Exam Session - Knowledge Check: Storage (CLF-C01)

cloudacademy.com/quiz/exam/3761108/results

#1

If you are uncertain how often you will access and modify data, why is it cost-effective to use Amazon EFS Standard storage class instead of the Elastic File System Infrequent Access storage class?

✗
EFS Infrequent Access performs reads and writes slower than EFS Standard.

✗
The storage cost per GB is cheaper for EFS Infrequent Access than for EFS Standard.

✓
Elastic File Storage Infrequent Access charges for each read and write operation.

✗
The more data you store using EFS Standard, the greater the savings compared to EFS Infrequent Access.

Explanation

If you are uncertain how frequently you will access data in your Elastic File System, it is best to use EFS rather than EFS-IA because the EFS Infrequent Access class associates a charge with each read and write you make to the storage class.

/course/understanding-optimizing-costs-with-aws-storage-services/amazon-elastic-file-system-efs/

#2

Which of the following is a use case for EBS (Elastic Block Store)?

✓
Storing data that requires frequent updates.

✗
Saving static images associated with a website.

✕
Sharing storage for applications across multiple instances.

✕
Storing information in a table that can be queried.

Explanation

EBS must be attached to an EC2 Instance. EBS works particularly well as sort of a backend for a web server. EBS is useful as storage for whatever application you're running on, things like locally keeping track of the state of the game or keeping track of how many users have connected to the server.

/course/tablet-talk-aws-storage-explained-1603/storage-types/
#3

In which of the following scenarios will data be lost from an EC2 instance store? (Choose 2 answers)

✓
The instance stops

✓
Disk drive failure

✕
The instance reboots

✕
Network failure

Explanation

An instance store provides temporary block-level storage for your instance. This storage is located on disks that are physically attached to the host computer. Instance store is ideal for temporary storage of information that changes frequently, such as buffers, caches, scratch data, and other temporary content, or for data that is replicated across a fleet of instances, such as a load-balanced pool of web servers.

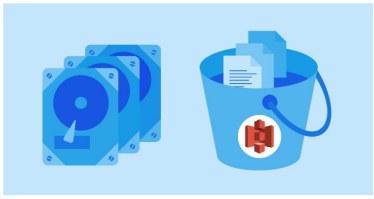
Data in the instance store is lost under the following circumstances:

- The underlying disk drive fails

- The instance stops
- The instance terminates

If the instance reboots (either intentionally or unintentionally) the data persists.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html
Covered in this lecture
EC2 Instance Storage
Course:Storage Fundamentals for AWS



4m

#4

Which of the following storage solutions is best for applications that scale across multiple instances, allowing for parallel access of data?

✗ Amazon Simple Storage Service (S3)

✗ Amazon Elastic Block Store (EBS)

✓ Amazon Elastic File System (EFS)

✗ Amazon Blob Storage (BS)

Explanation

Amazon Elastic File System, or EFS, is considered file-level storage and is also optimized for low-latency access, but unlike EBS, it supports access by multiple EC2 instances at once. As the file system can be accessed by multiple instances, it makes it a very good storage option for applications that scale across multiple instances, allowing for parallel access of data.

With EBS Multi-Attach now available as a feature, one may think this is the best choice -- but its compatibility is limited

/course/introduction-to-amazon-elastic-file-system/amazon-elastic-file-system-1/
Covered in this lecture
Amazon Elastic File System

Course:Introduction to Amazon Elastic File System (EFS)

9m

#5

Which AWS storage service is primarily a data-backup service?

✗ Amazon S3

✓ Amazon S3 Glacier

✗ Amazon EBS

✗ Amazon EFS

Explanation

Glacier, on the other hand, is primarily a data-backup service. It is really, really cheap to store your data on Glacier, but it's harder, slower, and more expensive to upload it or download it.

/course/introduction-to-amazon-web-services-aws/aws-storage-and-database-1/

Covered in this lecture
AWS Storage and Database
Course:Introduction to Amazon Web Services (AWS)

9m

#6

Which of the following is an appropriate use case for AWS Snowball?

✓ Data retrieval will take longer than a week using your existing connection method.

✗ You want to store a few data files for deletion within one day.

✗
You want to incur zero cost for data transfer services.

✗
Data transfer must occur within one hour.

Explanation

AWS Snowball is appropriate for cases in which it would take over one week to retrieve data using your existing connection. It is not cost-free for data transfer and it is not an appropriate use case for quick transfers of data, and it is not optimal for small amounts of data that will be deleted within a short amount of time. That data could be stored on an external drive or in an S3 bucket.

/course/aws-storage-fundamentals-2016/aws-import-export-snowball-1/
#7

Which of the following lists correctly names the AWS Snow family of devices, in order from smallest to largest?

✓
Snowcone, Snowball, Snowmobile

✗
Snowball, Snowcone, Snowmobile

✗
Snowmobile, Snowball, Snowcone

✗
Snowball, Snowmobile, Snowcone

Explanation

As you can see from this table, both from a physical and capacity perspective, the Snowcone is the smallest, followed by the Snowball and finally the Snowmobile.

/course/running-operations-large-scale-data-transfer-non-aws-environments-aws-snow-family-1741/what-is-the-snow-family/
#8

An Amazon EC2 instance store provides temporary block-level storage for your instance. Ephemeral storage is ideal for _____.

✗
persistent data

✗
storing critical system files

✗
high-performance storage of user files

✓
non-persistent data

Explanation

An Amazon EC2 Instance Store provides temporary block-level storage for your instance. An instance store is ideal for temporary storage of information that changes frequently, such as buffers, caches, scratch data, and other temporary content. Ephemeral storage is ideal for non-persistent data.

http://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html

Covered in this lecture
AWS Cloud Practitioner & Amazon Elastic Compute Cloud (EC2)
Course:Compute Fundamentals of AWS for Cloud Practitioner

16m

#9

Which of the following storage solutions is best for situations where files are written once and then accessed many times?

✓
Amazon Simple Storage Service (S3)

✗
Amazon Elastic Block Store (EBS)

✗
Amazon Elastic File Storage (EFS)

✗
Amazon FSx

Explanation

Amazon Simple Storage Service, or S3, is an object storage solution. This type of storage is best for situations where files are written once and then accessed many times.

/course/introduction-to-amazon-elastic-file-system/amazon-elastic-file-system-1/
Covered in this lecture
Amazon Elastic File System
Course:Introduction to Amazon Elastic File System (EFS)

9m

#10

What is the potential size range for individual objects stored in Amazon S3?

✗
1 byte to 500 MB

✓
0 bytes to 5 TB

✗
100 MB to 5 GB

✗
1 byte to 5 TB

Explanation

The total volume of data and number of objects you can store are unlimited. Individual Amazon S3 objects can range in size from 0 bytes to 5 TB.

https://aws.amazon.com/s3/faqs/

#11

The AWS Snow family consists of a range of _____ that are all designed to enable you to transfer data into AWS from the edge or beyond the cloud.

✓
physical hardware devices

✗
cloud compute instances

✗
virtual servers

✗
managed relational databases

Explanation

The Snow family consists of a range of physical hardware devices that are all designed to enable you to transfer data into AWS from the edge or beyond the cloud, such as your data center, but they can also be used to transfer data out of AWS too, for example, from Amazon S3 back to your data center.

/course/running-operations-large-scale-data-transfer-non-aws-environments-aws-snow-family-1741/what-is-the-snow-family/

#12

Where does Amazon EFS store its data?

✗
A bucket

✗
A volume

✗
A cache

✓
A file system

Explanation

Amazon EFS is similar to on-premise network attached storage, in contrast to EBS and EC2 instance store, which offer virtual directly attached storage, and Amazon S3, which offers internet accessible object storage with a flat structure.

https://docs.aws.amazon.com/efs/latest/ug/whatisefs.html

Covered in this lecture

Importing Data

Course:Using Amazon EFS to Create Elastic File Systems for Linux-Based Workloads

3m

#13

Which statement best describe the AWS Snow Family?

✗

Fully managed on-premises servers that extend AWS infrastructure, services, APIs, and tools to customer premises

✓

Physical pieces of hardware that are used to transfer data into AWS from the edge of or beyond the Cloud

✗

Cloud-backed storage volumes that you can mount as Internet Small Computer System Interface (iSCSI) devices from your on-premises application servers.

✗

A group of computing devices that process cryptographic operations and provides secure storage for cryptographic keys.

Explanation

The AWS Snowcone is a part of the AWS snow family of devices. These devices are physical pieces of hardware that are used to transfer data into AWS from the edge of or beyond the Cloud, such as your data center, but they can also be used to transfer data out of AWS too--for example, from Amazon S3 back to your premises.

/course/aws-snowcone-providing-portable-edge-computing-data-transfer-1776/the-snowcone-and-its-features/

#14

Which of the following is an advantage of Amazon S3 storage over EBS store volumes for the storage of archived data?

✓
It is cost-effective for storing data longterm

✗
It is scalable with a single API call

✗
It provides high IOPs

✗
It is highly persistent

Explanation

As compared to EBS store volumes, Amazon S3 storage is the cheapest option for the storage of files that may not be accessed for long periods of time. For example, data stored in the S3 Glacier Flexible Retrieval (Formerly S3 Glacier) storage class can be stored for $0.004 per GB per month and can be used for long-term backups and archives with retrieval option from 1 minute to 12 hours.

EBS store volumes are highly scalable, provide low latency of up to 16,000 IOPS for General Purpose SSDs and up to 256,000 IOPS for the new Provisioned IOPS SSD IOPs, and are highly persistent. EBS store volumes are best suited to situations that require high availability and performance, not archival storage.

https://aws.amazon.com/s3/pricing/

#15

Which AWS service is an object-based serverless storage system that is able to handle a nearly unlimited amount of data?

✗
Amazon DynamoDB

✗
Amazon EC2

✓
Amazon S3

✗
Amazon ECS

Explanation

Amazon S3 is an object-based serverless storage system that is able to handle a nearly unlimited amount of data.

/course/survey-serverless-2399/a-survey-of-serverless/
#16

Which statement about EC2 instance store volumes is incorrect?

✗
The storage cost is included in the EC2 instance price.

✗
Instance store volumes offer very high I/O speed.

✗
The instance store volumes reside on the same hardware as host instance.

✓
They are available for all instance types.

Explanation

Even though EC2 instance store volumes are part of the EC2 service itself, they are not available for all instance types. To see which instance types offer it, be sure to review the documentation closely.

https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/InstanceStorage.html
#17

Which of the following should you use as a backup solution in case an S3 bucket storage object is accidentally deleted?

✗
Multi-Factor Authentication Delete

✗
Lifecycle Policies

✓
Versioning

✗
Bucket Policies

Explanation

Enabling versioning on an S3 bucket ensures you can recover from misuse of an object or accidental deletion, and revert back to an older version of the same data object.

Multi-Factor Authentication Delete ensures that a user has to enter a 6 digit MFA code to delete an object, which prevents accidental deletion due to human error.

Lifecycle Policies allow you to automatically manage and move data between classes, allowing specific data to be relocated based on compliance and governance controls you might have in place.

Bucket Policies are JSON policies assigned to individual buckets. These Bucket Policies can also define who or what has access to that bucket's contents, but they do not control versioning of objects within buckets.

🔗/course/using-aws-storage-for-on-premise-backup/using-amazon-s3-as-a-data-backup-solution-1/
#18

Where is an object stored in Amazon S3?

✗
In a vault

✓
In a bucket

✗
In an archive

✗
In a volume

Explanation

Every object in Amazon S3 is stored in a bucket. You must create a bucket before you can store data in Amazon S3.

http://docs.aws.amazon.com/AmazonS3/latest/gsg/CreatingABucket.html

#19

Amazon S3 allows you to set up _____ policies to put infrequently accessed data into a cheaper storage tier, to help deal with the cost of the ever-increasing data burden.

✗ data movement

✓ lifecycle

✗ storage

✗ tier

Explanation

One benefit of using S3 is that we can set up lifecycle policies to help deal with the cost of the ever-increasing data burden. This allows us to put infrequently accessed data into a cheaper storage tier, and even to eventually put it into Glacier (the deep archival service) when we are fairly certain that that data isn't going to be used for a long while.

/course/understanding-data-lakes-aws-1646/what-makes-up-a-good-data-lake/

#20

Which Amazon S3 storage class offers cost savings for data with unknown or changing access patterns?

✗ S3 One Zone - Infrequent Access

✗ S3 Glacier

✗ S3 Standard

S3 Intelligent - Tiering

Explanation

S3 Intelligent - Tiering provides automatic cost savings for data with unknown or changing access patterns.

/course/understanding-the-costs-of-amazon-s3-1221/amazon-s3-and-glacier/

Covered in this lecture
Amazon S3 and Glacier
Course:Understanding the Costs of Amazon S3

17m