

# The Snowflake Multi-Stage Browser

A visual guide to the Native App that allows you to register and browse multiple Snowflake stages using a secure, direct-grant model with role-based access.

## Role-Based Access Control

The application separates duties with two distinct application roles, ensuring that only authorized users can manage the list of available stages. This is enforced by a secure, capability-based check in the application's code.



### Admin Role (``app_admin``)

Can view files in all registered stages and has exclusive access to the "Manage Stages" panel to add or remove stages from the application's registry.



### Viewer Role (``app_viewer``)

Can only view files in stages that have already been registered by an admin. The management panel is completely hidden from this role.

# Crucial Post-Installation Setup

The application's security relies on the consumer running standard `GRANT` commands. This gives the app explicit, auditable read-only access for each stage.

## Required SQL Grants for Each Stage

```
// 1. Grant USAGE on the parent Database
GRANT USAGE ON DATABASE MY_DB TO APPLICATION AWS_S3_BROWSER_APP;

// 2. Grant USAGE on the parent Schema
GRANT USAGE ON SCHEMA MY_DB.PUBLIC TO APPLICATION AWS_S3_BROWSER_APP;

// 3. Grant READ on the Stage itself
GRANT READ ON STAGE MY_DB.PUBLIC.MY_STAGE TO APPLICATION AWS_S3_BROWSER_APP;
```

## User Experience Workflow

The user journey is simple and intuitive, with clear separation between administrative tasks and daily usage.



## Admin Experience

1. Grant `app\_admin` role to their account role.
2. Run the required `GRANT` commands for a stage.
3. Open the app and use the "Manage Stages" panel to add the stage's full name.
4. View files in any registered stage.



## Viewer Experience

1. Grant `app\_viewer` role to their account role.
2. Open the app. The management panel is not visible.
3. Select a pre-registered stage from the dropdown.
4. Click "Refresh File List" to view its contents.

# Visualizing Stage Contents

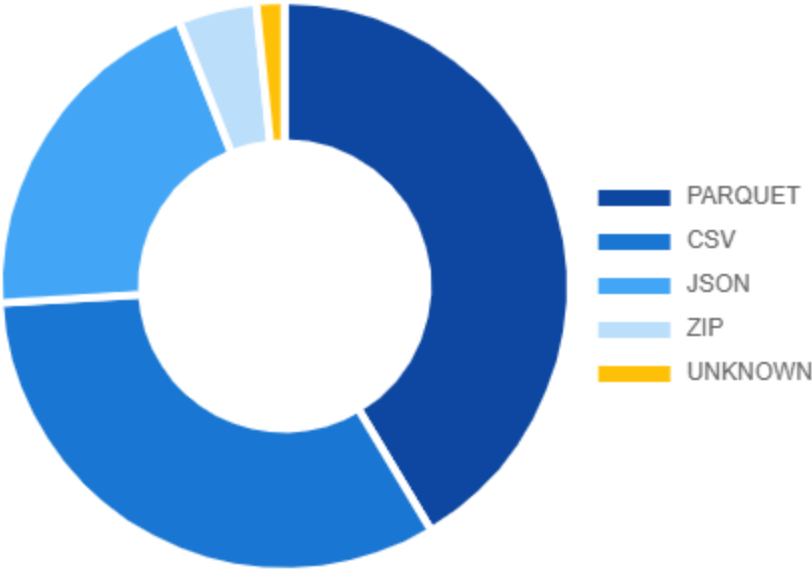
Once a stage is selected, the app provides immediate insights into its contents, including total size, file count, and a breakdown by file type, filtering out any directory listings.

## File Type Distribution

## Stage Metrics & File Listing

Total Files  
**1,256**

Total Size  
**3.42 GB**



File Name	Size
orders/2025/06/data_01.parquet	254.1 MB
customers/region_a/update.csv	15.2 KB
logs/archive.zip	1.15 GB