

# Snowflake Hands-On Workshop

## Real-time Analytics with External Data

September 10, 2019

1. Sign up for free Snowflake trial - <https://trial.snowflake.com/>

### Start Your 30-Day Free Trial

Receive \$400 of credits to try all Snowflake features

First Name	Last Name
Email	
Company	

CREATE ACCOUNT

### Let's get your account set up.

United States	▼	
Choose your Snowflake edition		
Business Critical	▼	?
Amazon Web Services	▼	?
US East (N. Virginia)	▼	?
#####		
<input checked="" type="checkbox"/>	Check here to indicate that you have read and agree to the terms of the <a href="#">Snowflake On Demand Terms</a> .	
<input checked="" type="checkbox"/>	By registering you acknowledge that Snowflake will process your personal information in accordance with its <a href="#">Privacy Notice</a> .	
FINALIZE SETUP		

2. Check your e-mail, and [ CLICK TO ACTIVATE ].

Hi Jason,

**Congratulations** on taking the first step to become a data-driven organization by signing up for Snowflake. Click the button below to activate your account.

CLICK TO ACTIVATE

Please note, your activation link is temporary and will expire in 72 hours. Once you activate your account, you can access it at <https://CZ78988.us-east-1.snowflakecomputing.com>.

Be sure to bookmark your login link to easily access your account going forward. If you experience any problems logging into your account or you forgot your username or password, please contact [support@snowflake.com](mailto:support@snowflake.com).

Best regards,

The Snowflake team

### 3. Create the admin User ID.

**Welcome to Snowflake, Jason Shull!**

Please choose your user name and password to get started.

User Name

admin

Password

••••••••

Confirm Password

••••••••

Get Started

### 4. Minimize the Welcome to Snowflake message.

Minimize ↗

# Welcome to Snowflake

## Getting to know Snowflake

Explore the following topics to navigate through and learn about high-level Snowflake concepts.

1	Run a query in the worksheet	>
2	Connect with partners to load data <span>New</span>	>
3	Explore warehouses	>
4	Explore databases	>
5	View query history	>
6	Secure data sharing	>

Explore more topics in [Snowflake Documentation](#)

### 5. Close the Getting Started side panel.

Getting Started > **Worksheet**

Worksheets provide a way for formulating and submitting SQL statements. Let's get started by running a sample query:

**To run a sample query:**

1. Set your worksheet context (warehouse, database, etc.) as needed.
2. Open a tutorial. Snowflake provides three different tutorials to choose from.
3. Select **All Queries** and click **Run!**

Take a tour of the Worksheet >

**Next steps...**

View all queries executed in the past 14 days >

**Related documentation**

Overview of Worksheet Features

SQL Command Reference

### 6. Close Browse the database objects panel.

## Browse database objects

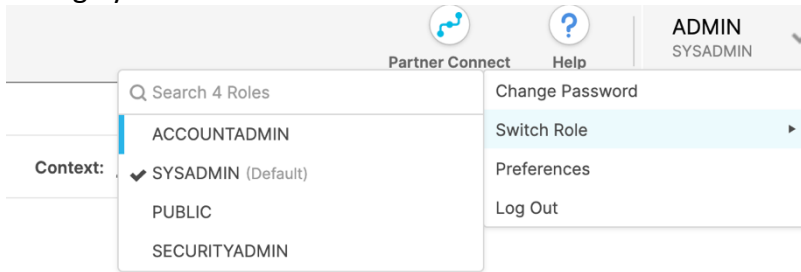


Use the object explorer to see databases, schemas, tables and views without having to leave your worksheet.

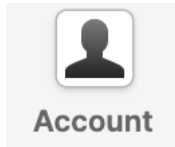
● ○ ○ ○

NEXT

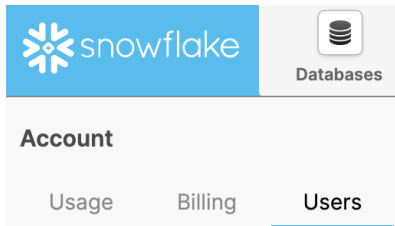
7. Change your Context to ACCOUNTADMIN.



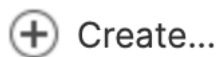
8. Click on the Account button in the top middle of the Web UI.



9. Click on the Users tab.



10. Click on the Create button.



11. Fill in the required General fields to create a new user named SNOWMAN, and click on the Next button.

### Create User

General

Advanced

Preferences

User Name \*

SNOWMAN

New Password \*

.....

Confirm Password \*

.....

Comment

☒ Force Password Change

Show SQL

Cancel

Next

Finish

12. The Advanced information is not required, but you may fill it out if you would like to. Then click on the Next button.

**Create User**

General Advanced Preferences

Login Name

Display Name

First Name

Last Name

Email

[Show SQL](#)

13. Change the Default Role to SYSADMIN under Preferences, and click on the Next button.

**Create User**

General Advanced Preferences

Default Warehouse

Default Namespace

Default Role

[Show SQL](#)

14. Open a new tab within the Worksheets for the Web UI by clicking on the +.



15. Enter the following SQL command, click on the Run button, and verify that the statement completed successfully.

```
grant role accountadmin to user snowman;
```

16. Launch a new tab in your browser, and connect to your Trial Snowflake URL.

17. Login with the User you created above.

## Log in to Snowflake

User Name

Password

[\[Forgot password\]](#)

Log In

18. If you did not uncheck the Force Password Change check box on the General tab, change the password for your new user, and click on the Finish button.

## Password Expired

Your password for **SNOWMAN** has expired. Please type a new password that is at least 8 characters long and contains digits, uppercase, and lowercase letters.

New Password

Confirm Password

Finish

19. Close / Minimize the informational messages as you did before starting in Step 4 above.  
20. Click on the Databases tab.



**Databases**

21. Click on the Create button, type in a name for your Database, and click on the Finish button.

## Create Database

Name\*

Comment

[Show SQL](#)

Cancel

Finish

22. Click on the Worksheets button.



**Worksheets**

23. Type in the following commands in the SQL Worksheet.

```
--Set up
USE ROLE ACCOUNTADMIN; --Highest level access for this URL
DROP DATABASE IF EXISTS DEMO_WEATHERSOURCE; --Clean up
DROP SHARE IF EXISTS "WEATHER_2016"; --Clean up
DROP MANAGED ACCOUNT IF EXISTS "OLAF"; --Clean up
USE ROLE SYSADMIN; --Change to lower privileged DBA role
CREATE OR REPLACE DATABASE FROSTY_DB; --Create Database

CREATE OR REPLACE WAREHOUSE WINTER_WH WITH WAREHOUSE_SIZE =
'MEDIUM' WAREHOUSE_TYPE = 'STANDARD'
AUTO_SUSPEND = 600 AUTO_RESUME = TRUE MIN_CLUSTER_COUNT = 1
MAX_CLUSTER_COUNT = 2 SCALING_POLICY = 'STANDARD'; --Create
virtual compute warehouse
```

24. Check the All Queries box.

☒ All Queries

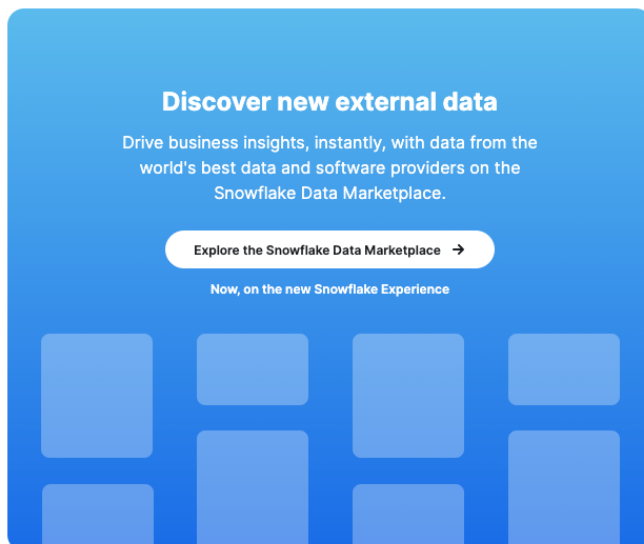
25. Click on the Run button.



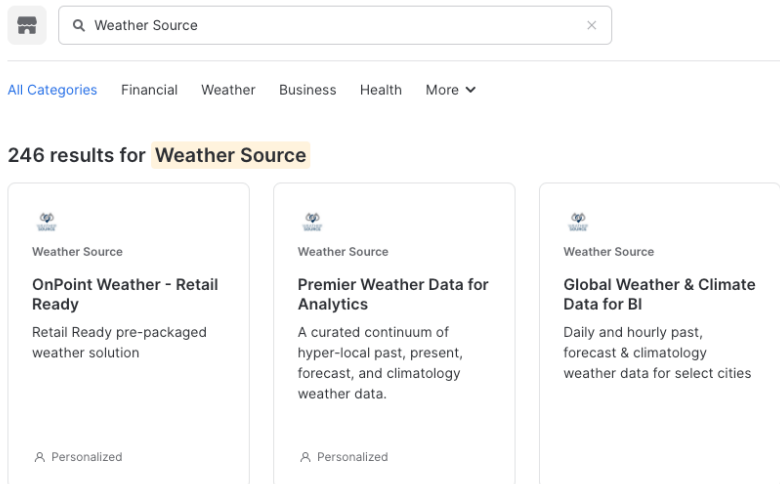
26. Go out to the Data Marketplace by clicking on the button shown below.



27. Click on the Explore the Snowflake Data Marketplace -> button.



28. Search for Weather Source.



29. Select Weather Source - Global Weather & Climate Data for BI.

30. Click on the Get Data button.



31. Get the data and name the Database DEMO\_WEATHERSOURCE.

32. Leave the default permissions for SYSADMIN.

33. Be sure to click the "I accept..." check box.

34. Click on the Create Database button.

35. Go back to the Browser tab where the snowman user is logged in.

36. Be sure that you are still on the Worksheets tab within the Snowflake Web UI.

37. Paste the following SQL at the end of the worksheet where you were working before.

```
/* How many Deliveries will be delayed due to snowfall?
```

```
When it snows in excess of 6 inches per day, my company
experiences delivery delays.
```

```
How many deliveries may have been delayed? */
```

```
SELECT    COUNTRY,
          POSTAL_CODE,
          DATE_VALID_STD,
          TOT_SNOWFALL_IN
FROM      DEMO_WEATHERSOURCE.STANDARD_TILE.HISTORY_DAY
WHERE     COUNTRY='US '
AND       TOT_SNOWFALL_IN > 6.0
ORDER BY  POSTAL_CODE, DATE_VALID_STD
LIMIT 10;
```

38. Click on the Run button with All Queries unchecked. Your cursor will need to be placed somewhere within the code that you pasted from above.





39. Paste the following SQL at the end of the worksheet where you were working before.

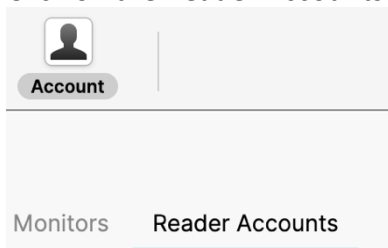
```
-- Create a table for snowfall greater than 6 inches.  
CREATE OR REPLACE TABLE FROSTY_DB.PUBLIC.HISTORY_DAY as  
SELECT    COUNTRY,  
          POSTAL_CODE,  
          DATE_VALID_STD,  
          TOT_SNOWFALL_IN  
FROM      DEMO_WEATHERSOURCE.STANDARD_TILE.HISTORY_DAY  
WHERE     COUNTRY='US'  
AND       TOT_SNOWFALL_IN > 6.0  
ORDER BY  POSTAL_CODE, DATE_VALID_STD;
```

40. Click on the Run button with All Queries unchecked. Your cursor will need to be placed somewhere within the code that you pasted from above.



41. Go back to the Browser tab where the admin user is logged in.

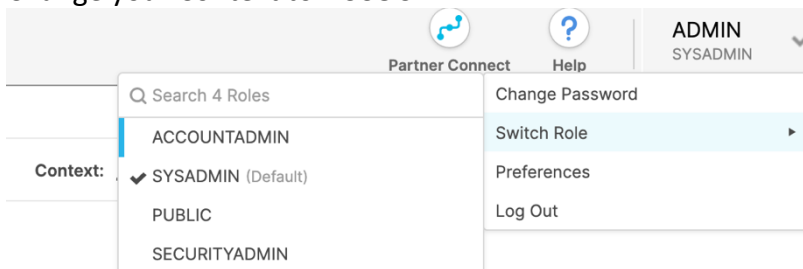
42. Click on the Reader Accounts tab.



43. Click on the Create Reader Account button.



44. Change your Context to ACCOUNTADMIN.



45. Fill out the Reader Account information as shown below and click on the Create Account button.

## Create Reader Account



### Reader Account Details

Provide a name for your new Reader account. The edition, region and cloud of your new Reader account will be the same as your current account.

Account Name  ?

Comments

Edition ESD

Region US East (Virginia)

### Admin Login Information

These are your reader account credentials, used to log in and manage the Reader account as the ACCOUNTADMIN role.

User Name

Password  [Show Password](#)

Confirm Password  [Show Password](#)

[Show SQL](#)

[Cancel](#)

[Create Account](#)

46. Wait for the shared URL to be created. Click on the URL created in the following window (Note – all URLs are unique and will not match the example below). This step may take approximately 20 minutes for the URL to be registered.

## Congratulations!



You have created a new reader account "OLAF".

Account URL <https://jza44010.snowflakecomputing.com>

Locator JZA44010 ?

### What's next?

- Visit the [secure shares page](#) to create and provide access to your secure share.
- Once you are able to access your reader account, log in and ensure it's ready for your data consumers.

[Done](#)

47. Log in with your newly created OLAF reader user. If you get a 403 forbidden error, you need to wait a little longer until the URL is registered.



## Sign in to Snowflake

Username

olaf

Password

.....|

Sign in

48. Once logged in, click on the I'm A Data Consumer button.

Minimize ↗

## Welcome to your reader account

Reader accounts allow you to prepare secure shares and explore shared data sets. To get started, tell us who you are:

I'm a Data Provider

I'm a Data Consumer

Dismiss

49. Go back to the Admin user tab in your web browser, and click on the Done button.

## Congratulations!



You have created a new reader account "OLAF".

Account URL <https://jza44010.snowflakecomputing.com>

Locator JZA44010

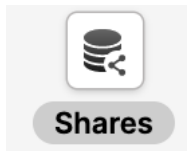
What's next?

○ Visit the [secure shares page](#) to create and provide access to your secure share.

○ Once you are able to access your reader account, log in and ensure it's ready for your data consumers.

Done

50. Click on the Shares button.



51. Click on the Outbound button.



52. Click on the Create button.



53. Fill in the Secure Share info as shown below and click on the Create button.

### Create a Secure Share and add Database objects to it

A Secure Share is a package or container comprising Database objects that contain the data you want to share. Once you setup Tables or Secure Views in the Database, ready with the data you intend to share, you can add them to the Secure Share.

Have you prepared the data? Identify and prepare data you want to include in the Secure Share. [Learn more about preparing data.](#)

**Create**  
Select a Database and Schemas. Select Tables or Views within each Schema to add to the Secure Share.

Secure Share Name

SNOW

Database

FROSTY\_DB

Tables & Views

Select Tables & Secure Views

1 Table, 0 Secure Views

FROSTY\_DB.PUBLIC.HISTORY\_DAY

Remove All

Comment

[Show SQL](#)

Cancel

Create

54. Click on the Next: Add Consumers button.



55. Select the Olaf reader account, and click on the Add button.

[Back](#)

### Add Consumers

Once added, the secure share is immediately "visible" and the account can create a database from the share and start querying the tables and secure views in the database. Currently you will only be able to share with accounts in the same cloud and region.

Secure Share

SNOW

Account Type

☒ Reader ☐ Full

OLAF (JZA44010)

Create a Reader account and add it to this Secure Share.

[Show SQL](#)

Do this later

Add

56. Click on the Done button.

1 Account Added Successfully

The following account now has access to your secure share "SNOW"

Reminder: Login (as ACCOUNTADMIN) and create a database from the Share so that your data consumers can access the shared data.

OLAF (<https://jza44010.snowflakecomputing.com>)

Done

57. Go back over to the Olaf tab in your browser.
58. Click on Warehouses button.



59. Click on the Create Warehouse button.



60. Fill out the Warehouse information as shown below, and click on the Finish button.

**Create Warehouse**

Name \* ARENDELLE\_WH

Size Small (2 credits / hour)

Learn more about virtual warehouse sizes [here](#)

Maximum Clusters 2

Multi-cluster warehouses improve the query throughput for high concurrency workloads.

Minimum Clusters 1

The number of active clusters will vary between the specified minimum and maximum values, based on number of concurrent users/queries.

Scaling Policy Standard

The policy used to automatically start up and shut down clusters.

Auto Suspend 10 minutes

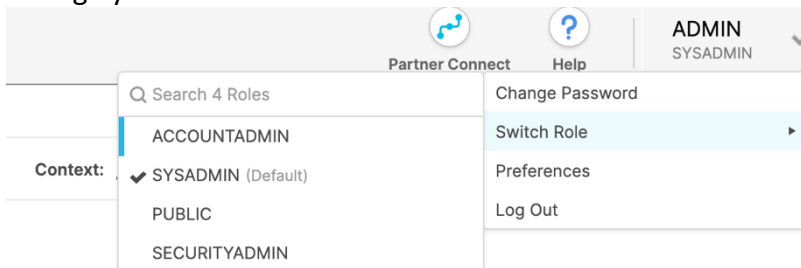
The maximum idle time before the warehouse will be automatically suspended.

☒ Auto Resume

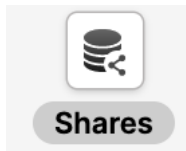
Comment

[Show SQL](#)

61. Change your Context to ACCOUNTADMIN.



62. Click on the Shares button.



63. Select SNOW and click on the Create Database from Secure Share BUTTON.

Secure Shares

Inbound

Outbound

+

Create

Create Database From Secure Share

Search Inbound Secure Shares

2 Inbound Secure Shares

Columns ▾

Secure Share Name	Shared By	Database	↓ Creation T	Owner	Comment
SNOW	DEMO72		3:28:39 PM		
ACCOUNT_USAGE	SNOWFLAKE	SNOWFLAKE	6/8/2019, 1...		

64. Fill out the share information as shown below and click on the Create Database button.

### Create Database From Secure Share

Enable data consumers to explore your shared data by creating a database from the secure share and allowing access to the roles that will be using it.

Secure Share SNOW

Database Name SNOW\_DB

Grant access to SYSADMIN

Comment Snow Secure Share from Frosty

Show SQL

Cancel

Create Database

65. Click on the OK button.

### Database Overview

Secure Share SNOW

Database SNOW\_DB

Roles with access 1 granted

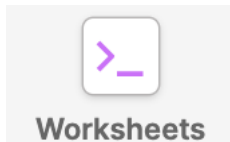
SYSADMIN access granted

Comment Snow Secure Share from Frosty

Edit Database

OK

66. Click on the Worksheets button.



67. Select a warehouse, database, and schema in the worksheet context drop-down.

×

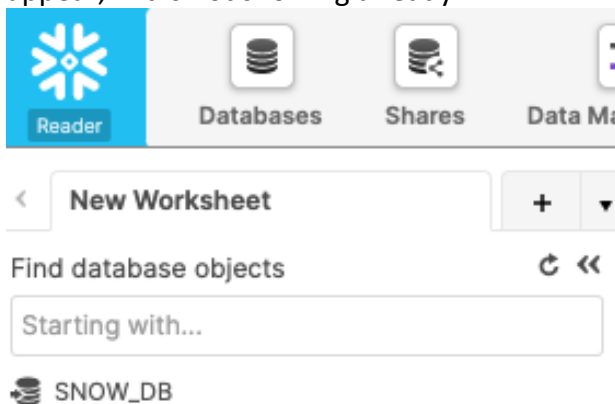
Role **SYSADMIN** [Change](#)

Warehouse **ARENDELLE\_WH (S) On** ▼  
Small [Resize](#)

Database **SNOW\_DB** ▼

Schema **PUBLIC** ▼

68. Click on the refresh button next to Find database objects, and your new database will appear, if it is not showing already.



69. Click on the shared SNOW\_DB to expand the objects under the PUBLIC schema to preview the data.

New Worksheet

Find database objects

Starting with...

SNOW\_DB

INFORMATION\_SCHEMA

PUBLIC

Tables

HISTORY\_DAY

No Views in this Schema

HISTORY\_DAY

Preview Data

999 rows 64.0 KB

Cluster by

Columns

COUNTRY

POSTAL\_CODE

DATE\_VALID\_STD

TOT\_SNOWFALL\_IN

Data Type

VARCHAR(2)

VARCHAR(20)

DATE

NUMBER(4,2)

Run

All Queries

Saved 42 seconds ago

Context

1

Results

Data Preview

Open History

Table: SNOW\_DB.PUBLIC.HISTORY\_DAY

Data

Details

Filter result...

Columns

Row	COUNTRY	POSTAL_CODE	DATE_VALID_STD	TOT_SNOWFALL_IN
1	US	04259	2020-02-18	6.29
2	US	04259	2020-04-09	6.48