Microsoft Fabric in a Day Lab Manual – Lab 3

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# Lab 3: Working with Dataflows gen2 – Creating the Location Table

## Introduction:

In this lab we will be creating a Dataflow gen2 in our Fabric Workspace. The below steps will walk through navigating the workspace to create the dataflow, connect to our sample database, filter to the required schema and selecting the base tables we’ll be working with for this exercise.

## Part 1: Creating the Dataflow Gen2

1. Go to home screen of your Fabric Workspace

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1. Select the New dropdown
2. Select More Options
3. Select Dataflow Gen2

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1. Change the name of your dataflow to **Location** and hit Enter

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## Part 2: Connecting To Source Data

1. Select Get Data from the top left

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1. Select View More under New Sources

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1. Select Azure from the slicers

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1. Select Azure SQL Database from the options
2. Input the connection details provided in the “Lab 3 – Source Connection Details” file below
   1. Server: <insert server details>
   2. Database: <insert database details>
   3. Change Authentication Kind to Organizational

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1. Select Next in the bottom right corner
2. Enter “Application” into the search box to narrow down the objects
3. Select Application.Cities, Application.Countries, and Application.StateProvinces checkboxes
4. Select Create

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## Part 3: Transforming Application Cities

Now that we’ve connected to the sample database and created the queries for the tables we’ll be working with, we’re going to start the data transformation process. We’ll begin by working with the Application Cities table. We’ll then join in the Application StateProvinces tables, and lastly the Application Countries table.

1. Select Application Cities from the queries pane on the left
2. Select Choose Columns from the top ribbon on the home tab
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3. Uncheck the Select All box

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1. Check the box for the following fields and click Ok
   1. CityID
   2. CityName
   3. StateProvinceID

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1. Reorganize the columns of the table to shuffle the Id fields to the beginning by clicking and dragging State Province Id to the second position

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1. Edit the naming of the Applied Steps to provide meaningful descriptions to improve readability by right-clicking the step and clicking rename
   1. Navigation 1 -> Application Cities Table
   2. Choose Columns -> Removed Unused Application Cities Fields
   3. Reordered Columns -> Moved State Province Id

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1. Open the Advanced Editor and review the Mashup (M code) being written as the steps are applied. Take note of the naming we’ve applied and how easy it is to navigate the code.

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1. Right click Application Cities from the Queries blade and click Enable Staging to disable
   1. We won’t be needing this feature for this exercise

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## Part 4: Transforming Application StateProvinces

Now that we’ve had a detailed walkthrough of how to transform the Application Cities table, we’re going to repeat the process for Application StateProvinces with abbreviated instructions.

1. Remove excess fields from Application StateProvinces. Keep only the following columns
   1. StateProvinceID
   2. StateProvinceCode
   3. StateProvinceName
   4. CountryID
   5. SalesTerritory

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1. Shuffle Id columns to the beginning

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1. Update the naming of the Applied Steps to meaningful descriptions

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1. Disable Staging

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## Part 5: Transforming Application Countries

We’ll now repeat the process for the Application Countries table.

1. Select only necessary fields

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1. Rename applied steps

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1. Disable staging

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## Part 6: Merging The Queries

Now that all of our tables have been cleaned up, we’re ready to bring them all together to create our Location table. There are several ways to accomplish this. We’ll begin by merging Application Countries and Application StateProvinces tables. We’ll then switch to the diagram view and apply the merge using the diagram interface.

1. Select the Application Countries query from the Queries pane
2. Select the Merge Queries (or Combine) dropdown from the Home ribbon and select merge queries as new

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1. Ensure Country Id is the field selected in the Application Countries table
2. Select the Application StateProvinces table from the “Right table for merge” dropdown
3. Select Country Id as the join field for Application StateProvinces
4. Change the join type to inner join
5. Select Ok

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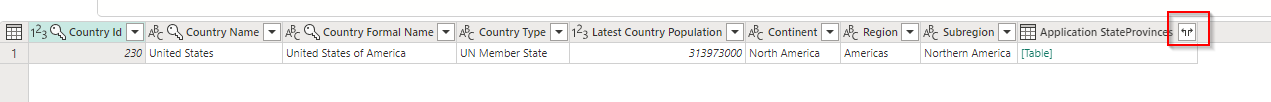
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1. A new Query has been created in the Queries pane
2. Rename this query to Location

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1. Select the expand button on the new column that was added to the Application Countries table



1. Uncheck the Country Id box as this would be a duplicate column
2. Select Ok

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1. Shuffle the State Province Id field to the front of the table by right-clicking the column header, selecting move, and to beginning

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1. Rename the applied steps

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## Part 7: Using Diagram View to Merge

We’ve now completed merging out Countries and StateProvinces tables together into a new table called Location. Next, we will merge the new location table with our Application Cities table. This time, we’re going to use the diagram view to complete the merge process.

1. Go to the View tab in the top ribbon
2. Select the Diagram View toggle
   1. You’ll see the three tables we started with as well as our new Location table in the diagram

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1. Select the ellipsis (three dots) in the top right of the Location table in the diagram
2. Select Merge queries

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1. Ensure State Province Id is selected from the Location table
2. Select Application Cities from the dropdown
3. Choose State Province Id as the join field from Application Cities
4. Select Inner as the join type
5. Select Ok

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1. Your diagram view should now show all three Application tables as merging into the Location table

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1. Expand the Application Cities column from the table
2. Uncheck the State Province Id box as this would be a duplicate column

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1. Shuffle the City Id field to the beginning of the table

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1. Expand the Query Settings pane on the right and rename the applied steps

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1. Expand the Queries pane on the left and disable staging for the Location table

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## Part 8: Writing to a Destination

We’ve now completed the transformation process and produced the final version of the Location table. Next up, we’ll add a destination to our dataflow and load the Location table into our Lakehouse.

1. Add a destination to the dataflow by clicking the “+” button in the bottom right corner
2. Select Lakehouse from the available options

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1. Leave the default settings and click Next

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1. Navigate to your Fabric in a Day Workspace and expand the folder
2. Select the lakehouse that you created earlier “Lakehouse\_{your initials}”
3. Change the table name “location” (lowercase)
4. Click Next

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1. Leave the default loading setting as Replace and click Save Settings

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1. Select the Publish button to complete development of the Dataflow and load the Location table to your lakehouse

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1. You’ll notice two different loading symbols once published. The first “swirl” represents the metadata of the Dataflow being saved.

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**Note: You may see other artifacts in your workspace. These are temporary and will remove themselves from the UI after processing is completed.**

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1. The second “swirl” is the actual execution of the Dataflow

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1. Once complete, navigate to the Lakehouse.

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1. You should now see your location table under the Tables section of the Lakehouse Explorer. Click the table to preview the data.

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1. You’re now done with this lab