**QUESTION 34**

A company runs an on-premises application that is powered by a MySQL database.

The company is migrating the application to AWS to Increase the application's elasticity and availability.

The current architecture shows heavy read activity on the database during times of normal operation.

Every 4 hours the company's development team pulls a full export of the production database to populate a database in the staging environment.

During this period, users experience unacceptable application latency.

The development team is unable to use the staging environment until the procedure completes.

A solutions architect must recommend replacement architecture that alleviates the application latency issue.

The replacement architecture also must give the development team the ability to continue using the staging environment without delay.

Which solution meets these requirements?

1. Use Amazon Aurora MySQL with Multi-AZ Aurora Replicas for production.

Populate the staging database by implementing a backup and restore process that uses the mysqldump utility.

1. Use Amazon Aurora MySQL with Multi-AZ Aurora Replicas for production.

Use database cloning to create the staging database on-demand.

1. Use Amazon RDS for MySQL with a Mufti AZ deployment and read replicas for production. Use the standby instance tor the staging database.

1. Use Amazon RDS for MySQL with a Multi-AZ deployment and read replicas for production. Populate the staging database by implementing a backup and restore process that uses the mysqldump utility.

**Answer:** B

**QUESTION 37**

A company has an automobile sales website that stores its listings in a database on Amazon RDS. When an automobile is sold the listing needs to be removed from the website and the data must be sent to multiple target systems.

Which design should a solutions architect recommend?

1. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) queue for the targets to consume.
2. Create an AWS Lambda function triggered when the database on Amazon RDS is updated to send the information to an Amazon Simple Queue Service (Amazon SQS) FIFO queue for the targets to consume.
3. Subscribe to an RDS event notification and send an Amazon Simple Queue Service (Amazon

SQS) queue fanned out to multiple Amazon Simple Notification Service (Amazon SNS) topics Use AWS Lambda functions to update the targets.

1. Subscribe to an RDS event notification and send an Amazon Simple Notification Service (Amazon SNS) topic fanned out to multiple Amazon Simple Queue Service (Amazon SQS) queues Use AWS Lambda functions to update the targets

**Answer:** D

**Explanation:**

<https://docs.aws.amazon.com/lambda/latest/dg/services-rds.html>

<https://docs.aws.amazon.com/lambda/latest/dg/with-sns.html>

**QUESTION 40**

A company recently migrated a message processing system to AWS.

The system receives messages into an ActiveMQ queue running on an Amazon EC2 instance.

Messages are processed by a consumer application running on Amazon EC2.

The consumer application processes the messages and writes results to a MySQL database funning on Amazon EC2.

The company wants this application to be highly available with tow operational complexity

Which architecture otters the HGHEST availability?

1. Add a second ActiveMQ server to another Availably Zone.

Add an additional consumer EC2 instance in another Availability Zone.

Replicate the MySQL database to another Availability Zone.

1. Use Amazon MO with active/standby brokers configured across two Availability Zones.

Add an additional consumer EC2 instance in another Availability Zone.

Replicate the MySQL database to another Availability Zone.

1. Use Amazon MO with active/standby blotters configured across two Availability Zones.

Add an additional consumer EC2 instance in another Availability Zone.

Use Amazon ROS tor MySQL with Multi-AZ enabled.

1. Use Amazon MQ with active/standby brokers configured across two Availability Zones.d Add an Auto Scaling group for the consumer EC2 instances across two Availability Zones. Use Amazon RDS for MySQL with Multi-AZ enabled.

**Answer:** D

**QUESTION 148**

A company has an on-premises MySQL database used by the global sales team with infrequent access patterns.

The sales team requires the database to have minimal downtime.

A database administrator wants to migrate this database to AWS without selecting a particular instance type in anticipation of more users in the future.

Which service should a solution architect recommend?

1. Amazon Aurora MySQL.
2. Amazon Aurora Serverless for MySQL.
3. Amazon Redshift Spectrum.
4. Amazon RDS for MySQL.

**Answer:** B

**Explanation:**

A database administrator wants to migrate this database to AWS without selecting a particular instance type in anticipation of more users in the future" Serverless sounds right, and it's compatible with MySQL and PostgreSQL.

<https://aws.amazon.com/rds/aurora/serverless/>

**QUESTION 153**

A company has an ecommerce application that stores data in an on-premises SQL database.

The company has decided to migrate this database to AWS.

However, as part of the migration, the company wants to find a way to attain sub-millisecond responses to common read requests.

A solutions architect knows that the increase in speed is paramount and that a small percentage of stale data returned in the database reads is acceptable.

What should the solutions architect recommend?

1. Build Amazon RDS read replicas.

1. Build the database as a larger instance type.
2. Build a database cache using Amazon ElastiCache.
3. Build a database cache using Amazon Elasticsearch Service (Amazon ES).

**Answer:** C

**Explanation:**

To attain sub-millisecond responses to common read requests. <https://aws.amazon.com/redis/>

REDIS (REmote DIctionary Server) delivers sub-millisecond response times enabling millions of requests per second for real-time applications.

**QUESTION 155**

An application allows users at a company's headquarters to access product data.

The product data is stored in an Amazon RDS MySQL DB instance.

The operations team has isolated an application performance slowdown and wants to separate read traffic from write traffic.

A solutions architect needs to optimize the application's performance quickly.

What should the solutions architect recommend?

1. Change the existing database to a Multi-AZ deployment.

Serve the read requests from the primary Availability Zone.

1. Change the existing database to a Multi-AZ deployment.

Serve the read requests from the secondary Availability Zone.

1. Create read replicas for the database.

Configure the read replicas with half of the compute and storage resources as the source database.

1. Create read replicas for the database.

Configure the read replicas with the same compute and storage resources as the source database.

**Answer:** D

**QUESTION 178**

A development team runs monthly resource-intensive tests on its general purpose Amazon RDS for MySQL DB instance with Performance Insights enabled.

The testing lasts for 48 hours once a month and is the only process that uses the database.

The team wants to reduce the cost of running the tests without reducing the compute and memory attributes of the DB instance.

Which solution meets these requirements MOST cost-effectively?

1. Stop the DB instance when tests are completed.

Restart the DB instance when required.

1. Use an Auto Scaling policy with the DB instance to automatically scale when tests are completed.
2. Create a snapshot when tests are completed.

Terminate the DB instance and restore the snapshot when required.

1. Modify the DB instance to a low-capacity instance when tests are completed.

Modify the DB instance again when required.

**Answer:** C

**Explanation:** [https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER\_MySQL.Replication.ReadRe plicas.html](https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/USER_MySQL.Replication.ReadRe%20plicas.html)

**QUESTION 231**

A company wants to migrate its MySQL database from on-premises to AWS.

The company recently experienced a database outage that significantly impacted the business.

To ensure this does not happen again, the company wants a reliable database solution on AWS that minimizes data loss and stores every transaction on at least two nodes.

Which solution meets these requirements?

1. Create an Amazon RDS DB instance with synchronous replication to three nodes in three Availability Zones.
2. Create an Amazon RDS MySQL DB instance with Multi-AZ functionality enabled to synchronously replicate the data.

1. Create an Amazon RDS MySQL DB instance and then create a read replica in a separate AWS Region that synchronously replicates the data.
2. Create an Amazon EC2 instance with a MySQL engine installed that triggers an AWS Lambda function to synchronously replicate the data to an Amazon RDS MySQL DB instance.

**Answer:** B

**Explanation:**

Q: What does Amazon RDS manage on my behalf?

Amazon RDS manages the work involved in setting up a relational database: from provisioning the infrastructure capacity you request to installing the database software. Once your database is up and running, Amazon RDS automates common administrative tasks such as performing backups and patching the software that powers your database. With optional Multi-AZ deployments, Amazon RDS also manages synchronous data replication across Availability Zones with automatic failover.

<https://aws.amazon.com/rds/faqs/>