Create your first table and grant privileges in Unity Catalog

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A quick walkthrough of creating a table and granting privileges in Unity Catalog. It is intended for users but may also be of interest to admins who are newly responsible for Unity Catalog management.

To get started immediately, you can go straight to the first section of this article.

Before you begin

In order to perform the tasks described in this article, you must have:

- An Azure Databricks workspace that is enabled for Unity Catalog.
- Access to compute that uses a Unity Catalog-compliant access mode. SQL warehouses are all Unity Catalog-compliant
- Access to a catalog in Unity Catalog.
- Appropriate privileges on Unity Catalog objects. These are listed at the beginning of each task.
- Other users and groups added to the workspace**Confirm access to a catalog**

To run the tutorials in this article, you must have the USE CATALOG privilege on a catalog in Unity Catalog and both the USE SCHEMA and CREATE TABLE privileges on the default schema in that catalog. Catalogs are the top of the three-level namespace in Unity Catalog: catalog.schema.table.

To determine whether you have access to a catalog:

1. Log in to your workspace.
2. Click **Catalog**.

3. Under **Catalog** in the left pane, view any catalogs that you have permission to list.

If you see a *workspace catalog* named after your workspace, go to Create your first table and manage permissions (for workspaces that include a workspace catalog). If you see a *main* catalog, go to Create your first table and manage permissions (for workspaces that include a main catalog).

To determine whether you have adequate permission on any other catalogs, click the catalog name in the left pane to open the details pane and open the **Permissions** tab to view your permissions. If you have USE CATALOG on the catalog and both USE SCHEMA and CREATE TABLE on the catalog's default schema, you can use the tutorial Create your first table and manage permissions (for workspaces that include a main catalog).

If you do not have USE CATALOG on at least one catalog, ask an account admin to assign it for you. Also ask for USE SCHEMA and CREATE TABLE on the catalog's default schema.

Create your first table and manage permissions (for workspaces that include a workspace catalog)

Use this tutorial if your workspace was enabled for Unity Catalog automatically and includes a *workspace catalog*, named after the workspace

Unity Catalog enables you to define access to tables declaratively using SQL or the Databricks Explorer UI.

In this example, you'll run a notebook that creates a table named department in the workspace catalog and default schema (database). This catalog and schema are created automatically for all workspaces that were enabled for Unity Catalog automatically.

Permissions required: USE CATALOG privilege on the workspace catalog and both USE SCHEMA and CREATE TABLE on the <workspace-catalog>.default schema. All workspace users are granted these privileges when the workspace is created. No other permissions are required to complete this example apart from those that you grant as you run it.

1. Create a notebook and attach it to a Unity Catalog-compliant cluster or SQL warehouse.

Select SQL as your notebook language.

2. Add the following commands to the notebook and run them (where <workspace-catalog> is the name of your workspace catalog):

SQLCopy

```
USE CATALOG <workspace-catalog>
```

SQLCopy

```
CREATE TABLE IF NOT EXISTS default.department
(
  deptcode   INT,
  deptname  STRING,
  location  STRING
);
```

SQLCopy

```
INSERT INTO default.department VALUES
  (10, 'FINANCE', 'EDINBURGH'),
  (20, 'SOFTWARE', 'PADDINGTON');
```

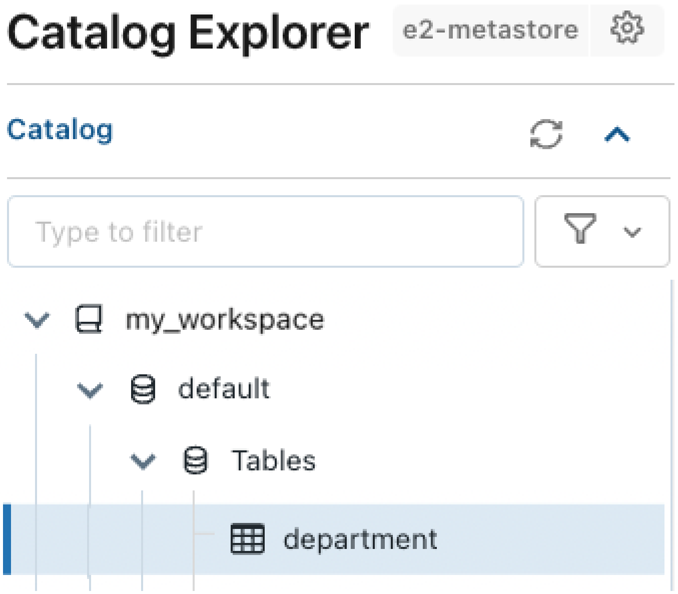
Note

If your workspace catalog is set as the default catalog for your workspace, you don't need to provide the complete three-level namespace (<workspace-catalog>.default.department) or the USE CATALOG <catalog> statement, because the workspace catalog is defined as the *default catalog* for the workspace and is therefore assumed. Any time you reference a catalog other than the default catalog, you must specify the catalog in the statement or declare it with a USE CATALOG <catalog> statement.

You now have a table in Unity Catalog.

3. Find the new table in Catalog Explorer.

In the sidebar, click **Catalog**, then browse or search for the workspace catalog (<workspace-name>) and the default schema, where you'll find the department table.



Notice that you don’t need a running cluster or SQL warehouse to browse data in Catalog Explorer.

4. Grant permissions on the table.

As the original table creator, you’re the table *owner*, and you can grant other users permission to read or write to the table. You can even transfer ownership, but we won’t do that here.

On the table page in Catalog Explorer, go to the **Permissions** tab and click **Grant**.

On the **Grant on** dialog:

a. Select the users and groups you want to give permission to. In this example, we use a group called data-consumers.

b. Select the privileges you want to grant. For this example, assign the SELECT (read) privilege and click **Grant**.

You can also grant those permissions using the following SQL statement in a Azure Databricks notebook or the Databricks SQL query editor:

SQLCopy

```
GRANT SELECT ON default.department TO `data-consumers`;
```

Create your first table and manage permissions (for workspaces that include a main catalog)

Unity Catalog enables you to define access to tables declaratively using SQL or the Databricks Explorer UI.

In this example, you’ll run a notebook that creates a table named department in the main catalog and default schema (database). This catalog and schema are created automatically for all metastores.

You can also try running an example notebook that performs the same tasks.

Permissions required

This tutorial requires the USE CATALOG privilege on the main catalog and both USE SCHEMA and CREATE TABLE on the main.default schema.

By default, all account users have USE CATALOG on main and USE SCHEMA on default. You might need to ask the catalog owner to grant you CREATE TABLE on the default schema. If you are a metastore admin or the catalog owner, you can grant yourself or any user or group the CREATE TABLE privilege using the following command in a notebook that supports Unity Catalog:

SQLCopy

```
GRANT CREATE TABLE ON SCHEMA main.default TO `<user or group>`;
```

Tutorial instructions

1. Create a notebook and attach it to a cluster that supports Unity Catalog.

Select SQL as your notebook language.

2. Add the following commands to the notebook and run them:

SQLCopy

```
CREATE TABLE IF NOT EXISTS main.default.department
(
  deptcode   INT,
  deptname  STRING,
  location  STRING
);
```

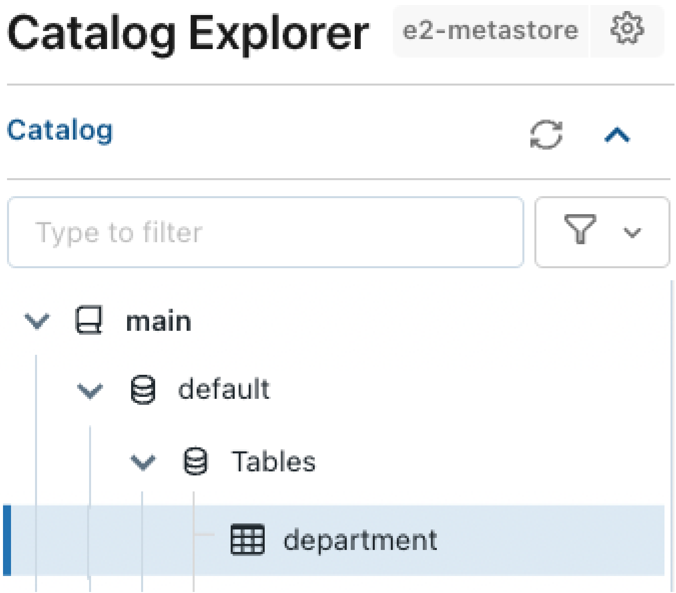
SQLCopy

```
INSERT INTO main.default.department VALUES
  (10, 'FINANCE', 'EDINBURGH'),
  (20, 'SOFTWARE', 'PADDINGTON');
```

You now have a table in Unity Catalog.

3. Find the new table in Catalog Explorer.

In the sidebar, click **Catalog**, then use the browser (or search) to find the main catalog and the default schema, where you'll find the department table.



Notice that you don't need a running cluster or SQL warehouse to browse data in Catalog Explorer.

4. Grant permissions on the table.

As the original table creator, you're the table *owner*, and you can grant other users permission to read or write to the table. You can even transfer ownership, but we won't do that here.

On the table page in Catalog Explorer, go to the **Permissions** tab and click **Grant**.

On the **Grant on** dialog:

a. Select the users and groups you want to give permission to. In this example, we use a group called data-consumers.

b. Select the privileges you want to grant. For this example, assign the SELECT privilege and click **Grant**.

You can also grant those permissions using the following SQL statement in a Azure Databricks notebook or the Databricks SQL query editor:

SQLCopy

```
GRANT SELECT ON main.default.department TO `data-consumers`;
```

5. Run one of the example notebooks that follow for a more detailed walkthrough that includes catalog and schema creation, a summary of available privileges, a sample query, and more.

Example notebooks: Create your first catalog, schema, and table

You can use the following example notebooks to create a catalog, schema, and table, as well as manage permissions on each.