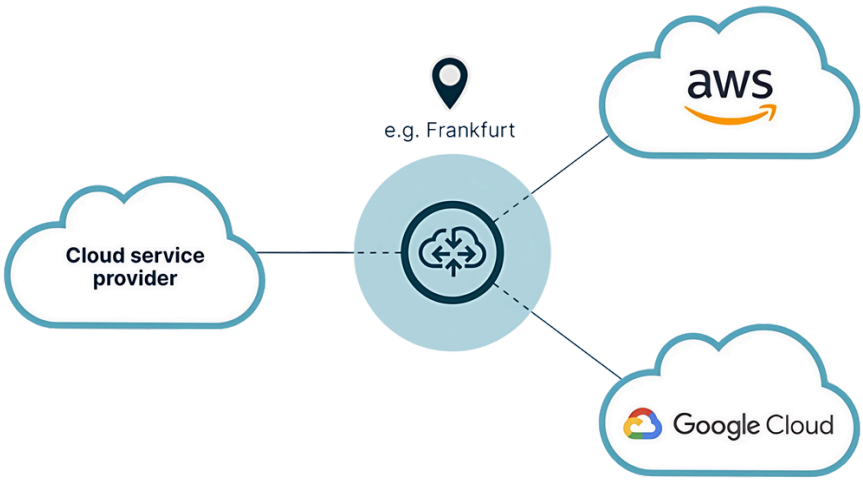
Notes

AWS Project Documentation

Multi-Cloud Data Transfer: AWS S3 to Google Cloud



@sAnandha

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MULTI-CLOUD DATA TRANSFER: AWS S3 ↔ GCP GCS

☁What is Multi-Cloud?

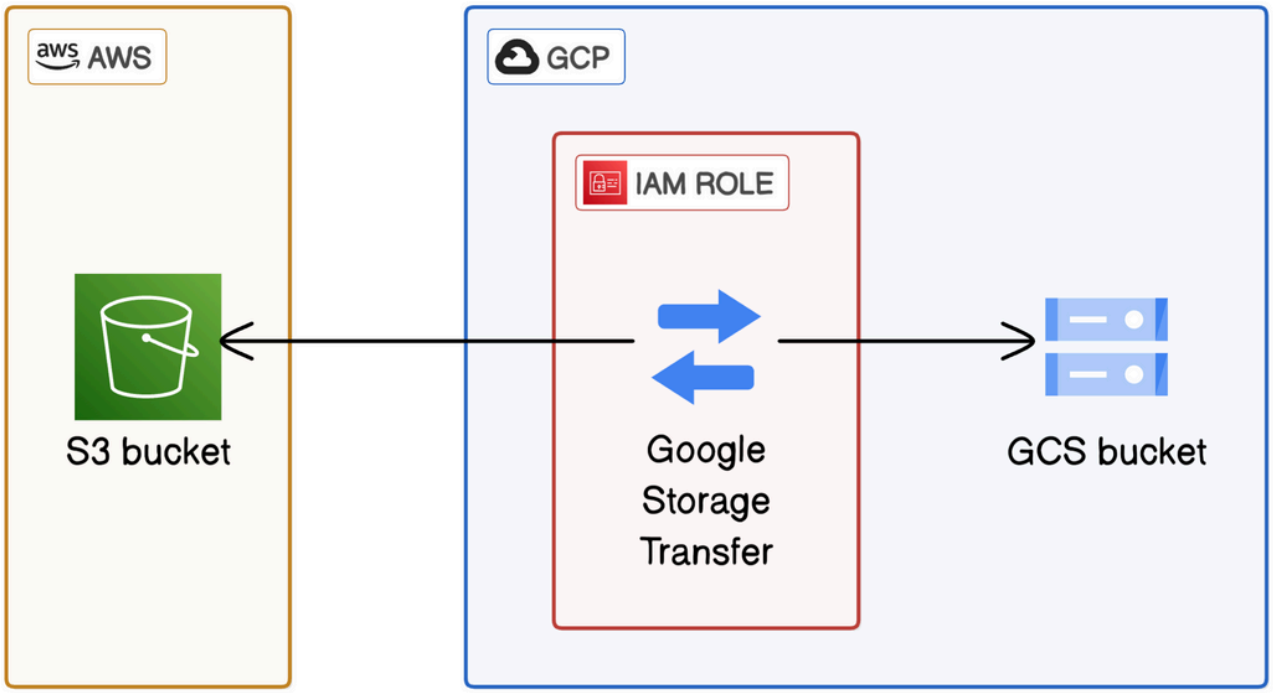
Multi-cloud means using cloud services from more than one provider, like Amazon Web Services (AWS) and Google Cloud Platform (GCP). Instead of depending on just one cloud, we use different services from different platforms based on our needs.

🚀 Why Use Multi-Cloud?

- ✅ Avoid Lock-in: You're not stuck with one provider.
- ✅ Better Performance: Choose faster or closer services.
- ✅ Cost Optimization: Pick cheaper services when possible.
- ✅ Backup and Safety: If one cloud has issues, the other can work.
- ✅ Flexibility: Use best features from both AWS and GCP.

Notes

ARCHITECTURE DIAGRAM :



Architecture Overview :

The diagram shows:

- An **S3 bucket** on AWS (used to store files).
- A **GCS bucket** on GCP (another place to store files).
- A **Google Storage Transfer** tool that:
  - Moves data from **AWS S3** to **GCP GCS** or
  - Moves data from GCP GCS to AWS S3.
- An **IAM role** in GCP for secure permissions to access AWS.

Notes

🛠️ Steps to Develop AWS to GCP Data Transfer

🔹 Step 1: Set Up AWS S3 Bucket

1. Log in to AWS Console: Access your AWS account.
2. Create an S3 Bucket:
    - Navigate to the S3 service.
    - Click on "Create bucket".
    - Provide a unique name and select a region.
3. Upload Data:
    - Open your newly created bucket.
    - Click on "Upload" and add the files you wish to transfer.

🔹 Step 2: Configure AWS IAM for Access

1. Create an IAM User:
    - Go to the IAM service.
    - Click on "Users" and then "Add user".
    - Assign a username and select "Programmatic access".
2. Set Permissions:
    - Attach the policy AmazonS3ReadOnlyAccess to grant read access to S3.
3. Save Credentials:
    - After creation, note down the Access Key ID and Secret Access Key. These will be used to authenticate from GCP.

Step 3: Set Up GCP Cloud Storage Bucket

1. Log in to GCP Console: Access your Google Cloud account.
2. Create a GCS Bucket:
    - Navigate to the Cloud Storage service.
    - Click on "Create bucket".
    - Provide a unique name and select a location.
3. Enable Necessary APIs:
    - Ensure that the Storage Transfer Service API is enabled for your project.

Step 4: Create a Transfer Job in GCP

1. Access Storage Transfer Service:
    - In the GCP Console, navigate to "Storage Transfer" and Click on "Create transfer job".
2. Configure Source:
    - Select "Amazon S3" as the source.
    - Enter the Access Key ID, Secret Access Key, and the name of your S3 bucket.
3. Configure Destination:
    - Choose your GCS bucket as the destination.
4. Set Transfer Options:
    - Define the schedule (one-time or recurring).
5. Initiate Transfer:
    - Review the settings and create the transfer job

Step 5: Monitor the Transfer

1. Check Transfer Status:
   - In the Storage Transfer section, monitor the status of your transfer job.
2. Verify Data in GCS:
   - Navigate to your GCS bucket.
   - Confirm that the files from AWS S3 have been successfully transferred.

📂 Summary

Cloud	Service Used	Role
AWS	S3 Bucket	Stores original or backup data
AWS	IAM Role	Gives permission to access AWS
GCP	Storage Transfer	Handles the actual file movement
GCP	GCS Bucket	Stores copied data from S3

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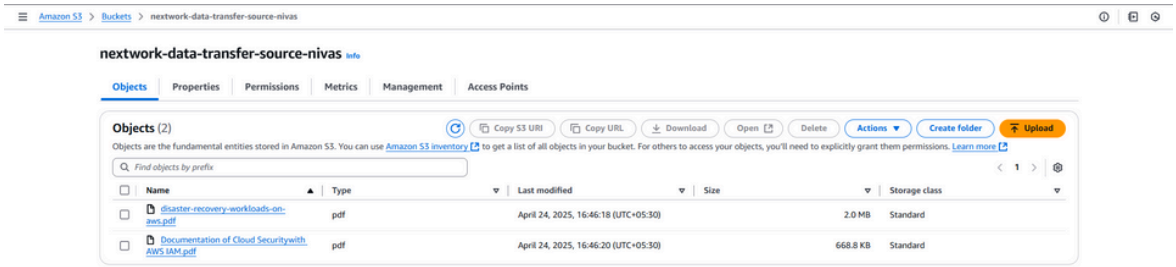
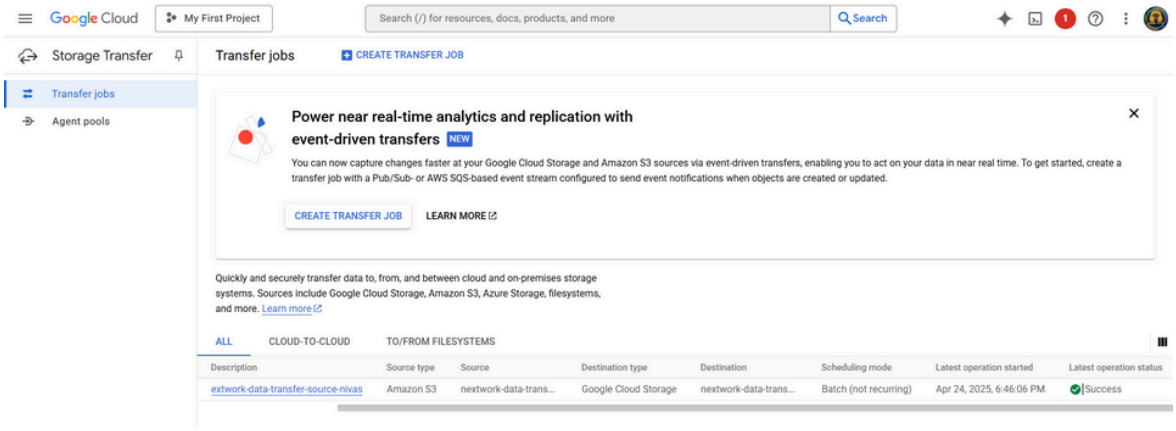
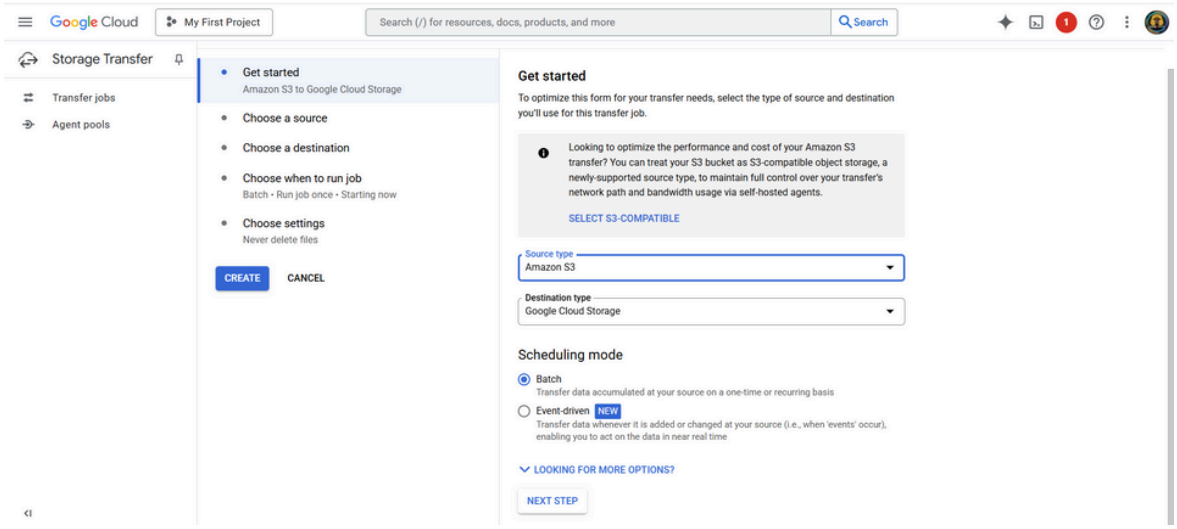
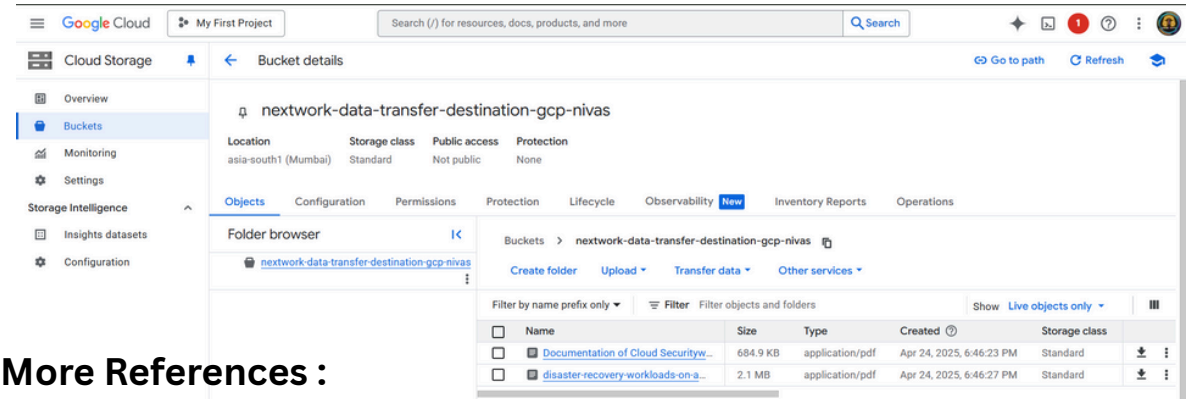
SAMPLE OUTPUT :









For More References :

https://learn.nextwork.org/projects/aws-multicloud-storage?_gl=1*f1g5ap*_ga*MjAzODY1Mzc3My4xNzI5NTMwMDAy*_ga_P3ZJGC0XCG*MTc0NjE2NDI2Mi4xODguMS4xNzQ2MTY0Mzc4LjAuMC4w