DAY - 13
AWS GLACIER

AWS Architecture and Design

1. Day 1 Overview of Cloud Computing
2. Day 2 Overview of AWS
3. Day 3 Amazon EC2*
4. Day 4 Amazon EBS *
5. Day 5 Amazon CloudWatch *
6. Day 6 Amazon S3*
7. Day 7 Amazon Elastic Load Balancer *
8. Day 8 Amazon Auto Scaling *
9. Day 9 Amazon VPC *
10. Day 10 Amazon IAM *
11. Day 11 Amazon RDS
12. Day 12 Amazon Route 53 *
13. **Day 13 Amazon DynamoDB* & Glacier**
14. Day 14 Amazon Cloudfront* & Import Export & Amazon SES *
15. Day 15 Amazon ElasticBeanStalk & Amazon Cloudformation & Amazon OpsWorks
16. Day 16 AWS Economics & AWS Account Overview *
17. Day 17 AWS Architecture
18. Day 18 AWS Certification Preparation

[With Hands on Demo]

AWS Glacier

AWS Glacier

- → Introduction to Glacier
- → Key Glacier Terminology
- → Demo

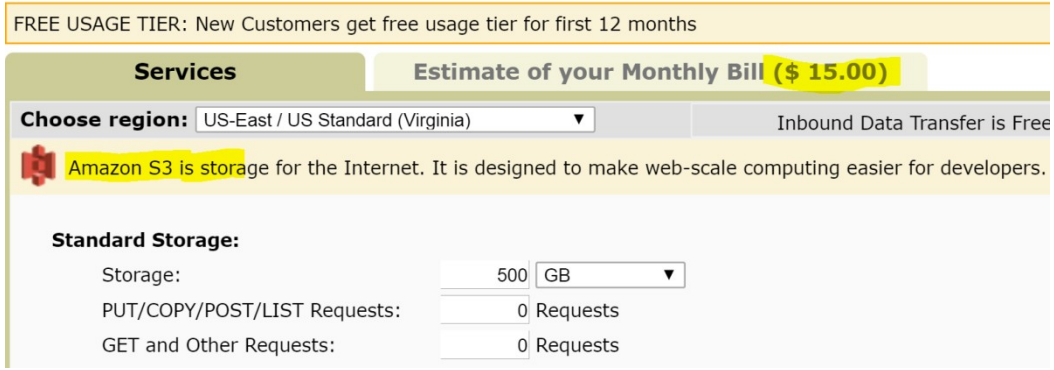
Requirement for Archival

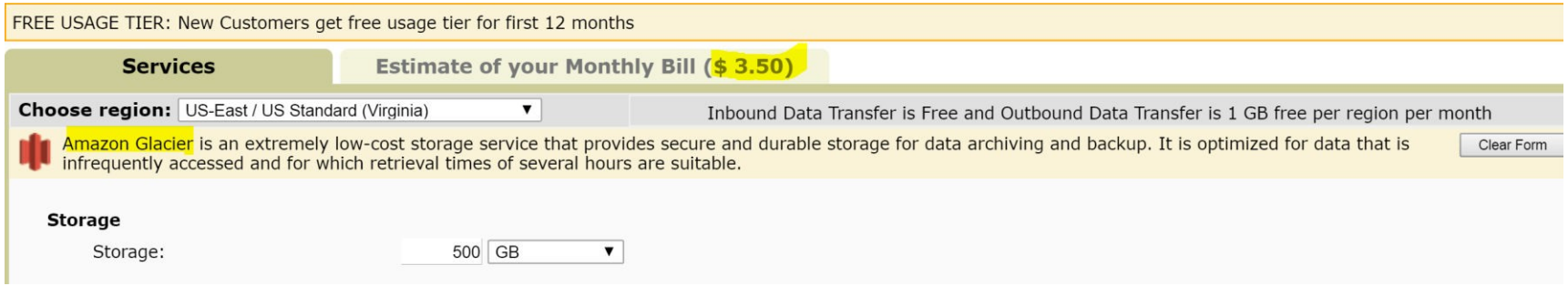
- → You are having large data but that is hardly used
- → You need that data to be stored as it might be used for future need
- → It is not important that data should be available immediately

Glacier

- → Amazon Glacier is an extremely low-cost storage service
- → Idle for data back-up and archival
- → Its AWS managed scalable archival so you don't have to worry about capacity planning, hardware provisioning, data replication, hardware failure detection and repair, or time-consuming hardware maintenance.

Glacier





AWS Glacier

Reference Point	AWS S3	AWS Glacier
Storage Cost	$0.030/GB up to 1 TB	$0.007 per GB for all sizes [almost ¼ of S3]
Data Request Cost	PUT, COPY, POST, or LIST Requests $0.005 per 1,000 requests	UPLOAD and RETRIEVAL Requests: $0.050 per 1,000 requests
	Archive to Glacier requests $0.05 per 1,000 requests Delete is Free	LISTVAULTS, GETJOBOUTPUT, DELETE: No Cost (free up to 5% of monthly storage)
Max Size of single object	5 TB	40 TB (using multipart upload)
Storage Method	Storage in Unique Bucket	Stores archives (objects) in Vault.
Number of buckets/vaults	Max 100 in US Standard Region	Max 1000 vaults/region
Access (Data retrieval)	In seconds	In 3-5 hours
Best suitable	Frequently Accessible Objects	Rarely accessible objects but for longer storage period

Glacier

→ Vault:

» A vault is a container for storing archives

» When you create a vault, you specify a name and select an AWS region where you want to create the vault

» Each vault resource has a unique address like https://<region-specific endpoint>/<account-id>/vaults/<vaultname>

e.g. https://glacier.us-west-2.amazonaws.com/111100002222/vaults/intellipaatvault

» A vault is like a bucket but, unlike a bucket, it doesn't have to have a unique name across S3 because it is named and accessed per account

→ Archive:

» An archive can be any data such as a photo, video, or document and is a base unit of storage in Amazon Glacier.

» Each archive has a unique ID and an optional description https://glacier.us-west-2.amazonaws.com/111100002222/vaults/intellipaatvault/archives/NMHJYUIOOSSKCBSHOIENABCDEFGHIJKL-TjhqG6eGoOY9Z8i1_AUyUsuhPAdTqLHy8pTl5nfCFJmDl2yEZONi5L26Omw12vcs01MNGntHEQL8MBfGlqrEXAMP LEArchiveId

» Archive IDs are unique within a vault.

» You can store an unlimited number of archives in a vault.

Moving Archives to Glacier

- AWS Console allows to create Vault only but does not allow uploading archives from console
- Use AWS CLI / SDK / APIs to upload archive
- AWS S3 Lifecycle also allows to migrate objects to AWS
- Glacier does not support updating existing Archive. Create new and delete old for update.

Remember Glacier is not replacement of S3 but its for long term storage as it may take 3-5 hours to make object available

Once your retrieval request has been fulfilled, your data is available for download for 24 hours

Glacier

- Glacier is designed to provide average annual durability of 99.999999999% for an archive
- Data is stored across regions for higher durability
- All data is stored securely using AES-256 encryption
- All data transfer over SSL

Demo

Lets see Demo of AWS Glacier

Summary

In this video we learned AWS Archival Storage Service Glacier

In next session we will have overview aboutm AWS Cloudfront

Thank You

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