GCP Infrastructure Instructions for STS DAGs

This document outlines the required services, permissions, and configuration for enabling GCS-to-GCS transfers using Storage Transfer Service (STS) in Airflow Composer (Airflow 2.5.3, Composer 2.6.5).

1. Enable Required APIs:

- Storage Transfer Service (storagetransfer.googleapis.com)

- Cloud Storage (storage.googleapis.com)

2. Composer Environment Configuration:

- PyPI packages to install:

apache-airflow-providers-google==10.1.1

apache-airflow-providers-amazon==6.1.0

3. IAM Permissions (for Composer service account):

A. On Source Bucket:

- storage.objectViewer

B. On Destination Bucket:

- storage.objectCreator or storage.objectAdmin

C. On STS usage project:

- storagetransfer.user or custom role with:

- storagetransfer.transferJobs.create

- storagetransfer.transferJobs.get

- storagetransfer.transferJobs.run

4. Network:

- Ensure access to both buckets and no firewall blocks to *.googleapis.com

5. For event-driven transfers (polling-based):

- No Pub/Sub or Cloud Functions are needed

- DAG will poll for new files every 15 minutes

These steps enable batch and event-style file transfers via STS in Composer.