**Storage**

1. Your company likes the idea of storing files on AWS. However, low-latency service of the majority of files is important to customer service. Which Storage Gateway configuration would you use to achieve both of these ends? [Select 2]
   1. Gateway-Snapshot
   2. Gateway-VTL
   3. File Gateways
   4. Gateway-stored.
2. Trying to use S3 without File Gateway in front would be a major impact to the user environment. Using File Gateway is the recommended way to use S3 with shared document pools. Life-cycle management and Infrequent Access storage is available for both S3 and EFS. A restriction however is that 'Using Amazon EFS with Microsoft Windows is not supported'. File Gateway does not support iSCSI in the client side
3. Of all the EBS types, both current and of the previous generation, HDD based volumes will always be less expensive than SSD types. Therefore, of the options available in the question, the Cold (sc1) and Throughout Optimized (st1) types are HDD based and will be the lowest cost options.
4. A client needs you to import some existing infrastructure from a dedicated hosting provider to AWS to try and save on the cost of running his current website. He also needs an automated process that manages backups, software patching, automatic failure detection, and recovery. You are aware that his existing set up currently uses an Oracle database. Which of the following AWS databases would be best for accomplishing this task?

A. Amazon RDS

B. Amazon Redshift

C. Amazon SimpIeDB

D. Amazon EIastiCache

1. Does DynamoDB support in-place atomic updates?

A. Yes

B. No

C. It does support in-place non-atomic updates

D. It is not defined

1. Does Amazon DynamoDB support both increment and decrement atomic operations?

A. Only increment, since decrement are inherently impossible with DynamoDB's data model.

B. No, neither increment nor decrement operations.

C. Yes, both increment and decrement operations.

D. Only decrement, since increment are inherently impossible with DynamoDB's data mode

1. You are building infrastructure for a data warehousing solution and an extra request has come through that there will be a lot of business reporting queries running all the time and you are not sure if your current DB instance will be able to handle it. What would be the best solution for this?

A. DB Parameter Groups

B. Read Replicas

C. Multi-AZ DB Instance deployment

D. Database Snapshots

1. In DynamoDB, could you use IAM to grant access to Amazon DynamoDB resources and API actions?

A. In DynamoDB there is no need to grant access

B. Depended to the type of access

C. No

D. Yes

1. One of the criteria for a new deployment is that the customer wants to use AWS Storage Gateway. However you are not sure whether you should use gateway cached volumes or gateway-stored volumes or even what the differences are. Which statement below best describes those differences?
2. Gateway-cached lets you store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets local.
3. Gateway-stored enables you to configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3.
4. Gateway-cached is free whilst gateway-stored is not.
5. Gateway-cached is up to 10 times faster than gateway-stored.
6. Gateway-stored lets you store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets locally
7. Gateway-cached enables you to configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3.
8. You need to change some settings on Amazon Relational Database Service but you do not want the database to reboot immediately which you know might happen depending on the setting that you change. Which of the following will cause an immediate DB instance reboot to occur?

A. You change storage type from standard to IOPS, and Apply Immediately is set to true.

B. You change the DB instance class, and Apply Immediately is set to false.

C. You change a static parameter in a DB parameter group.

D. You change the backup retention period for a DB instance from 0 to a nonzero value or from a nonzero value to 0, and Apply Immediately is set to false.

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| --- | --- | --- |
| No | Answer | Explanation |
| 1 | C,D | Gateway-Stored volumes store your primary data locally, while asynchronously backing up that data to AWS. Depending on the Cache allocated you can achieve the same with File Gateway |
|  |  | Elasticache for Memcached which does not offer a native encryption service, although Elasticache for Redis does |
| 4 | A | Amazon RDS gives you access to the capabilities of a familiar MySQL, Oracle, SQL Server, or PostgreSQL database engine. This means that the code, applications, and tools you already use today with your existing databases can be used with Amazon RDS. Amazon RDS automatically patches the database software and backs up your database, storing the backups for a user-defined retention period and enabling point-in-time recovery |
| 5 | A |  |
| 6 | C | Amazon DynamoDB supports increment and decrement atomic operations |
| 7 | B | Read Replicas make it easy to take advantage of MySQL’s built-in replication functionality to elastically scale out beyond the capacity constraints of a single DB Instance for read-heavy database workloads. There are a variety of scenarios where deploying one or more Read Replicas for a given source DB  Instance may make sense. Common reasons for deploying a Read Replica include:  Scaling beyond the compute or I/O capacity of a single DB Instance for read-heavy database workloads. This excess read traffic can be directed to one or more  Read Replicas.  Serving read traffic while the source DB Instance is unavailable. If your source DB Instance cannot take I/O requests (e.g. due to I/O suspension for backups or scheduled maintenance), you can direct read traffic to your Read RepIica(s). For this use case, keep in mind that the data on the Read Replica may be "staIe" since the source DB Instance is unavailable.  Business reporting or data warehousing scenarios; you may want business reporting queries to run against a Read Replica, rather than your primary, production DB Instance |
| 8 | D | Amazon DynamoDB integrates with AWS Identity and Access Management (IAM). You can use AWS IAM to grant access to Amazon DynamoDB resources and API actions. To do this, you first write an AWS IAM policy, which is a document that explicitly lists the permissions you want to grant. You then attach that policy to an AWS IAM user or role |
| 9 | A | Volume gateways provide cloud-backed storage volumes that you can mount as Internet Small Computer System Interface (iSCSI) devices from your on-premises application sewers. The gateway supports the following volume configurations:  Gateway-cached volumes — You store your data in Amazon Simple Storage Service (Amazon S3) and retain a copy of frequently accessed data subsets locally. Gateway-cached volumes offer a substantial cost savings on primary storage and minimize the need to scale your storage on-premises. You also retain lowlatency access to your frequently accessed data.  Gateway-stored volumes — If you need low-latency access to your entire data set, you can configure your on-premises gateway to store all your data locally and then asynchronously back up point-in-time snapshots of this data to Amazon S3. This configuration provides durable and inexpensive off-site backups that you can recover to your local data center or Amazon EC2. For example, if you need replacement capacity for disaster recovery, you can recover the backups to Amazon  EC2. |
| 10 | A | A DB instance outage can occur when a DB instance is rebooted, when the DB instance is put into a state that prevents access to it, and when the database is restarted. A reboot can occur when you manually reboot your DB instance or when you change a DB instance setting that requires a reboot before it  can take effect.  A DB instance reboot occurs immediately when one of the following occurs:  You change the backup retention period for a DB instance from 0 to a nonzero value or from a nonzero value to 0 and set Apply Immediately to true.  You change the DB instance class, and Apply Immediately is set to true.  You change storage type from standard to PIOPS, and Apply Immediately is set to true.  A DB instance reboot occurs during the maintenance window when one of the following occurs:  You change the backup retention period for a DB instance from 0 to a nonzero value or from a nonzero value to 0, and Apply Immediately is set to false. You change the DB instance class, and Apply Immediately is set to false |