## **Loading Data in Snowflake Using External Stages**

### **What is a Stage in Snowflake?**

A **stage** is a storage area used to temporarily hold data files before loading into or unloading from Snowflake.  
 There are three types of stages:

* **User stage** – automatically created for each user
* **Table stage** – attached to individual tables
* **Named stage** – manually created and reusable (used here)

### **Step-by-Step Explanation of the Code**

#### **1. Create a Database and Schema to Manage External Resources**

CREATE OR REPLACE DATABASE MANAGE\_DB;

CREATE OR REPLACE SCHEMA external\_stages;

* Creates a database named MANAGE\_DB
* Creates a schema called external\_stages inside that database
* These are used to organize external stages, file formats, etc.

#### **2. Create an External Stage (Connecting to S3)**

CREATE OR REPLACE STAGE MANAGE\_DB.external\_stages.aws\_stage

url='s3://bucketsnowflakes3'

credentials=(aws\_key\_id='ABCD\_DUMMY\_ID' aws\_secret\_key='1234abcd\_key');

* Creates a named stage called aws\_stage
* Connects to an Amazon S3 bucket
* Uses AWS credentials to allow Snowflake to access the files

#### **3. View Stage Details**

DESC STAGE MANAGE\_DB.external\_stages.aws\_stage;

* Displays stage properties such as location, credentials (masked), and file format settings

#### **4. Update the Stage Credentials**

ALTER STAGE aws\_stage

SET credentials=(aws\_key\_id='XYZ\_DUMMY\_ID' aws\_secret\_key='987xyz');

* Updates the AWS access keys for the existing stage

#### **5. Create a Public Stage (No Credentials Needed)**

CREATE OR REPLACE STAGE MANAGE\_DB.external\_stages.aws\_stage

url='s3://bucketsnowflakes3';

* Re-creates the stage assuming the S3 bucket is publicly accessible
* No need to provide credentials

#### **6. List Files in the Stage**

LIST @aws\_stage;

* Lists all files available in the external stage
* Useful for previewing what you’ll load

#### **7. Load Data into a Table**

COPY INTO OUR\_FIRST\_DB.PUBLIC.ORDERS

FROM @aws\_stage

file\_format=(type = csv field\_delimiter=',' skip\_header=1)

pattern='.\*Order.\*';

* Loads data from the stage into the ORDERS table
* Assumes the files are CSV with commas and a header row
* Only files with "Order" in their name will be loaded (pattern filter)

## **Summary**

* Use **named stages** to connect Snowflake to cloud storage like S3
* You can manage stages, update credentials, and filter which files to load
* Use COPY INTO to load data from the stage into Snowflake tables
* File formats and naming patterns help control how data is loaded