**Tutorials Dojo – Practice Exam – Review Mode – 5**

**Final Result – 67.69% (44/65) – 06/02/2023**

**CSAA – Design Cost-Optimized Architectures - 75%**

**CSAA – Design High-Performing Architectures - 80%**

**CSAA – Design Resilient Architectures - 66.67%**

**CSAA – Design Secure Architectures - 54.17%**

* The Solutions Architect expects the S3 bucket to immediately receive over 2000 PUT requests and 3500 GET requests per second at peak hour. What should the SA do to ensure optimal performance?
  + Do nothing. Amazon S3 will automatically manage performance at this scale
* To ensure normal operations, the company wants to track its AWS resource usage so that it is not reaching the AWS service quotas unexpectedly.
  + Write an AWS Lambda Function that refreshes the AWS Trusted Advisor Service Limits checks and set it to run every 24 hours.
  + Configure the events using Amazon EventBridge (Amzon CloudWatch Events) and use an Amazon Simple Notification Service (Amazon SNS) topic as the target for notifications
* Ensure that the architecture provides higher bandwidth, higher packet per second (PPS) performance, and consistently lower inter-instance latencies. What is the MOST suitable and cost-effective solution that the architect should implement to achieve the above requirements?
  + Enable Enhanced Networking with Elastic Network Adapter (ENA) on the Windows EC2 Instances
* In EBS encryption, what service does AWS use to secure the volume’s data at rest?
  + By using Amazon-managed keys in AWS Key Management Service (KMS)
  + By using your own keys in AWS Key Management Service (KMS)
* Which of the following statements are true about encrypted Amazon Elastic Block Store volumes?
  + Snapshots are automatically encrypted
  + All data moving between the volume and the instance are encrypted
* The company currently has an IAM Role for its Amazon EC2 instance that permits the instance to access Amazon DynamoDB. They want their EC2 instances in the new region to have the exact same privileges. What should be done to accomplish this?
  + Assign the existing IAM role to instances in the new region
* A client is hosting their company website on a cluster of web servers that are behind a public-facing load balancer. The client also uses Amazon Route 53 to manage their public DNS. How should the client configure the DNS zone Apex Record to point to the load balancer?
  + Create an A record aliased to the load balancer DNS name
* In order for you to establish an SSH connection from your home computer to your EC2 instance, you need to do the following:
  + On the Security Group, add an Inbound Rule to allow SSH traffic to your EC2 instance
  + On the NACL, add both an Inbound and Outbound Rule to allow SSH traffic to your EC2 Instance
* In the event of system failure on the primary database instance, what happens to Amazon Aurora during the failover?
  + Aurora will attempt to create a new DB in the same Availability Zone as the original instance and is done on a best-effort basis

Amazon Aurora

* If you have an Amazon Aurora Replica in the same or a different AZ, when failover over, Aurora flips the CNAME for your DB instance to point at the healthy replica, which in turn is promoted to become the new primary. Start-to-finish failover typically completes within 30 seconds
* If you are running Aurora Serverless and the DB Instance or AZ becomes unavailable, Aurora will automatically recreate the DB Instance in a different AZ
* If you do not have an Amazon Aurora Read Replica (single instance deployment) and are not running Aurora Serverless, Aurora will attempt to create a new DB Instance in the same AZ as the original instance
* Scaling throughput of S2S VPN Connections
  + Associate the VPCs to an Equal Cost Multipath Routing (ECMR) – enabled transit gateway and attach additional VPN tunnels
    - A single VPN Tunnel still has a maximum throughput of 1.25 Gbps. If you establish multiple VPN Tunnels to an ECMP-enabled transit gateway, it can scale beyond the default limit of 1.25 Gbps
* Capture detailed information of all HTTP requests through a public-facing ALB every five minutes + track client IP address and network latency + use the data for analyzing traffic patterns and for troubleshooting their Docker applications orchestrated by the Amazon ECS Anywhere Service – Solution with LEAST amount of overhead?
  + Enable access logs on the ALB. Integrate the Amazon ECS Cluster with Amazon CloudWatch Application Insights to analyze traffic patterns and simplify troubleshooting