



# QUESTION & ANSWER

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**Exam** : **AWS-Solution-Architect-Associate**

**Title** : AWS Certified Solutions Architect - Associate

**Version** : DEMO

1. A 3-tier e-commerce web application is currently deployed on-premises and will be migrated to AWS for greater scalability and elasticity. The web server currently shares read-only data using a network distributed file system. The app server tier uses a clustering mechanism for discovery and shared session state that depends on IP multicast. The database tier uses shared-storage clustering to provide database fail-over capability, and uses several read slaves for scaling. Data on all servers and the distributed file system directory is backed up weekly to off-site tapes.

Which AWS storage and database architecture meets the requirements of the application?

- A. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment and one or more read replicas. Backup: web servers, app servers, and database backed up weekly to Glacier using snapshots.
- B. Web servers: store read-only data in an EC2 NFS server, mount to each web server at boot time. App servers: share state using a combination of DynamoDB and IP multicast. Database: use RDS with multi-AZ deployment and one or more Read Replicas. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.
- C. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment and one or more Read Replicas. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.
- D. Web servers: store read-only data in S3, and copy from S3 to root volume at boot time. App servers: share state using a combination of DynamoDB and IP unicast. Database: use RDS with multi-AZ deployment. Backup: web and app servers backed up weekly via AMIs, database backed up via DB snapshots.

**Answer:** A

**Explanation:**

<https://d0.awsstatic.com/whitepapers/Storage/AWS%20Storage%20Services%20Whitepaper-v9.pdf>

Amazon Glacier doesn't suit all storage situations. Listed following are a few storage needs for which you should consider other AWS storage options instead of Amazon Glacier.

Data that must be updated very frequently might be better served by a storage solution with lower read/write latencies, such as Amazon EBS, Amazon RDS, Amazon DynamoDB, or relational databases running on EC2.

2. Your customer wishes to deploy an enterprise application to AWS which will consist of several web servers, several application servers and a small (50GB) Oracle database. Information is stored, both in the database and the file systems of the various servers. The backup system must support database recovery, whole server and whole disk restores, and individual file restores with a recovery time of no more than two hours. They have chosen to use RDS Oracle as the database.

Which backup architecture will meet these requirements?

- A. Backup RDS using automated daily DB backups. Backup the EC2 instances using AMIs and supplement with file-level backup to S3 using traditional enterprise backup software to provide file level restore.
- B. Backup RDS using a Multi-AZ Deployment. Backup the EC2 instances using AMIs, and supplement by copying file system data to S3 to provide file level restore.
- C. Backup RDS using automated daily DB backups. Backup the EC2 instances using EBS snapshots and

supplement with file-level backups to Amazon Glacier using traditional enterprise backup software to provide file level restore

D. Backup RDS database to S3 using Oracle RMAN Backup the EC2 instances using Amis, and supplement with EBS snapshots for individual volume restore.

**Answer: A**

**Explanation:**

You need to use enterprise backup software to provide file level restore. See

[https://d0.awsstatic.com/whitepapers/Backup\\_and\\_Recovery\\_Approaches\\_Using\\_AWS.pdf](https://d0.awsstatic.com/whitepapers/Backup_and_Recovery_Approaches_Using_AWS.pdf)

Page 18:

If your existing backup software does not natively support the AWS cloud, you can use AWS storage gateway products. AWS Storage Gateway is a virtual appliance that provides seamless and secure integration between your data center and the AWS storage infrastructure.

3. Your company has HQ in Tokyo and branch offices all over the world and is using a logistics software with a multi-regional deployment on AWS in Japan, Europe and USA. The logistic software has a 3-tier architecture and currently uses MySQL 5.6 for data persistence. Each region has deployed its own database.

In the HQ region you run an hourly batch process reading data from every region to compute cross-regional reports that are sent by email to all offices this batch process must be completed as fast as possible to quickly optimize logistics how do you build the database architecture in order to meet the requirements'?

A. For each regional deployment, use RDS MySQL with a master in the region and a read replica in the HQ region

B. For each regional deployment, use MySQL on EC2 with a master in the region and send hourly EBS snapshots to the HQ region

C. For each regional deployment, use RDS MySQL with a master in the region and send hourly RDS snapshots to the HQ region

D. For each regional deployment, use MySQL on EC2 with a master in the region and use S3 to copy data files hourly to the HQ region

E. Use Direct Connect to connect all regional MySQL deployments to the HQ region and reduce network latency for the batch process

**Answer: A**

4. A customer has a 10 GB AWS Direct Connect connection to an AWS region where they have a web application hosted on Amazon Elastic Computer Cloud (EC2). The application has dependencies on an on-premises mainframe database that uses a BASE (Basic Available. Sort stale Eventual consistency) rather than an ACID (Atomicity. Consistency isolation. Durability) consistency model. The application is exhibiting undesirable behavior because the database is not able to handle the volume of writes.

How can you reduce the load on your on-premises database resources in the most cost-effective way?

A. Use an Amazon Elastic Map Reduce (EMR) S3DistCp as a synchronization mechanism between the on-premises database and a Hadoop cluster on AWS.

B. Modify the application to write to an Amazon SQS queue and develop a worker process to flush the queue to the on-premises database.

C. Modify the application to use DynamoDB to feed an EMR cluster which uses a map function to write to

the on-premises database.

D. Provision an RDS read-replica database on AWS to handle the writes and synchronize the two databases using Data Pipeline.

**Answer: B**

5. Company B is launching a new game app for mobile devices. Users will log into the game using their existing social media account to streamline data capture. Company B would like to directly save player data and scoring information from the mobile app to a DynamoDB table named Score Data. When a user saves their game the progress data will be stored to the Game state S3 bucket.

What is the best approach for storing data to DynamoDB and S3?

A. Use an EC2 Instance that is launched with an EC2 role providing access to the Score Data DynamoDB table and the GameState S3 bucket that communicates with the mobile app via web services.

B. Use temporary security credentials that assume a role providing access to the Score Data DynamoDB table and the Game State S3 bucket using web identity federation.

C. Use Login with Amazon allowing users to sign in with an Amazon account providing the mobile app with access to the Score Data DynamoDB table and the Game State S3 bucket.

D. Use an IAM user with access credentials assigned a role providing access to the Score Data DynamoDB table and the Game State S3 bucket for distribution with the mobile app.

**Answer: B**

**Explanation:**

The requirements state “Users will log into the game using their existing social media account to streamline data capture.” This is what Cognito is used for, ie Web Identity Federation. Amazon also recommend to “build your app so that it requests temporary AWS security credentials dynamically when needed using web identity federation.”