AWS Glacier

What is AWS Glacier

❑ Amazon Glacier is an extremely low-cost storage service that provides durable storage with security features for data archiving and backup.

❑ With Amazon Glacier, customers can store their data cost effectively for months, years, or even decades.

❑ You can upload a single file as an archive or aggregate multiple files into a TAR or ZIP file and upload as one archive.

❑ A single archive can be as large as 40 terabytes.

❑ Amazon Glacier is a REST- based web service.
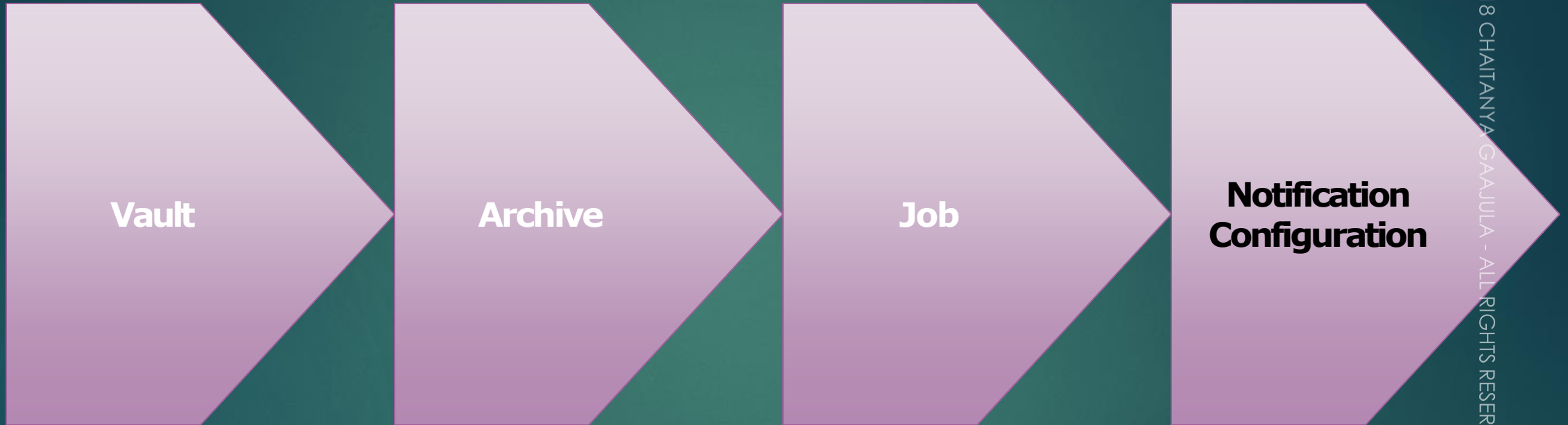
AWS Glacier: Features

Low Cost	Secure	Durable

Simple	Flexible	Integrated

AWS Glacier: Data Model

**Vault**

Archive

Job

Notification Configuration

AWS Glacier: Vault

❑ Vault is a container for storing archives.

❑ Within a region, an account must use unique vault names.

❑ An AWS account can create same-named vaults in diferent regions

❑ Each vault resource has a unique address. The general form is:

☐ https://<region-specific endpoint>/<account-id>/vaults/<vaultname>

❑ Example, create a vault (examplevault) in the US West region.

☐ https://glacier.us-west-2.amazonaws.com/111122223333/vaults/examplevault

   o glacier.us-west-2.amazonaws.com identifies the region.

   o 111122223333 is the AWS account ID that owns the vault.

   o vaults refers to the collection of vaults owned by the AWS account.

   o examplevault identifies a specific vault in the vaults collection.
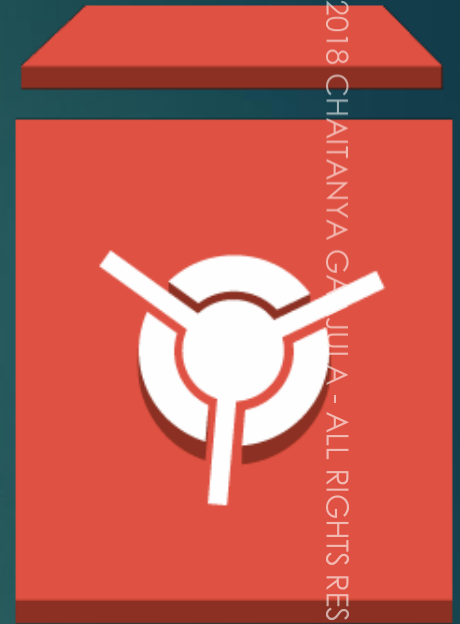
AWS Glacier: Archive

❑ Archive can be any data such as a photo, video, or document

❑ Archive is a base unit of storage in Amazon Glacier.

❑ Each archive has a unique ID.

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

❑ Amazon Glacier assigns the archive an ID, which is unique in the AWS region in which it is stored.

    ❑ https://<region-specific endpoint>/<account-id>/vaults/

    ❑ <vault-name>/archives/<archive-id>

❑ You cannot update an existing archive.

AWS Glacier: Archive RetrievalOptions

Expedited

Allow you to quickly access your data
Data are typically made available within 1–5 minutes.

Types
- ✓ On-Demand
- ✓ Provisioned

Standard

Allow you to access your data within several hours
.
(Approx. 3-5 hours)

This is default option

Bulk

Lowest-cost retrieval option.
Retrieve large amounts, of data inexpensively in a day.
Bulk retrievals complete within 5–12 hours.

AWS Glacier: Retrieval Policies

Free Tier

Max Retrieval Rate

No Retrieval Limit

AWS Glacier: Job

❑ To retrieve an archive, first initiate a job, and then download the job output after AWS Glacier completes the job.

❑ With AWS Glacier, your data retrieval requests are queued and most jobs take about four hours to complete.

❑ A vault can have multiple jobs in progress at any point in time.

❑ When you send a job request (initiate a job), AWS Glacier returns to you a job ID to track the job.

❑ For each job, AWS Glacier maintains information such as job type, description, creation date, completion date, and job status.

❑ You can obtain information about a specific job or obtain a list of all your jobs associated with a vault.

❑ Each job is uniquely identified in the form:

    https://<region-specific endpoint>/<account-id>/vaults/<vault-name>/jobs/<job-id>

AWS Glacier: Notification Configuration

❑ Because jobs take time to complete, AWS Glacier supports a notification mechanism to notify you when a job is complete.

❑ You can configure a vault to send notification to an Amazon Simple Notification Service (Amazon SNS) topic when jobs complete.

AWS Glacier: Retrieval Options

- ❑ Glacier Pricing
  - o $0.004 per GB / month

- ❑ Retrieval Pricing

Description	Expedited	Standard	Bulk
Data Access Time	1 - 5 minutes	3 - 5 hours	5 - 12 hours
Data Retrievals	$0.03 per GB	$0.01 per GB	$0.0025 per GB
Retrieval Requests	On-Demand: $0.01 per request Provisioned: $100 per Provisioned Capacity Unit	$0.050 per 1,000 requests	$0.025 per 1,000 requests

AWS Glacier: Operation

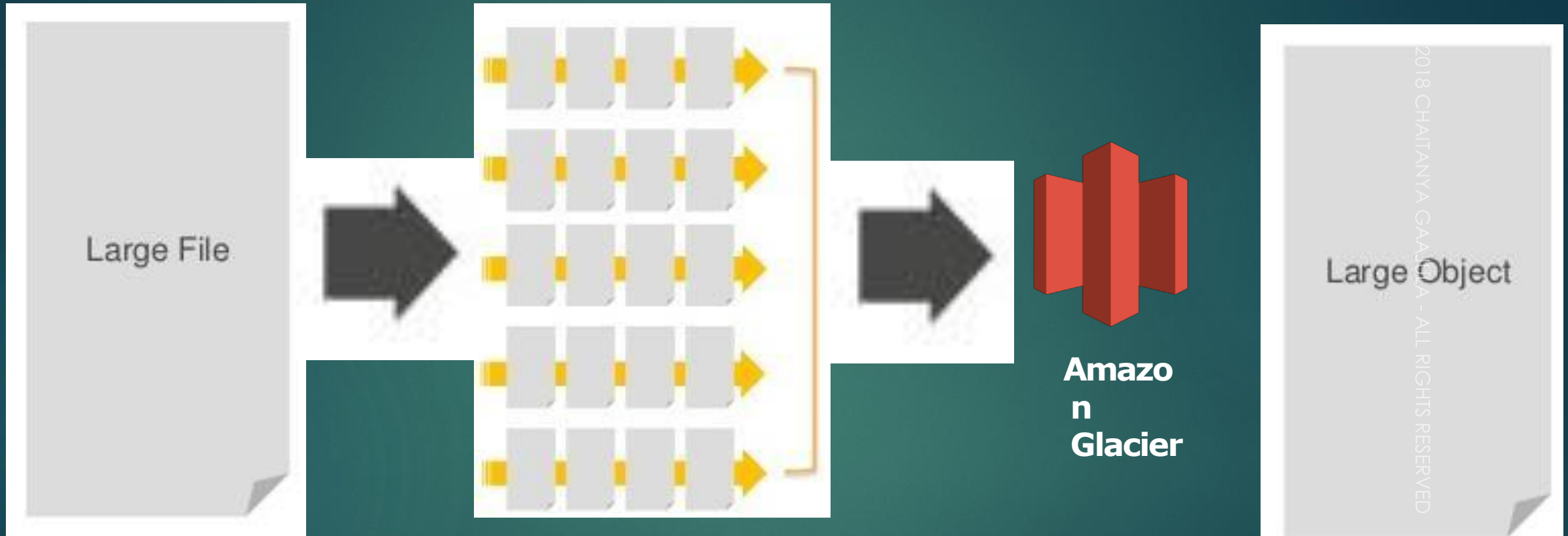| Create Vault	Delete Vault	Retrieving Vault Metadata	Downloading a Vault Inventory
Uploading an Archive	Downloading an Archive	Deleting an Archive	Updating an Archive

AWS Glacier: Multipart Upload

Large File

Amazon Glacier

Large Object

AWS Glacier: Limitations

Description	Limitation
You can create up to 1,000 vaults per region	1000

THANK YOU