

Automated orders data pipeline: GCS to Snowflake

1. Create google cloud storage bucket to load data(csv files)

Upgrade your account to avoid a break in service (₹20,836.30 credit and 6 days left in your trial). [LEARN MORE](#) [UPGRADE](#)

Google Cloud My First Project storage buck Search

Cloud Storage Bucket details [GO TO PATH](#) [REFRESH](#) [LEARN](#)

snowpipe_raw_data_practice

Location: us (multiple regions in United States) Storage class: Standard Public access: Not public Protection: Soft Delete

OBJECTS CONFIGURATION PERMISSIONS PROTECTION LIFECYCLE OBSERVABILITY INVENTORY REPORTS OPERATIONS

Folder browser [Buckets](#) > snowpipe_raw_data_practice

[CREATE FOLDER](#) [UPLOAD](#) [TRANSFER DATA](#) [MORE SERVICES](#)

Filter by name prefix only Filter objects and folders Show Live objects only

<input type="checkbox"/>	Name	Size	Type	Created	Storage class	Last modified	Public access	Version history	Encryption
No rows to display									

2. Create role to assign some permissions to gcs bucket when connecting with Snowflake

Upgrade your account to avoid a break in service (₹20,836.30 credit and 6 days left in your trial). [LEARN MORE](#) [UPGRADE](#)

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IAM & Admin Create Role

Custom roles let you group permissions and assign them to principals in your project or organization. You can manually select permissions or import permissions from another role. [Learn more](#)

Title *
new_gcs_role_snowflake 21 / 100 characters

Description
Created on: 2024-09-07 22 / 256 characters

ID *
CustomRole

Role launch stage
Alpha

[+ ADD PERMISSIONS](#)

No assigned permissions

Filter Enter property name or value

<input type="checkbox"/>	Permission	Status
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Google Cloud My First Project pub

Pub/Sub

Topics

Subscriptions

Manage Resources

Release Notes

Subscription name projects/astute-city-426410-k4/subscriptions/snowpipe_pubsub_topic

Subscription state active

Topic name projects/astute-city-426410-k4/topics/snowpipe_pubsub_topic

METRICS DETAILS MESSAGES

GO BACK TO CLASSIC METRICS SAVE AS DASHBOARD

RESET ZOOM 1 hour 6 hours 1 day 1 week 1 month 6 weeks Custom

PERMISSIONS LABELS

Edit or delete roles below, or select "Add Principal" to grant new access.

ADD PRINCIPAL

Show inherited roles in table

Display roles inherited from the parent resources in the table below

Terminal (astute-city-426410-k4)

```
Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to astute-city-426410-k4.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
miralkunapara2003@cloudshell:~ (astute-city-426410-k4)$ gsutil notification create -t snowpipe_pubsub_topic -f json gs://snowpipe_raw_data_practice;
Created notification config projects/_/buckets/snowpipe_raw_data_practice/notificationConfigs/4
miralkunapara2003@cloudshell:~ (astute-city-426410-k4)$ gsutil notification create -t snowpipe_pubsub_topic -f json gs://snowpipe_raw_data_practice/
Created notification config projects/_/buckets/snowpipe_raw_data_practice/notificationConfigs/5
miralkunapara2003@cloudshell:~ (astute-city-426410-k4)$
```

5. Create another permission for monitoring pub-sub

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Google Cloud My First Project iam

IAM & Admin

IAM

PERMISSIONS RECOMMENDATIONS HISTORY

Permissions for project "My First Project"

These permissions affect this project and all of its resources. [Learn more](#)

Include Google-provided role grants

VIEW BY PRINCIPALS VIEW BY ROLES

GRANT ACCESS REMOVE ACCESS

Filter Enter property name or value

Type	Principal	Name	Role	Security Insights
	1063863163461-compute@developer.gserviceaccount.com	Compute Engine default service account	Editor	8793/8806 excess permissions
	kxqf00000@gcpuscentral1-1dfa.iam.gserviceaccount.com		pubsub_monitoring_role	
	miralkunapara2003@gmail.com	miral kunapara	Owner	9864/10020 excess permissions

6. Load csv files into bucket

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UPGRADE

Google Cloud

My First Project

Search (/) for resources, docs, products, and more

Search

Cloud Storage

Bucket details

GO TO PATH

REFRESH

LEARN

Buckets

Monitoring

Settings

Manage Resources

Marketplace

Release Notes

snowpipe_raw_data_practice

Locationus (multiple regions in United States)

Storage classStandard

Public accessNot public

ProtectionSoft Delete

OBJECTS

CONFIGURATION

PERMISSIONS

PROTECTION

LIFECYCLE

OBSERVABILITY

INVENTORY REPORTS

OPERATIONS

Folder browser

雪pipe_raw_data_practice

CREATE FOLDER

UPLOAD

TRANSFER DATA

MORE SERVICES

Filter by name prefix only

Filter

Filter objects and folders

Show

Live objects only

	Name	Size	Type	Created	Storage class	Last modified	
<input type="checkbox"/>	orders_20231210.csv	124 B	text/csv	Sep 7, 2024, 6:59:53 PM	Standard	Sep 7, 2024, 6:59:	⬇ ⋮
<input type="checkbox"/>	orders_20231211.csv	90 B	text/csv	Sep 7, 2024, 7:02:06 PM	Standard	Sep 7, 2024, 7:02:	⬇ ⋮

Explore 1st and 3rd party solutions in Marketplace

7. Analyze messages is consumed by subscription

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UPGRADE

Google Cloud

My First Project

pub

Search

Pub/Sub

snowpipe_pub...

EDIT

CREATE SNAPSHOT

REPLAY MESSAGES

PURGE MESSAGES

DETAILS

DELETE

LEARN

HIDE INFO PANEL

Pub/Sub

Topics

Subscriptions

Snapshots

Schemas

Pub/Sub Lite

Lite Reservations

Lite Topics

Lite Subscriptions

Manage Resources

Release Notes

Subscription nameprojects/astute-city-426410-k4/subscriptions/snowpipe_pubsub_topic

Subscription stateactive

Topic nameprojects/astute-city-426410-k4/topics/snowpipe_pubsub_topic

METRICS

DETAILS

MESSAGES

GO BACK TO CLASSIC METRICS

SAVE AS DASHBOARD

RESET ZOOM

1 hour

6 hours

1 day

1 week

1 month

6 weeks

Custom

Overview

Health

Pull

Oldest unacked message a...

Create alerting policy

Oldest unacked message age

4min

2min

0

UTC+5:30

6:20 PM

6:30 PM

6:40 PM

6:50 PM

7:00 PM

oldest unacked message age: 3.7min

snowpipe_pubsub_topic

PERMISSIONS

LABELS

Edit or delete roles below, or select "Add Principal" to grant new access.

ADD PRINCIPAL

Show inherited roles in table

Display roles inherited from the parent resources in the table below

Filter

Enter property name or value

Role / Principal

Inheritance

Editor (2)

Owner (1)

Pub/Sub Subscriber (1)

8. Check the data is loaded in snowflake order_data_lz table

Project_solution

Databases

Worksheets

Search objects

FIRST_ONE

SNOWFLAKE

SNOWFLAKE_SAMPLE_DATA

SNOWPIPE_PROJECT

INFORMATION_SCHEMA

VIEWS

PUBLIC

Tables

ORDER_DATA_LZ

Stages

SNOWPIPE_STAGE

Pipes

GCS_TO_SNOWFLAKE_PIPE

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82

SNOWPIPE_PROJECT.PUBLIC

Settings

Code Versions

select system\$pipe_status('gcs_to_snowflake_pipe');

-- Check the history of ingestion

Select *

from table(information_schema.copy_history(table_name=>'order_data_lz', start_time=> dateadd(hours, -1, current_timestamp())));

-- Terminate a pipe

drop pipe gcs_snowpipe;

--select data

select * from order_data_lz ;

Results

Chart

ORDER_ID

PRODUCT

QUANTITY

ORDER_STATUS

ORDER_DATE

1

Keyboard

2

Completed

2023-08-07

2

Mouse

1

Pending

2023-08-07

3

Monitor

1

Completed

2023-08-07

4

Laptop

1

Failed

2023-08-07

Query Details

Query duration

697ms

Rows

4

Query ID

01b6df4b-0002-d3e5-0...

Show more

MK