

Experiment 2: Snowflake UI

Overview

In this experiment we will work with the Snowflake User Interface. This work will be in support of the work we'll do in the first group of experiments for our Snowflake foundation.



About the screen captures, sample code, and environment

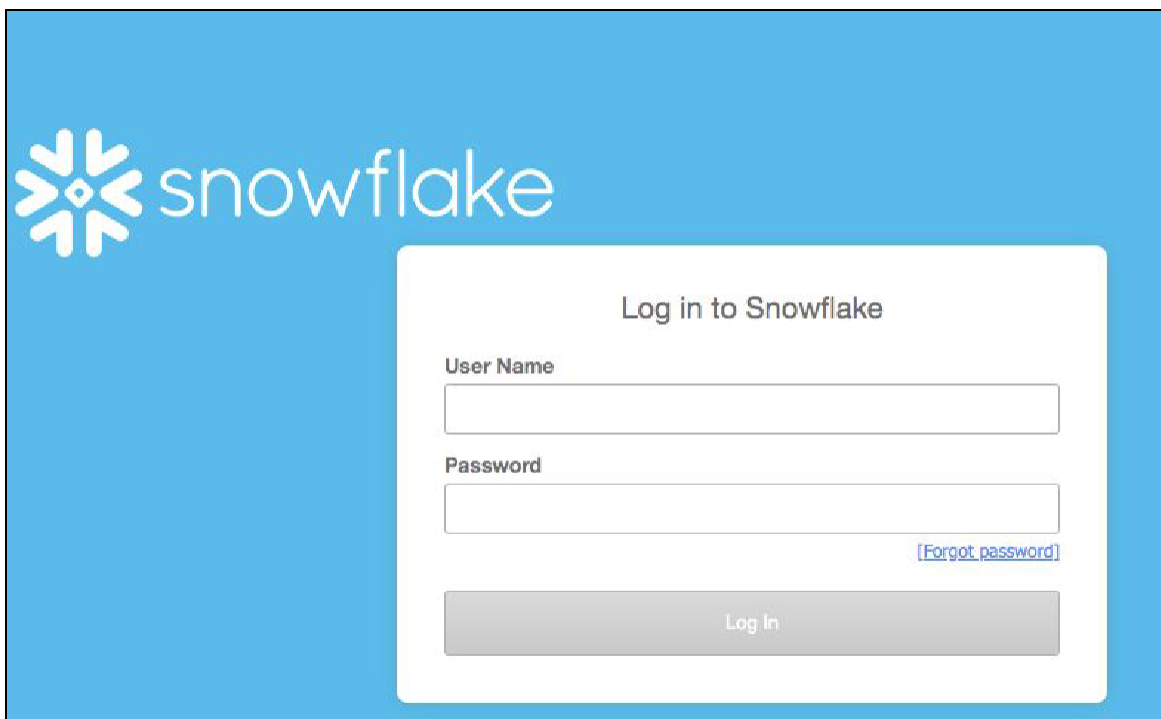
Screen captures in this experiment depict examples and results that may slightly vary from what you may see when you complete the experiments for the Foundation portion of our session and beyond.

2.1 Logging Into the Snowflake User Interface (UI)

2.1.1 Open a browser window and enter the URL of your Snowflake 30-day trial environment.

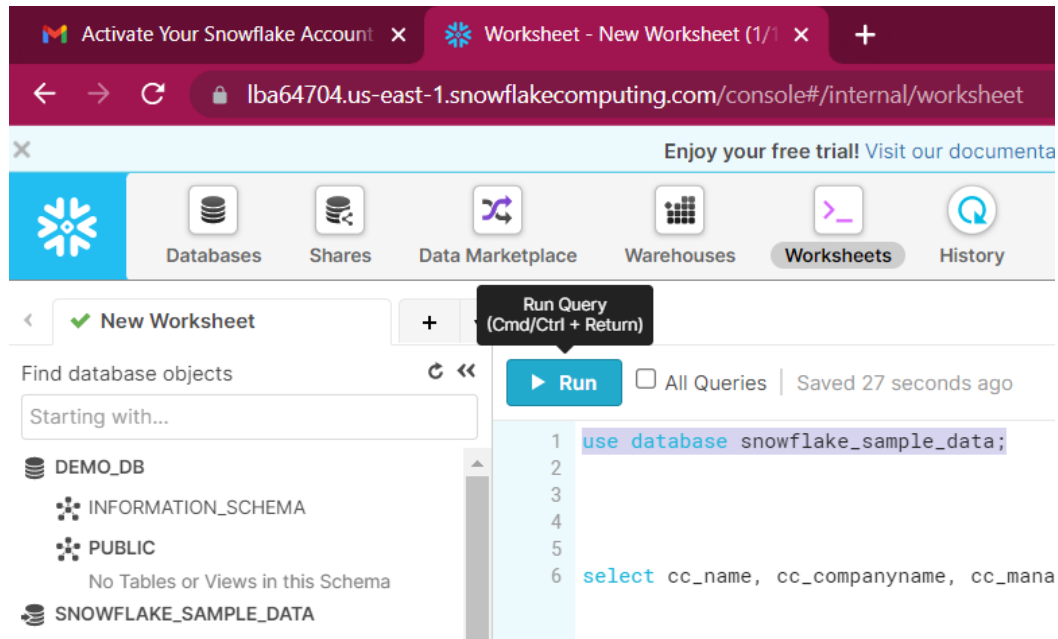
The individualized URL has your account information

2.1.2 You should see the login screen below. Enter your unique credentials to log in.

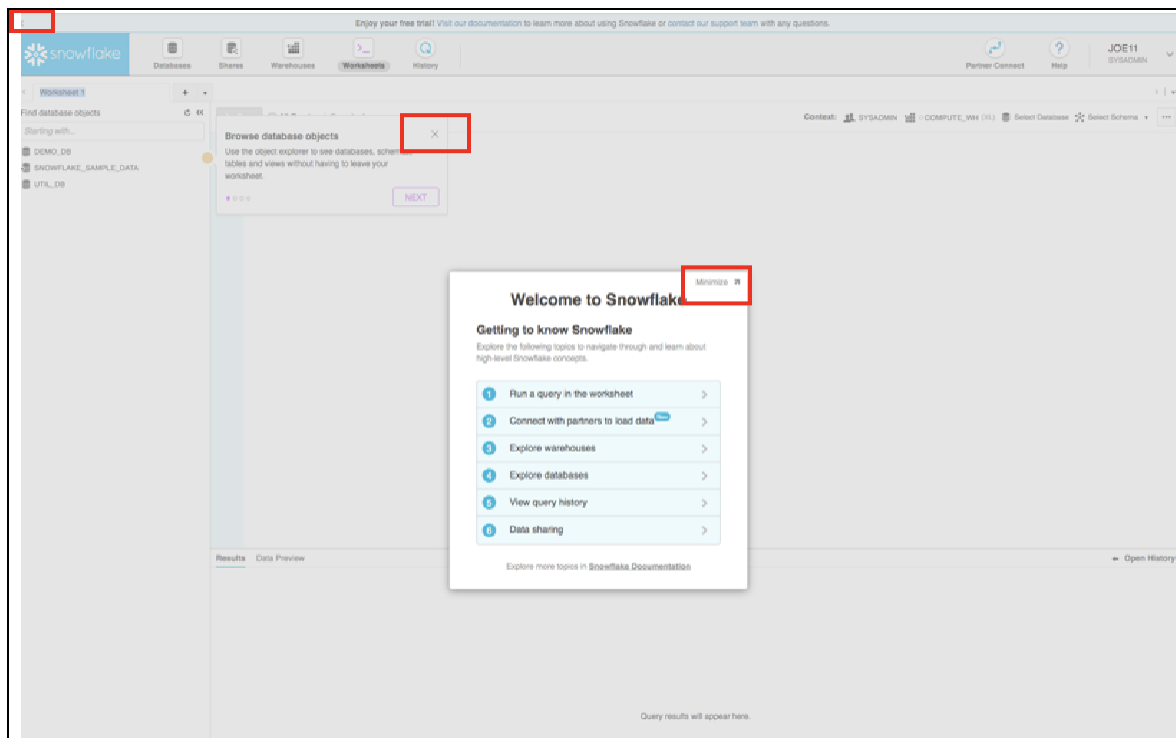
A screenshot of the Snowflake login interface. The background is a solid blue color. In the top left corner, there is a white Snowflake logo (a stylized snowflake) followed by the word "snowflake" in a white, lowercase, sans-serif font. On the right side, there is a white rectangular box with rounded corners. Inside this box, the text "Log in to Snowflake" is centered at the top. Below this text, there are two input fields: the first is labeled "User Name" and the second is labeled "Password". To the right of the "Password" field, there is a blue link that says "[Forgot password]". At the bottom of the white box, there is a grey rectangular button with the text "Log In" in white.

2.2 Close any Welcome Boxes and Experiments

2.2.1 You may see “welcome” and “helper” boxes in the UI when you log in for the first time. Also a “Enjoy your free trial...” ribbon at the top of the UI. Minimize and close them by clicking on the items in the red boxes on screenshot below.



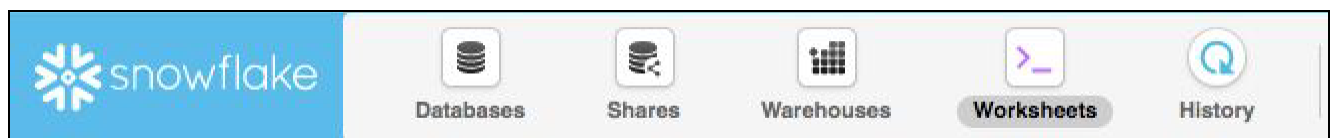
Remember that your account and the region that you’re using Snowflake in (for AWS CSP) are in the URL. The account in the above URL is LBA64704 and the AWS Cloud Provider region is US-EAST-1 (Northern Virginia).



2.3 Navigating the Snowflake UI

First let's get reacquainted with the Snowflake Web User Interface! This experiment revisits the basic components of the user interface to help orient your experiments in the Foundation and beyond. We will move left to right in the top of the UI.

2.3.1 The top menu allows you to switch between the different areas of Snowflake:



2.3.2 The **Databases** tab shows information about the databases you have created or have privileges to access. You can create, clone, drop, or transfer ownership of databases as well as load data (limited) in the UI. Notice several databases already exist in your environment. However, we will not be using these in this experiment.

The screenshot shows the Snowflake web interface with the 'Databases' tab selected and highlighted by a red box. The top navigation bar includes icons for Databases, Shares, Warehouses, Worksheets, History, and Partner Connect. Below the navigation bar, the 'Databases' section is titled 'Databases' with the subtitle 'Manage your databases from this page.' Below this, there are action buttons: '+ Create...', 'Clone...', 'Drop...', and 'Transfer Ownership'. A table lists existing databases:

Database	Origin	Creation Time ▼	Owner	Comment
SNOWFLAKE_SAMPLE_DATA	SFC_SAMPLES.SA...	6/27/19 11:52:44 PM	ACCOUNTADMIN	TPC-H, OpenWeatherMap, etc
DEMO_DB		6/27/19 11:52:42 PM	SYSADMIN	demo database
UTIL_DB		6/27/19 11:52:30 PM	SYSADMIN	utility database

2.3.3 The **Shares** tab is where data sharing can be configured to easily and securely share Snowflake table(s) among separate Snowflake accounts or external users, without having to create a second copy of the table data. At the end of this experiment is a experiment on data sharing.

2.3.4 The **Warehouses** tab is where you set up and manage compute resources (virtual warehouses) to load or query data in Snowflake. Note a warehouse called "COMPUTE_WH (XL)" already exists in your environment.

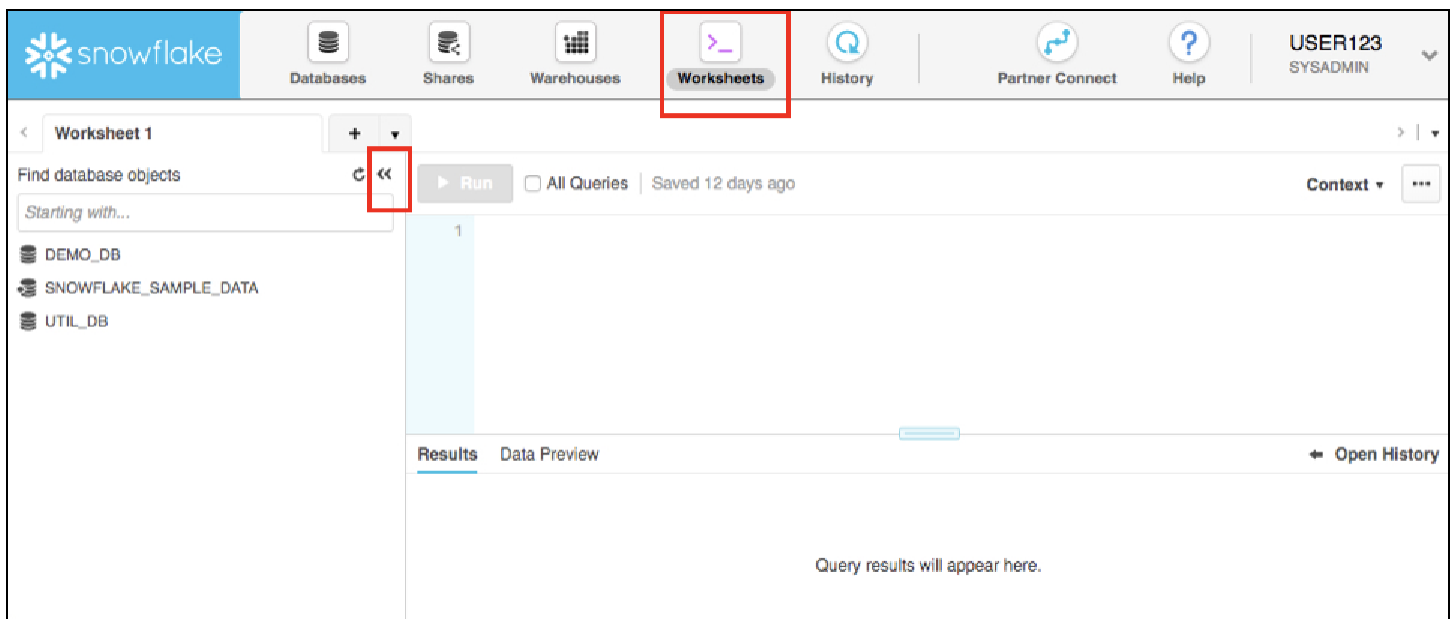
The screenshot shows the Snowflake web interface with the 'Warehouses' tab selected and highlighted by a red box. The top navigation bar includes icons for Databases, Shares, Warehouses, Worksheets, History, Partner Connect, Help, and a user dropdown for 'USER123 SYSADMIN'. Below the navigation bar, the 'Warehouses' section is titled 'Warehouses' with the subtitle 'Manage your warehouses from this page. To operate on your data, you need to create one or more warehouses.' Below this, there are action buttons: '+ Create...', 'Configure...', 'Suspend...', 'Resume...', 'Drop...', and 'Transfer Ownership'. A table lists existing warehouses:

Status	Warehouse Name	Size	Run...	Que...	Auto Suspend	Auto Resume	Created On ▼	Resumed On	Own
Suspended	COMPUTE_WH	X-Large	0	0	10 minutes	Yes	6/28/19 12:00:24 AM	6/28/19 12:00:24 AM	SYSADMIN

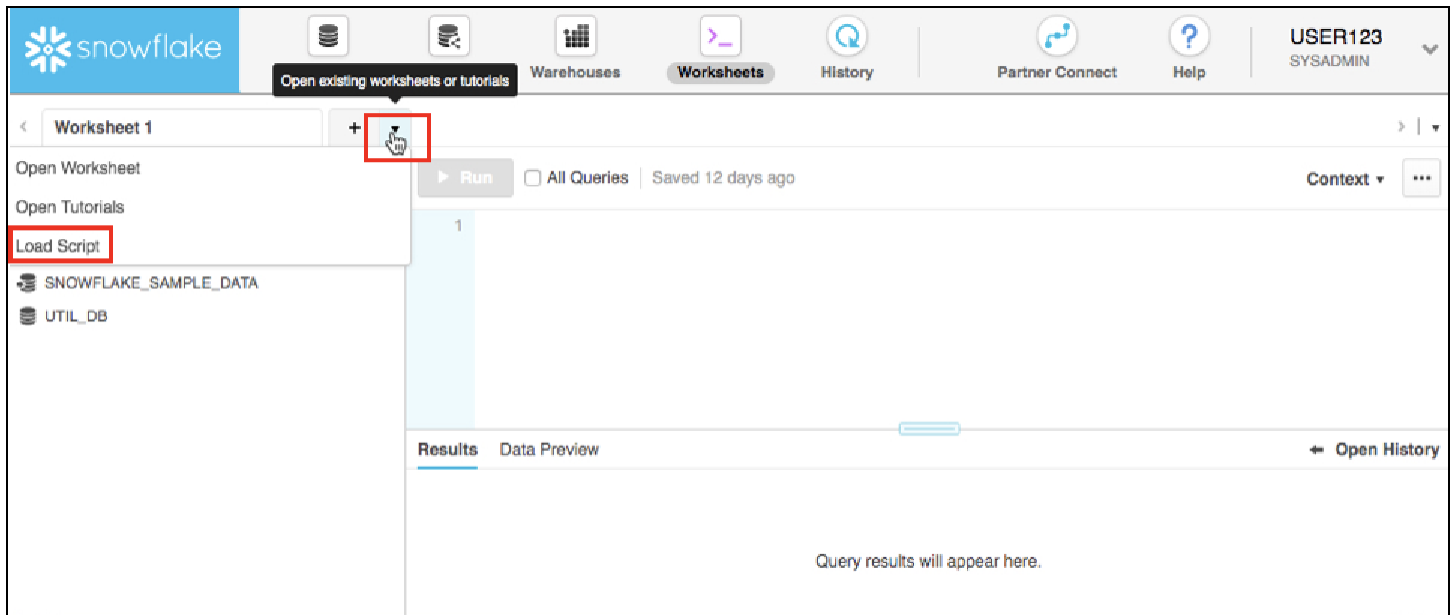
2.3.5 The **Worksheets** tab provides an interface for submitting SQL queries, performing DDL and DML operations and viewing results as your queries/operations complete. The default “Worksheet 1” appears.

In the left pane is the database objects browser which enables users to explore all databases, schemas, tables, and views accessible by the role selected for a worksheet. The bottom pane shows results of queries and operations.

The various windows on this page can be resized by moving the small sliders on them. And if during the experiment you need more room to work in the worksheet, collapse the database objects browser in the left pane. Many of the screenshots in this guide will have this database objects browser closed.



- 2.3.6 At the top left of the default “Worksheet 1,” just to the right of the worksheet tab, click on the small, downward facing arrow, select “Load Script”, then browse to the “**foundation_experiment_scripts.sql**” file you downloaded in the prior experiment and select “Open”. All of the SQL commands you need to run for the remainder of this experiment will now appear on the new worksheet. Do not run any of the SQL commands yet. We will come back to them later in the experiment and execute them one at a time.



Warning - Do Not Copy/Paste SQL From This PDF to a Worksheet

Copy-pasting the SQL code from this PDF into a Snowflake worksheet will result in formatting errors and the SQL will not run correctly. Make sure to use the “Load Script” method just covered.

On older or locked-down browsers, this “load script” step may not work as the browser will prevent you from opening the .sql file. If this is the case, open the .sql file with a text editor and then copy/paste all the text from the .sql file to the “Worksheet 1”

Worksheets vs the UI

Much of the configurations in this experiment will be executed via this pre-written SQL in the Worksheet in order to save time. These configurations could also be done via the UI in a less technical manner but may take more time to complete the experiments.

- 2.3.7 The **History** tab allows you to view the details of all queries executed in the last 14 days in the Snowflake account (click on a Query ID to drill into the query for more detail).

2.3.8 If you click on the top right of the UI where your user name appears, you will see that here you can do things like change your password, roles, or preferences. Snowflake has several system defined roles. You are currently in the default role of SYSADMIN and we will stay in this role until towards the end of this experiment.

SYSADMIN

For most this set of experiments you will remain in the SYSADMIN (aka System Administrator) role which has privileges to create warehouses and databases and other objects in an account, although as we see from the introduction for Data Sharing you have to utilize another role.



In a real-world environment, you would use different roles for the tasks in this experiment, and assign the roles to your users. More on access control in Snowflake detailed in this experiment and also at

<https://docs.snowflake.net/manuals/user-guide/security-access-control.html>

2.4 The Experiment story

2.4.1 This Snowflake experiment will be done as part of a theoretical real-world “story” to help better you better understand why we are performing the steps in this experiment and in the order they appear.

The “story” of this experiment is based on the analytics team at Citi Bike, a real, citywide bikeshare system in New York City, USA. This team wants to be able to run analytics on data to better understand their riders and how to serve them best.

We will first load structured .csv data from rider transactions into Snowflake. This comes from Citi Bike internal transactional systems. Then later we will load open-source, semi-structured JSON weather data into Snowflake to see if there is any correlation between the number of bike rides and weather.

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**Using your own data or story for the experiments**

You are free to substitute your own data, but that reduces the value of the group engagement from our shared session.