Today's notebook

Accounts & Setup

- [ ] Create a dbt account. (link)

- [ ] Create a Snowflake trial account (link).

- [ ] Load data into snowflake

  - *New worksheet*:

```sql
-- initial setup
use role sysadmin;
create database dbt_db;
create database raw;
create schema raw.jaffle_shop;
create schema raw.stripe;
create warehouse transforming;

-- customer table --
create table raw.jaffle_shop.customers
( id integer,
first_name varchar,
last_name varchar
);
-- load customer data
copy into raw.jaffle_shop.customers (id, first_name, last_name)
from 's3://dbt-tutorial-public/jaffle_shop_customers.csv'
file_format = (
    type = 'CSV'
    field_delimiter = ','
    skip_header = 1
    );

-- orders table --
create table raw.jaffle_shop.orders
( id integer,
user_id integer,
order_date date,
status varchar,
_etl_loaded_at timestamp default current_timestamp
);
```

```sql
-- load orders data --
copy into raw.jaffle_shop.orders (id, user_id, order_date, status)
from 's3://dbt-tutorial-public/jaffle_shop_orders.csv'
file_format = (
    type = 'CSV'
    field_delimiter = ','
    skip_header = 1
    );

-- payments table --
create table raw.stripe.payment
( id integer,
orderid integer,
paymentmethod varchar,
status varchar,
amount integer,
created date,
_batched_at timestamp default current_timestamp
);
-- load payments data --
copy into raw.stripe.payment (id, orderid, paymentmethod, status, amoun
from 's3://dbt-tutorial-public/stripe_payments.csv'
file_format = (
    type = 'CSV'
    field_delimiter = ','
    skip_header = 1
    );

-- checkout the tables
select * from raw.jaffle_shop.customers;
select * from raw.jaffle_shop.orders;
select * from raw.stripe.payment;
```
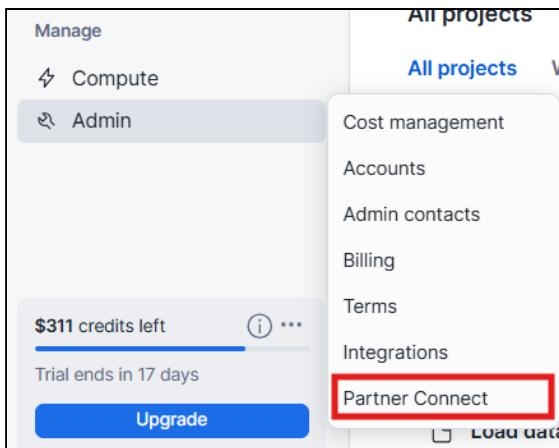
☐ Connect Snowflake & dbt.

- Using **Partner Connect** (Recomended):

Manage

⚡ Compute

🔧 Admin

All projects

All projects   W

- Cost management
- Accounts
- Admin contacts
- Billing
- Terms
- Integrations
- **Partner Connect**

$311 credits left   ⓘ •••

Trial ends in 17 days

Upgrade

☐ Load data

Partner Connect

🔍 dbt   ⊗

All Categories   Business Intelligence   CI/CD   Data Integration   More ⌄

Data Integration

❎ dbt

dbt

dbt lets teams collaborate on data transformation, following engineering best practices.

Connect to dbt

dbt requires the following information to create your new trial account: first name, last name, and email address.

In order to configure the connection with Snowflake, the following objects will be created in your Snowflake account:

Database	**PC_DBT_DB**
Warehouse	**PC_DBT_WH** (X-Small)
System User	**PC_DBT_USER**
System Role	**PC_DBT_ROLE**

Privilege MODIFY PROGRAMMATIC AUTHENTICATION METHODS will be granted to the PC_DBT_ROLE

Role PUBLIC will be granted to the PC_DBT_ROLE

Role PC_DBT_ROLE will be granted to the SYSADMIN role

Optional Grant ⌃

Provide **PC_DBT_USER** access to tables in an existing database(s) by selecting one or more databases that **PC_DBT_ROLE** may access. The USAGE privilege will be granted on the selected databases.

RAW   SNOWFLAKE_SAMPLE_DATA

By clicking on **connect** you are instructing Snowflake to create the above objects and provide all of the above information to dbt. dbt's processing of this information, and your use of dbt, are governed solely by dbt's Terms of Use and dbt's Privacy Policy and not your agreement with Snowflake.

Please contact Snowflake Support if you have questions about connecting with dbt

Close   **Connect**

- **Manual connection**:

```
use role accountadmin;
create role dbt_transformer;
set name = (select current_user());
grant role dbt_transformer to user identifier($name);

grant all on database raw to role dbt_transformer;
grant all on database dbt_db to role dbt_transformer;

grant all on schema raw.jaffle_shop to role dbt_transformer;
grant all on schema raw.stripe to role dbt_transformer;

grant all on all tables in database raw to role dbt_transformer;
grant all on future tables in database raw to role dbt_transformer;
```

Go to dbt *account settings*, create a **new project**, which require a *development environment* and so a *connection*.

1. create a new project.

2. setup a new connection: chose **Snowflake**
   Enter: ACCOUNT - ROLE (leave black) - DATABASE dbt_db - WAREHOUSE transforming.
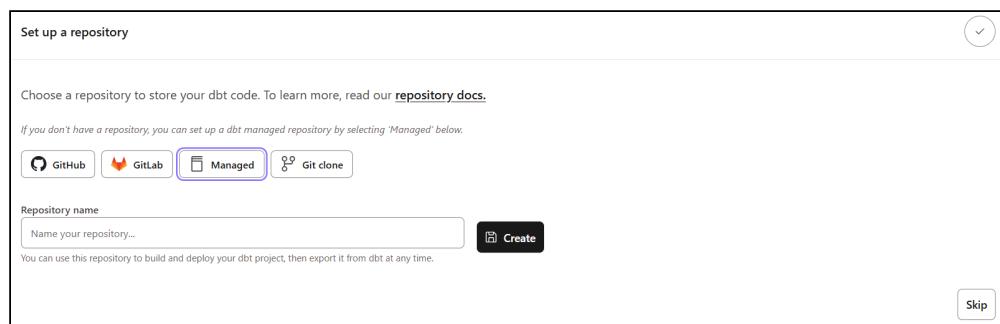
3. setup the development environment:
   Chose **Username and Password**;
   Enter: USERNAME - PASSWORD - ROLE dbt_transformer - SCHEMA dbt_<first-initial><last-name>
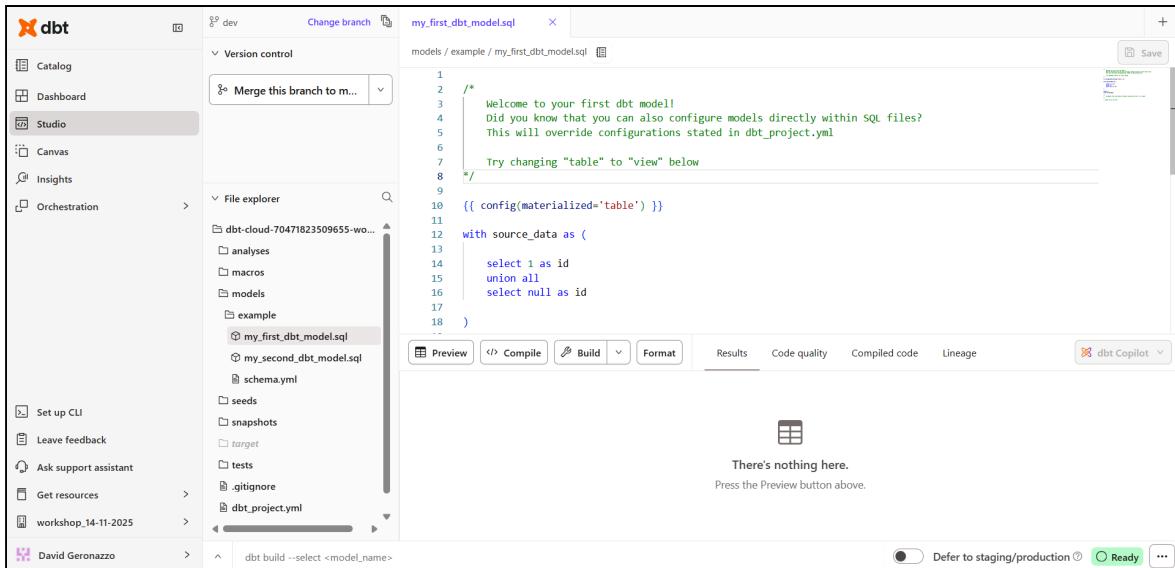
4. test connection and save.

5. Setup a **managed** repository, and give it a name.

Interface

Models

What are Models?

Models are *select statement*:

- modular steps of logics between our raw layer and the trnasformed layer.
- Each model maps to a table/view in the data platform.

```sql
with customers as (
    select
        id as customer_id,
        first_name,
        last_name
    from raw.jaffle_shop.customers

),

orders as (
    select
        id as order_id,
        user_id as customer_id,
        order_date,
        status
    from raw.jaffle_shop.orders

),

customer_orders as (
    select
        customer_id,
```

```sql
        min(order_date) as first_order_date,
        max(order_date) as most_recent_order_date,
        count(order_id) as number_of_orders
    from orders
    group by 1

),

final as (
    select
        customers.customer_id,
        customers.first_name,
        customers.last_name,
        customer_orders.first_order_date,
        customer_orders.most_recent_order_date,
        coalesce(customer_orders.number_of_orders, 0) as number_of_orders
    from customers
    left join customer_orders using (customer_id)
)

select * from final;
```