

Experiment 9: Data Sharing

Overview

Snowflake enables account-to-account sharing of data through *shares*, which are created by data providers and “imported” by data consumers, either through their own Snowflake account or a provisioned Snowflake Reader account. The consumer could be an external entity/partner, or a different internal business unit which is required to have its own, unique Snowflake account.

With Data Sharing –

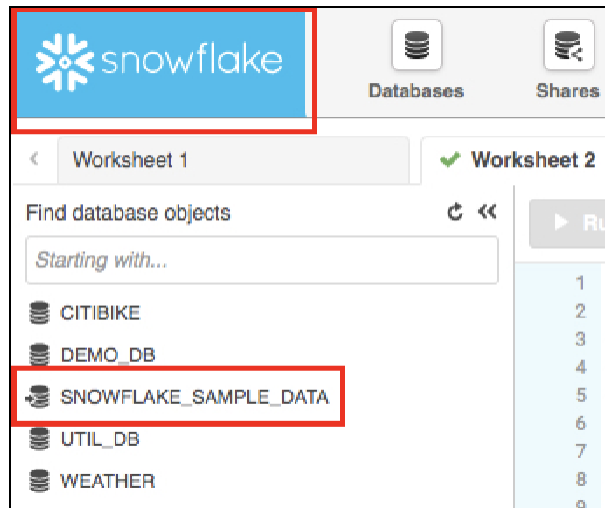
- There is only one copy of data, which lives in the data provider’s account
- Shared data is always live, real-time and immediately available to consumers
- Providers can establish revocable, fine-grained access grants to shares
- Data sharing is simple and secure, especially compared to the “old” way of sharing data which was often manual and involved transferring large .csv across the Internet in a manner that might be insecure

Note - Data Sharing currently only supported between accounts in the same Snowflake Provider and Region

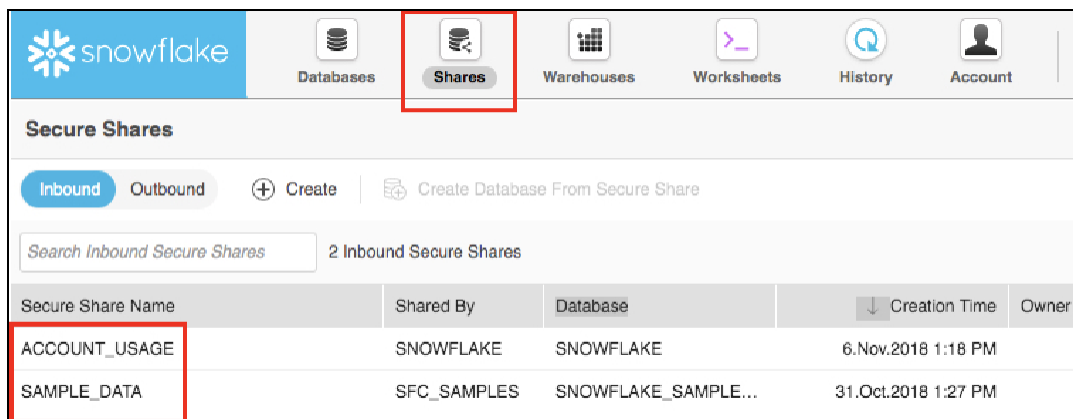
One example of data sharing is that Snowflake uses secure data sharing to share account usage data and sample data sets with all Snowflake accounts. In this capacity, Snowflake acts as the provider of the data and all other accounts act as the consumers. In your Snowflake environment you can easily see this and we walk through this in the next section.

9.1 See Existing Shares

- 9.1.1 Click on the blue Snowflake logo at the very top left of the UI. On the left side of the UI in the database object browser, notice the database “SNOWFLAKE_SAMPLE_DATA”. The small arrow on the database icon indicates this is a share.



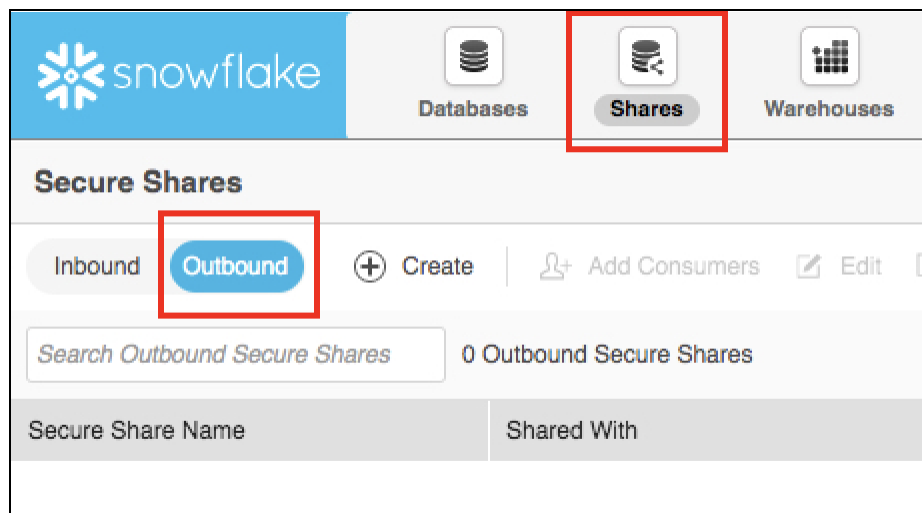
- 9.1.2 At the top right of the UI verify you are in the ACCOUNTADMIN role. Then at the top of the UI click on the Shares tab. Notice on this page you are looking at your Inbound Secure Shares and there are two shares shared by Snowflake with your account. One contains your account usage and the other has sample data you can use. This is data sharing in action - your Snowflake account is a consumer of data shared/provided by Snowflake!



9.2 Create an Outbound Share

9.2.1 Let's go back to the Citi Bike story and assume we are the Account Administrator for Snowflake at Citi Bike. We have a trusted partner who wants to do perform data science on the data in our TRIPS database on a near real-time basis to further analyze it. This partner also has their own Snowflake account in our region. So let's use Snowflake Data Sharing to share this data with them so they can analyze it.

At the top of the UI click on the Shares tab. Then, further down on the page click on the "Outbound" button.



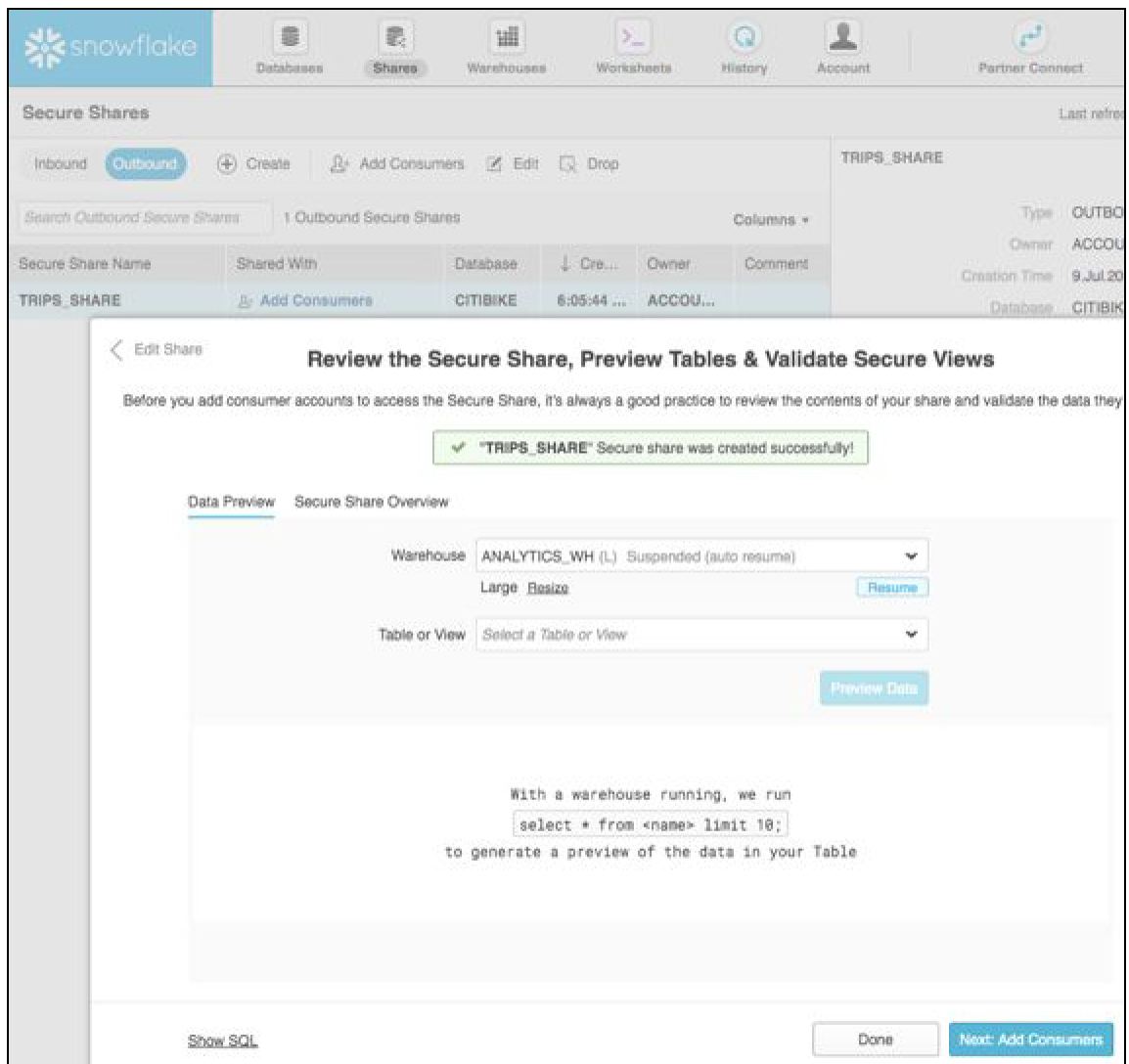
9.2.2 Click on the "Create" button and in the fields that appear, fill them out as shown below.

- For "Secure Share Name" enter "TRIPS_SHARE"
- For "Database" you will use the drop-down to select "CITIBIKE"
- For "Tables & Views" you will use the database object browser to browse to CITIBIKE > PUBLIC > TRIPS.
- Click on the blue "Apply" button

The screenshot shows the Snowflake web interface. At the top, there's a navigation bar with icons for Databases, Shares, Warehouses, Worksheets, History, and Account. Below this, the 'Secure Shares' section is active, showing 'Inbound' and 'Outbound' tabs. A red box highlights the '+ Create' button. Below the tabs, there's a search bar and a table header with columns: Secure Share Name, Shared With, Database, Creation..., Owner, and Comment. The main content area is titled 'Create a Secure Share and add Database objects to it'. It includes a description of Secure Shares and a link to learn more about preparing data. Below this, the 'Create' section prompts the user to select a Database and Schemas. A red box highlights the form fields: 'Secure Share Name' (containing 'TRIPS_SHARE'), 'Database' (a dropdown menu showing 'CITIBIKE'), and 'Tables & Views' (a button labeled 'Select Tables & Secure Views' and a list showing 'CITIBIKE.PUBLIC.TRIPS' with a plus icon). There's also a 'Comment' text area. At the bottom, there are 'Show SQL', 'Cancel', and 'Create' buttons.

9.2.3 Click on the blue “Create” button at the bottom of the box.

Note the window indicates the Secure share was created successfully.



In the real-world, the Citi Bike Account Administrator would click on the “Next: Add Consumers” blue button to add information on their partner’s Snowflake account name and type. But since in the experiment we are just using our own account, we will stop here.

9.2.4 Click on the “Done” button at the bottom of the box.

Note this page now shows the “TRIPS_SHARE” secure share. It only took seconds to give other accounts access to data in Snowflake in a secure manner with no copies of the data having to be made!

Secure Shares Last refreshed 6:05:47 PM

Inbound **Outbound** Create Add Consumers Edit Drop

Search Outbound Secure Shares 1 Outbound Secure Shares Columns ▾

Secure Share Name	Shared With	Database	↓ Cre...	Owner	Comment
TRIPS_SHARE	Add Consumers	CITIBIKE	6:05:44 ...	ACCOU...	

TRIPS_SHARE ✕

Type OUTBOUND

Owner ACCOUNTADMIN

Creation Time 9.JUL.2019

Database CITIBIKE

[Add consumers to access your Secure Data Share](#)

Lastly, note that Snowflake provides several ways to securely share data without compromising confidentiality. You can share not only tables and views, but also Secure Views, Secure UDFs (User Defined Functions), and Secure Joins. For more details on how to use these methods for sharing data while preventing access to sensitive information, see the Snowflake documentation.

Congratulations, you are now done with this experiment! Let's wrap things up for the Foundation set of experiments in the next section.