Module 4 – Worksheet

AWS Certified Solutions Architect – Associate

Module 4: Overview

Domain 2 – Implementation/Deployment

Using key AWS services in categories including:

- Compute and Networking
- Storage and Content Delivery
- Database
- Deployment and Management
- App Services

Sample Questions

QUESTION 1

Your e-commerce application provides daily and *ad hoc* reporting to various business units on customer purchases. This results in an extremely high level of read traffic to your MySQL Amazon Relational Database Service (Amazon RDS) instance. What can you do to scale up read traffic without affecting your database's performance? *(Choose the best answer)*

a. ( ) Increase the allocated storage for the Amazon RDS instance

b. ( ) Modify the Amazon RDS instance to be a Multi-AZ deployment

c. ( ) Create a read replica for the Amazon RDS instance

d. ( ) Change the Amazon RDS instance DB engine version

*See solution at end of document

QUESTION 2

Your firm is moving its testing platform to AWS to provide developers with instant access to clean test and development environments. The primary requirement for your firm is to make environments easily reproducible and interchangeable. What service will help your firm meet the requirements? *(Choose the best answer)*

a. ( ) AWS CloudFormation

b. ( ) AWS Config

c. ( ) Amazon Redshift

d. ( ) AWS Trusted Advisor

*See solution at end of document

Personal Preparation Plan

Check off the items you've already completed. Mark items to complete before your exam:

Identify personal knowledge gaps:

The certification exam validates the following proficiencies. When you are ready for the certification exam, you should feel comfortable with the following concepts. Based on your assessment of your own knowledge gaps, mark those items on which you should build proficiency before your exam:

- ❑ Know which services scale automatically.
- ❑ Know how to design for elasticity to increase or decrease computing services in an automated fashion.
- ❑ Be familiar with services and deployment configurations that are more efficient and cost-effective in order to select the least costly architecture alternative.

Resources

Related labs:

❑ Working with Amazon Elastic Block Store (EBS)
❑ Creating Amazon EC2 Instances
❑ Caching Static Files with Amazon CloudFront
❑ Creating a VPC with CloudFormation
https://qwiklabs.com/learning_paths/10/lab_catalogue?locale=en

Related whitepapers:

❑ Architecting for the AWS Cloud: Best Practices
❑ AWS Well-Architected Framework
❑ Performance at Scale with Amazon ElastiCache
❑ Overview of Deployment Options on AWS
❑ Managing your AWS Infrastructure at Scale
❑ Enterprise Backup and Recovery On-Premises to AWS
❑ Determining the IOPS Needs for Oracle Database on AWS
❑ Backup and Recovery Approaches Using AWS
❑ Amazon VPC Network Connectivity Options
http://aws.amazon.com/whitepapers/

AWS Certified Solutions Architect – Associate website:
http://aws.amazon.com/certification/certified-solutions-architect-associate/

Sample Question Solutions

QUESTION 1

Your e-commerce application provides daily and ad hoc reporting to various business units on customer purchases. This is resulting in an extremely **high level of read traffic** to your MySQL Amazon Relational Database Service (Amazon RDS) instance. What can you do to **scale up** read traffic **without impacting your database's performance**?

a. ( ) Increase the allocated storage for the Amazon RDS instance
Incorrect: Simply adding additional storage to the Amazon RDS instance will not help scale up read traffic without impacting database performance. The need is to horizontally scale read operations.

b. ( ) Modify the Amazon RDS instance to be a Multi-AZ deployment
Incorrect: A Multi-AZ deployment automatically provisions and maintains a synchronous standby replica in a different Availability Zone. The primary DB instance is synchronously replicated across Availability Zones to a standby replica to provide data redundancy, eliminate I/O freezes, and minimize latency spikes during system backups. While this helps with availability of RDS it does not help scale up read traffic without impacting database performance.

c. (•) Create a read replica for Amazon RDS instance
Correct: You can create a special type of DB instance called a Read Replica for MySQL, MariaDB, and PostgreSQL in Amazon RDS to reduce the load on your source DB instance by routing read queries from your applications to the Read Replica. Using Read Replicas, allow you to elastically scale out beyond the capacity constraints of a single DB instance for read-heavy database workloads.

d. ( ) Change the Amazon RDS instance DB engine version
Incorrect: Simply changing the Amazon RDS instance DB Engine version will not help scale up read traffic without impacting database performance. The need is to horizontally scale read operations.

QUESTION 2

Your firm is moving its testing platform to AWS to provide developers with **instant access** to clean test and development environments. The primary requirement for your firm is to make environments **easily reproducible and interchangeable**. What service will help your firm meet the requirements?

a. (•) AWS CloudFormation
Correct: AWS CloudFormation gives developers and systems administrators an easy way to create and manage a collection of related AWS resources, provisioning and updating them in an orderly and predictable fashion. By leveraging AWS CloudFormation, you can reuse your template to set up your resources consistently and repeatedly. Just describe your resources once and then provision the same resources over and over for clean test and development environments.

b. ( ) AWS Config
Incorrect: AWS Config provides you with an AWS resource inventory, configuration history, and configuration change notifications to enable security and governance. Config does not provide a way to easily reproduce environments.

c. ( ) Amazon Redshift
Incorrect: Amazon Redshift is a fast, fully managed, petabyte-scale data warehouse. Redshift is not a tool to easily reproduce environments.

d. ( ) AWS Trusted Advisor
Incorrect: Trusted Advisor is an online resource to help you reduce cost, increase performance, and improve security by optimizing your AWS environment. Trusted Advisor is not a tool to easily reproduce environments.