review

review questions

Databases on AWS
V01-100

Course title

BackSpace Academy
AWS Certified Associate

Question

Which service below can run a managed PostgreSQL database that provides online transaction processing (OLTP)?

Answers

A. Amazon DynamoDB
B. Amazon Athena
C. Amazon RDS
D. Amazon EMR

C

Amazon RDS gives you access to several familiar database engines, including Amazon Aurora, MySQL, PostgreSQL, MariaDB, Oracle, and SQL Server.

https://aws.amazon.com/rds/postgresql/

Question

Which are the benefits below of using Amazon RDS over Amazon EC2 when running relational databases on AWS? (Choose two.)

Answers

A. Automated backups
B. Schema management
C. Indexing of tables
D. Software patching
E. Extract, transform, and load (ETL) management

A D

Amazon Relational Database Service (Amazon RDS) makes it easy to set up, operate, and scale a relational database in the cloud. It provides cost-efficient and resizable capacity while automating time-consuming administration tasks such as hardware provisioning, database setup, patching and backups. It frees you to focus on your applications so you can give them the fast performance, high availability, security and compatibility they need.

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Welcome.html

Question

An Enterprise company has a MySQL database running on a single Amazon EC2 instance. The company now requires higher availability in the event of any interruption. Which set of tasks would meet this requirement?

Answers

A. Add an Application Load Balancer in front of the EC2 instance
B. Configure EC2 Auto Recovery to move the instance to another Availability Zone
C. Migrate to Amazon RDS and enable Multi-AZ
D. Enable termination protection for the EC2 instance to avoid outages

C

In a Multi-AZ deployment, Amazon RDS 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. Running a DB instance with high availability can enhance availability during planned system maintenance and help protect your databases against DB instance failure and Availability Zone disruption.

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/Concepts.MultiAZ.html

Question

Which one below is the customer’s responsibility when using Amazon RDS?

Answers

A. Patching the operating system of underlying hardware
B. Controlling traffic to and from the database through security groups
C. Running backups that enable point-in-time recovery of a DB instance
D. Replacing failed DB instances

B

You only must configure security for your use cases. You don't have to configure security access for processes that Amazon RDS manages. These include creating backups, replicating data between a primary DB instance and a read replica, and other processes.

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/UsingWithRDS.html

Question

Which are the benefits below of running a database on Amazon RDS compared to an on-premises database? (Choose two.)

Answers

A. RDS backups are managed by AWS.
B. RDS supports any relational database.
C. RDS has no database engine licensing costs.
D. RDS database compute capacity can be easily scaled.
E. RDS inbound traffic control (for example, security groups) is managed by AWS.

A D

The automated backup feature of Amazon RDS enables point-in-time recovery for your database instance. Amazon RDS will back up your database and transaction logs and store both for a user-specified retention period. This allows you to restore your database instance to any second during your retention period, up to the last five minutes. Your automatic backup retention period can be configured to up to thirty-five days.

Amazon RDS makes it easy to use replication to enhance availability and reliability for production workloads. Using the Multi-AZ deployment option, you can run mission-critical workloads with high availability and built-in automated fail-over from your primary database to a synchronously replicated secondary database. Using Read Replicas, you can scale out beyond the capacity of a single database deployment for read-heavy database workloads.

https://aws.amazon.com/rds/features/

Question

Which databases below are available on Amazon RDS? (Choose two.)

Answers

A. Sybase
B. Microsoft SQL Server
C. IBM Db2
D. MongoDB
E. PostgreSQL

B E

Amazon RDS is available on several database instance types - optimized for memory, performance or I/O - and provides you with six familiar database engines to choose from, including Amazon Aurora, PostgreSQL, MySQL, MariaDB, Oracle Database, and SQL Server. You can use the AWS Database Migration Service to easily migrate or replicate your existing databases to Amazon RDS.
DocumentDB is the AWS managed MongoDB compatible service.

https://aws.amazon.com/rds/

Question

According to the AWS shared responsibility model, when using Amazon RDS, who is responsible for scheduling and performing backups?

Answers

A. AWS is responsible for both tasks.
B. The customer is responsible for scheduling and AWS is responsible for performing backups.
C. The customer is responsible for both tasks.
D. AWS is responsible for scheduling and the user is responsible for performing backups.

B

By default, Amazon RDS creates and saves automated backups of your DB instance securely in Amazon S3 for a user-specified retention period. In addition, you can create snapshots, which are user-initiated backups of your instance that are kept until you explicitly delete them

https://aws.amazon.com/rds/features/backup/

Question

What is the customer responsible when using Amazon RDS?

Answers

A. Patching and maintenance of the underlying operating system.
B. Managing automatic backups of the database.
C. Controlling network access through security groups.
D. Replacing failed instances in the event of a hardware failure.

C

Security in the cloud – Your responsibility is determined by the AWS service that you use. You are also responsible for other factors including the sensitivity of your data, your organization's requirements, and applicable laws and regulations.

https://docs.aws.amazon.com/AmazonRDS/latest/UserGuide/UsingWithRDS.html

Question

Which service below provides the ability to host a NoSQL database in the AWS Cloud?

Answers

A. Amazon Aurora
B. Amazon DynamoDB
C. Amazon RDS
D. Amazon Redshift

B

DynamoDB is a NoSQL type engine.

https://aws.amazon.com/nosql/

Question

An Enterprise company has multiple data sources across the organization and wants to consolidate data into one data warehouse. Which service below can be used to meet this requirement?

Answers

A. Amazon DynamoDB
B. Amazon Redshift
C. Amazon Athena
D. Amazon QuickSight

B

Amazon Redshift –is the most widely used cloud data warehouse. It makes it fast, simple and cost-effective to analyze all your data using standard SQL and your existing Business Intelligence (BI) tools.

https://aws.amazon.com/redshift/

Question

Which AWS service below provides a user the ability to warehouse data in the AWS Cloud?

Answers

A. Amazon EFS
B. Amazon Redshift
C. Amazon RDS
D. Amazon VPC

B

Amazon Redshift is a fully managed, petabyte-scale data warehouse service in the AWS Cloud. An Amazon Redshift data warehouse is a collection of computing resources called *nodes*, which are organized into a group called a *cluster*. Each cluster runs an Amazon Redshift engine and contains one or more databases.

https://docs.aws.amazon.com/redshift/latest/gsg/getting-started.html

Question

An Enterprise company must process a large amount of data from social media accounts by making graphical queries with high throughput. Which service below will help the company design a cloud architecture that will meet these requirements?

Answers

A. Amazon RDS
B. Amazon DynamoDB
C. Amazon Neptune
D. Amazon Redshift

C

Amazon Neptune is a fast, reliable, fully managed graph database service that makes it easy to build and run applications that work with highly connected datasets. The core of Amazon Neptune is a purpose-built, high-performance graph database engine optimized for storing billions of relationships and querying the graph with milliseconds latency.

https://aws.amazon.com/neptune/

Question

Which service below acts as a data extract, transform, and load (ETL) tool to make it easy to prepare data for analytics?

Answers

A. Amazon QuickSight
B. Amazon Athena
C. AWS Glue
D. AWS Elastic Beanstalk

C

AWS Glue is a serverless data integration service that makes it easy to discover, prepare, and combine data for analytics, machine learning, and application development. AWS Glue provides all of the capabilities needed for data integration so that you can start analyzing your data and putting it to use in minutes instead of months. Data integration is the process of preparing and combining data for analytics, machine learning, and application development.

https://aws.amazon.com/glue/

Question

An Enterprise company is building a business intelligence solution and wants to use dashboards for reporting purposes. Which service below can be used?

Answers

A. Amazon Redshift
B. Amazon Elasticsearch Service (Amazon ES)
C. Amazon QuickSight
D. Amazon Athena

C

Amazon QuickSight is fast, cloud-powered business intelligence service that can help you to build visualizations, perform ad hoc analysis, and get business insights from your data.

https://aws.amazon.com/getting-started/hands-on/create-business-intelligence-dashboards-using-amazon-quicksight/