S3 exam tips

- Remember that S3 is Object based i.e. allows you to upload files.
- Files can be from 0 Bytes to 5TB.
- There is unlimited storage
- Files are stored in Buckets.
- S3 is a universal namespace, that is, names must be unique globally.
- https://s3-eu-west-1.amazonaws.com/acloudguru

- Read after Write consistency for PUTS of new Objects
- Eventual Consistency for overwrite PUTS and DELETES (can take some time to propagate)

- S3 Standard : 99.99% availability, 99.999999999% durability, stored redundantly across multiple devices in multiple facilities, and is designed to sustain the loss of 2 facilities concurrently.
- S3 - IA : (Infrequently Accessed): For data that is accessed less frequently, but requires rapid access when needed. Lower fee than S3, but you are charged a retrieval fee.
- S3 One Zone - IA: want a lower-cost option for infrequently accessed data, but do not require the multiple Availability Zone data resilience.

- Glacier: Very cheap, but used for archival only. Expedidited, Standard or Bulk. A Standard retrieval time takes 3 - 5 hours.

- Remember the core fundamentals of S3;
  - Key (name)
  - Value (data)
  - Version ID
  - Metadata
  - Access control lists

S3 - Versioning Lab

S3 - Versioning

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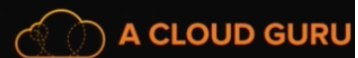
- Stores all versions of an object (including all writes and even if you delete an object)
- Great backup tool.

- Once enabled, Versioning cannot be disabled, only suspended.
- Integrates with Lifecycle rules
- Versioning's MFA Delete capability, which uses multi-factor authentication, can be used to provide an additional layer of security.

- Cross Region Replication, requires versioning enabled on the source bucket.

S3 - Lifecycle Management

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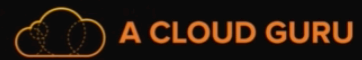
- Can be used in conjunction with versioning.
- Can be applied to current versions and previous versions
- Following actions can now be done;
  - Transition to the Standard - Infrequent Access Storage Class (128Kb and 30 days after the creation date).
  - Archive to the Glacier Storage Class (30 days after IA, if relevant)

CloudFront - Exam Tips

- Edge Location - This is the location where content will be cached. This is separate to an AWS Region/AZ
- Origin - This is the origin of all the files that the CDN will distribute. This can be either an S3 Bucket, an EC2 Instance, an Elastic Load Balancer or Route53.
- Distribution - This is the name given the CDN which consists of a collection of Edge Locations.
  - Web Distribution - Typically used for Websites.

Securing your buckets

- By default, all newly created buckets are PRIVATE
- You can setup access control to your buckets using;
  - Bucket Policies
  - Access Control Lists
- S3 buckets can be configured to create access logs which log all requests made to the S3 bucket. This can be done to another bucket.

Encryption

- In Transit;
  - SSL/TLS

- At Rest
  - Server Side Encryption
    - S3 Managed Keys - **SSE-S3**
    - AWS Key Management Service, Managed Keys - **SSE-KMS**
    - Server Side Encryption With Customer Provided Keys - **SSE-C**

Exam Tips

- File Gateway - For flat files, stored directly on S3.
- Volume Gateway
  - Stored Volumes - Entire Dataset is stored on site and is asynchronously backed up to S3.
  - Cached Volumes - Entire Dataset is stored on S3 and the most frequently accessed data is cached on site.
- Gateway Virtual Tape Library (VTL)
  - Used for backup and uses popular backup applications like NetBackup, Backup Exec, Veeam etc.

Snowball edge like mini aws data center

Snowball Exam Tips

- Snowball
- Snowball Edge
- Snowmobile

S3 Summary

Exam Tips - S3 Static Websites

- You can use S3 to host static websites
- Serverless
- Very cheap, scales automatically.
- STATIC only, cannot host dynamic sites.

Last Few Tips

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- Write to S3 - HTTP 200 code for a successful write.
- You can load files to S3 much faster by enabling multipart upload.
- Read the S3 FAQ before taking the exam. It comes up A LOT!