

authors: Matthias Nicola, Henrik Nielsen id: internal\_marketplace\_intra\_org\_sharing summary: INTRA-COMPANY DATA SHARING WITH THE SNOWFLAKE INTERNAL MARKETPLACE categories: Data-Sharing environments: web status: Published feedback link: <https://github.com/Snowflake-Labs/sfguides/issues> tags: Summit HOL, Data Sharing, Marketplace, Snowflake Internal Marketplace, Data Mesh, Data Products

# Intra-Company Data Sharing with the Snowflake Internal Marketplace

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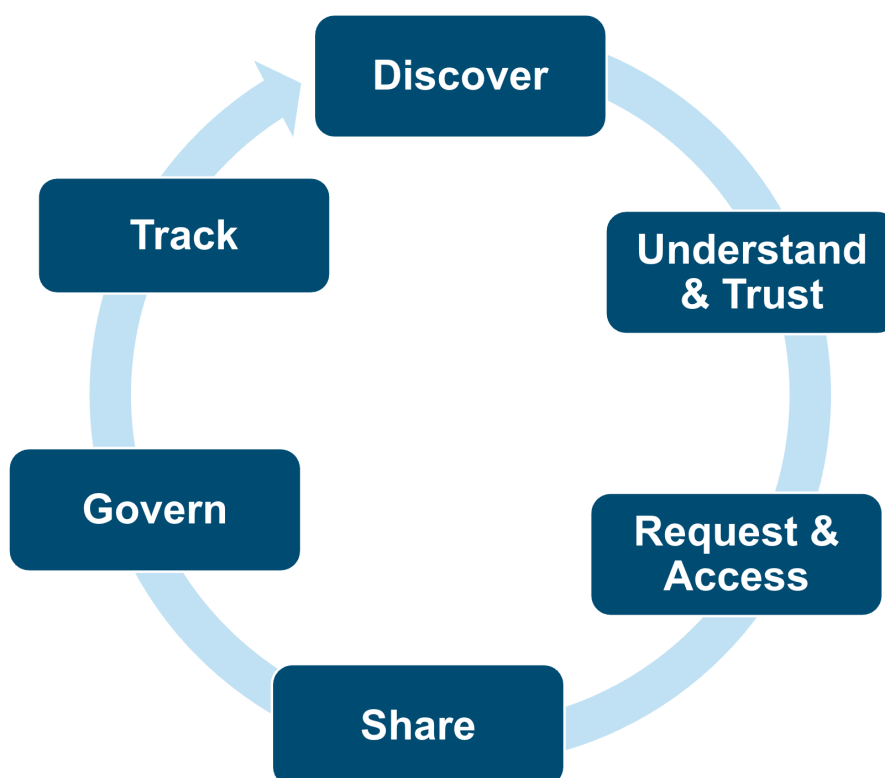
## Overview

Duration: 5

Sharing information between departments or business units ("domains") of a company is critical for success. Sharing and consuming data assets is more successful if data is shared as a product. A data product is a collection of related data objects plus metadata, such as a business description, ownership and contact information, service level objectives, data dictionary, and more.

**Snowflake Internal Marketplace** enables companies to publish documented and governed data products, so they are discoverable and understandable for data consumers. Optionally, data quality metrics and SLOs can be included to make the product more trustworthy. The marketplace also offers rich capabilities to manage access to data product and wrap detailed governance around them to control which consumers can use which data products or which parts of a data product.

## Data Products on the Internal Marketplace



What You'll Learn

- How to publish, share, discover, and consume data product with the Snowflake Internal Marketplace
- How to setup profile for different business units that own the data products
- How to manage access to data products, including request & approval workflows
- How to configure governance policies for fine-grained access control of data products across business units

## What You'll Need

- Basic knowledge of SQL, Database Concepts
- Familiarity with using SQL in [Snowsight Worksheets](#)

## What You'll Build

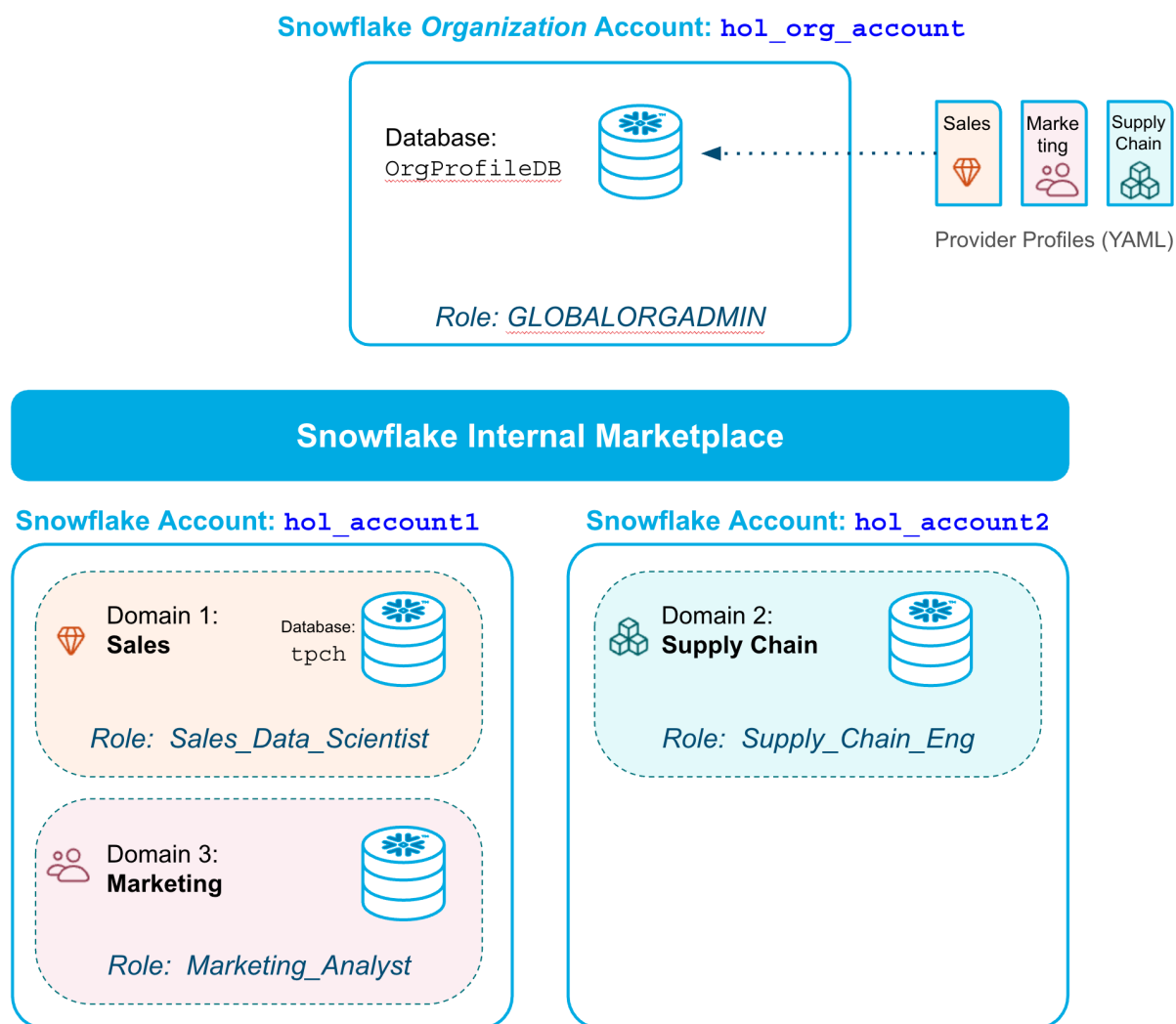
- Data products based on simple TPC-H data
- Organizational Listings comprised of data and metadata
- Governance policies to manage your data products

## Prerequisites and Setup

Duration: 15

The setup instructions for this lab describe all the steps for you to create the 3 accounts, domain profiles, and roles shown in the diagram below.

The internal marketplace exists by default. It does not need to be created. But, you will configure it with provider profiles for the different business units via the [organization account](#).



The setup has 6 steps:

- Step 1: Create a Snowflake trial account in a region of your choice
- Step 2: Configure the first account and create two more accounts *in the same org*
- Step 3: Configure the second account
- Step 4: Configure the organization account, and rename the first account
- Step 5: Create profiles for the Sales, Marketing, and Supply Chain domains
- Step 6: Setup of a TPC-H sample database
- Step 7: Pre-populate the Internal Marketplace with Sample Listings

For Steps 2 through 7 you can download [scripts here](#) and execute them in different accounts as per the instructions below. In the Snowflake UI you can easily import these scripts like this:



## Step 1: Create a Snowflake trial account

Signup for a trial account [here](#)

- Choose any cloud provider and region
- Choose **Enterprise Critical** edition (this is important!)
- **Activate the account with admin user `sales_admin`**

## Step 2: Configure the first account and create two more accounts *in the same org*

- Login as **sales\_admin** to your Primary Account from Step 1 and execute the following commands in a worksheet.
- In the first four commands, enter your own email, first name, last name and password - this variable will be reused in the code for creating users and accounts.
- You can also download this SQL file and import it into Snowsight - **STEP2\_setup\_primary\_account.sql**

```
-- Run this code in your PRIMARY Account
-- Make sure you update the four variables below (email_var, firstname_var
and lastname_var)
```

```
USE ROLE accountadmin;
```

```
-- Use the same name and email for all accounts
```

```
set email_var = 'FILL_IN_YOUR_EMAIL';
set firstname_var = 'FILL_IN_YOUR_FIRST_NAME';
set lastname_var = 'FILL_IN_YOUR_LAST_NAME';
```

```
-- Use the same password for users in all accounts
```

```
set pwd_var = 'FILL_IN_YOUR_PASSWORD';
```

```
CREATE OR REPLACE WAREHOUSE compute_wh WAREHOUSE_SIZE=small
INITIALLY_SUSPENDED=TRUE;
GRANT ALL ON WAREHOUSE compute_wh TO ROLE public;
```

```
CREATE OR REPLACE ROLE sales_data_scientist_role;
GRANT CREATE SHARE ON ACCOUNT TO ROLE sales_data_scientist_role;
GRANT CREATE ORGANIZATION LISTING ON ACCOUNT TO ROLE
sales_data_scientist_role;
GRANT ROLE sales_data_scientist_role TO USER sales_admin;
```

```
SET my_user_var = CURRENT_USER();
ALTER USER identifier($my_user_var) SET DEFAULT_ROLE =
sales_data_scientist_role;
```

```
-- Next, create a user and role for the marketing domain
-- in the primary account:
```

```
USE ROLE accountadmin;
CREATE OR REPLACE ROLE marketing_analyst_role;
```

```
CREATE OR REPLACE USER marketing_admin
  PASSWORD = $pwd_var
  LOGIN_NAME = marketing_admin
  DISPLAY_NAME = marketing_admin
  FIRST_NAME = $firstname_var
  LAST_NAME = $lastname_var
  EMAIL = $email_var
  MUST_CHANGE_PASSWORD = FALSE
```

```
DEFAULT_WAREHOUSE = compute_wh
DEFAULT_ROLE = marketing_analyst_role
COMMENT = 'Marketing domain admin';

GRANT ROLE marketing_analyst_role TO USER marketing_admin;
GRANT CREATE SHARE ON ACCOUNT TO ROLE marketing_analyst_role;
GRANT CREATE ORGANIZATION LISTING ON ACCOUNT TO ROLE
marketing_analyst_role;
```

Check your email inbox for a message from "Snowflake Computing" and validate the email for the `marketing_admin` user.

While waiting for the email, you can go ahead and run the following parts.

Now, run the following commands to create the next two accounts that you need. You have to **use the same worksheet** as above, as the variables created are reused.

```
-- Run this code in your PRIMARY account
-- Create a secondary account in the same region (default!):
USE ROLE orgadmin;

CREATE ACCOUNT hol_account2
  admin_name = supply_chain_admin
  admin_password = $pwd_var
  first_name = $firstname_var
  last_name = $lastname_var
  email = $email_var
  must_change_password = false
  edition = enterprise;

-- Create an organization account for admin purposes:
CREATE ORGANIZATION ACCOUNT hol_org_account
  admin_name = org_admin
  admin_password = $pwd_var
  first_name = $firstname_var
  last_name = $lastname_var
  email = $email_var
  must_change_password = false
  edition = enterprise;

-- Make a note of your account names, URLs, and passwords!
-- Get an overview of all the accounts in the organization.
-- This SHOW command below should return 3 rows:

SHOW ACCOUNTS;
```

### Step 3: Configure the second account `HOL_ACCOUNT2`

In a separate browser tab, log in to account you created in step 1 (`HOL_ACCOUNT2`) and set up this account.

- Login as `supply_chain_admin` user to your account `HOL_ACCOUNT2` from Step 2 and execute the following commands in a worksheet (Use the code below or download it from the file `STEP3(HOL_ACCOUNT2)_setup_hol_account2.sql`)

```
-- Run this in hol_account2, logged in as supply_chain_admin user
-- Make sure you run this as ACCOUNTADMIN
```

```
USE ROLE accountadmin;
```

```
CREATE OR REPLACE WAREHOUSE compute_wh WAREHOUSE_SIZE=small
INITIALLY_SUSPENDED=TRUE;
GRANT ALL ON WAREHOUSE compute_wh TO ROLE public;
```

```
CREATE ROLE supply_chain_admin_role;
GRANT ROLE accountadmin TO ROLE supply_chain_admin_role;
GRANT ROLE supply_chain_admin_role TO USER supply_chain_admin;
```

```
ALTER USER supply_chain_admin
  SET DEFAULT_ROLE = supply_chain_admin_role;
```

```
USE ROLE supply_chain_admin_role;
CREATE DATABASE supply_chain_db;
```

#### Step 4: Configure the organization account and rename your primary account

Login to the Organization Account `HOL_ORG_ACCOUNT` created earlier and execute the following commands in a worksheet.

You can also download code below from the file

`STEP4(HOL_ORG_ACCOUNT)_configure_org_account.sql` from the repository:

```
-- Login to the Organization Account HOL_ORG_ACCOUNT and execute the
following commands in a worksheet.
```

```
USE ROLE accountadmin;
```

```
CREATE OR REPLACE WAREHOUSE compute_wh WAREHOUSE_SIZE=xsmall
INITIALLY_SUSPENDED=TRUE;
GRANT ALL ON WAREHOUSE compute_wh TO ROLE public;
```

```
-- Rename the Primary Account:
USE ROLE globalorgadmin;
```

```
-- execute the following two commands together,
-- no other commands in between:
```

```
show accounts;
SET my_curr_account = (SELECT "account_name" FROM
TABLE(RESULT_SCAN(LAST_QUERY_ID())) order by "created_on" ASC LIMIT 1);
```

```
-- View and rename the account:
SELECT $my_curr_account;

ALTER ACCOUNT identifier($my_curr_account)
  RENAME TO hol_account1 SAVE_OLD_URL = true;

-- Enable users with the ACCOUNTADMIN role to set up Cross-Cloud Auto-
Fulfillmen
SELECT SYSTEM$ENABLE_GLOBAL_DATA_SHARING_FOR_ACCOUNT('hol_account1');
SELECT SYSTEM$ENABLE_GLOBAL_DATA_SHARING_FOR_ACCOUNT('hol_account2');

SHOW ACCOUNTS;

-- You should see 3 rows similar to the image below.
-- Make a note of your account names, URLs, and passwords!
```

## Step 5: Create profiles for the Sales, Marketing, and Supply Chain domains

Login to your Organization Account **HOL\_ORG\_ACCOUNT** to create data provider profiles. You will set up profiles for 3 business domains: **Sales**, **Marketing**, and **Supply chain**.

- Download the script **STEP5(HOL\_ORG\_ACCOUNT)\_create\_org\_profiles.sql**
- In that script, replace the dummy email **youremail@whatever.com** with your actual email address so that you receive access request notifications for your data product.
  - Don't worry: it's only a couple of emails and only during this lab.
- Login to your Organization Account **HOL\_ORG\_ACCOUNT** as the **org\_admin** user and run the downloaded script **STEP5(HOL\_ORG\_ACCOUNT)\_create\_org\_profiles.sql** in a worksheet.

## Step 6: Setup of a TPC-H sample database

- Download the script **STEP6(HOL\_ACCOUNT1)\_create\_lab\_database.sql**
- Login to your primary account **HOL\_ACCOUNT1** as the **sales\_admin** user and run the downloaded script **STEP6(HOL\_ACCOUNT1)\_create\_lab\_database.sql** script in a worksheet

## Step 7: Pre-populate the Internal Marketplace with Sample Listings

- Download the script **STEP7a(HOLACCOUNT1)\_create\_sample\_listing.sql**
  - Login into **hol\_account1** as **marketing\_admin** and run the script **STEP7a**.
- Download the script **STEP7b(HOLACCOUNT2)\_create\_sample\_listing.sql**
  - Login into **hol\_account2** as **supply\_chain\_admin** and run the script **STEP7b**.

**Setup is now complete!**

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