazon CloudFront to use an Application Load Balancer as the origin