



Transfer data to SQL Pool

1. Now in the previous labs we created the 1 Fact table and 2 Dimensions table within our Azure SQL Database.
2. In this lab we are going to make use of pipelines to transfer these tables from SQL Database to SQL Warehouse.
3. Now move to Azure Portal and open Synapse Studio.
4. Then navigate to integrate section from left pane then click on plus icon to expand more options then choose Copy data tool option of pipeline.
5. Click on next for the first page.

Copy Data tool

Properties

Select copy data task type and configure task schedule

Task type

Built-in copy task
You will get single pipeline to copy data from 90+ data source easily.

Metadata-driven copy task
You will get parameterized pipelines which can read metadata from an external store to load data at a large scale.

You will get single pipeline to quickly copy objects from data source to destination in a very intuitive manner.

Task cadence or task schedule *

Run once now Schedule Tumbling window

< Previous Next >

6. Now here in the connection you have to choose your SQL Database Server. As you have worked on it in the previous lab so, it has been saved here.
7. After that you are going to select your 3 tables as shown below. You can select multiple tables at a time.
8. Then click on next, you can skip the page for preview data.

Copy Data tool

9. Now you are going to choose your target as Pool database.

10. In terms of the target, since I don't have the existing tables in place, I'll ask this visitor just to go out and transfer the tables as they are. So, this wizard is going to go out and create those fact and dimension tables.

Copy Data tool

11. So, for each table you can see the mapping accordingly.

Copy Data tool

Column mapping

Choose how source and destination columns are mapped

Table mappings (3)

Source	Target
dbo.DimCustomer	dbo.DimCustomer
dbo.DimProduct	dbo.DimProduct
dbo.FactSales	dbo.FactSales

Column mappings

> Type conversion settings

+ New mapping Clear Reset Delete

Source	Type	Destination	Type
CustomerID	int	CustomerID	int
CompanyName	nvarchar	CompanyName	nvarchar
SalesPerson	nvarchar	SalesPerson	nvarchar

Azure Synapse dedicated SQL pool sink properties

Pre-copy script

< Previous Next > Cancel

12. Give it a name and choose bulk insert. Then move to review page and let it deploy itself.

Copy Data tool

Properties

Source

Destination

Settings

Review and finish

Settings

Enter name and description for the copy data task, more options for data movement

Task name * Copy_datatable_fact_dim

Task description

Fault tolerance

Enable logging

Enable staging

Advanced

Copy method Copy command PolyBase Bulk insert Upsert

Bulk insert table lock Yes No

13. Once it is deployed click on finish.

Copy Data tool

The screenshot shows the 'Copy Data tool' interface. On the left, a vertical progress bar indicates steps completed (Properties, Source, Destination, Settings) and pending (Review and finish, Review, Deployment). The main area displays a diagram with an 'Azure SQL Database' icon pointing to an 'Azure Synapse dedicated SQL pool' icon. Below the diagram, the text 'Deployment complete' is displayed. A table titled 'Deployment step' lists four steps: 'Validating copy runtime environment' (Succeeded), 'Creating datasets' (Succeeded), 'Creating pipelines' (Succeeded), and 'Running pipelines' (Succeeded). A note at the bottom states: 'Datasets and pipelines have been created. You can now monitor and edit the copy pipelines or click finish to close Copy Data Tool.' At the bottom are three buttons: 'Finish' (highlighted in blue), 'Edit pipeline', and 'Monitor'.

14. Now go to the monitor section and there you can see that your pipeline run was successful.

The screenshot shows the 'Monitor' section of the Azure portal. The left sidebar highlights 'Monitor'. The main area shows 'Activity runs' for a pipeline named 'Copy_datatable_fact_dim'. A Gantt chart at the top shows a 'ForEach' activity with a child 'ForEach_uhd' activity. Below the chart is a table of 'Activity runs' with the following data:

Activity name	Activity status	Activity type	Run start	Duration	Integration runtime
Copy_uhd	Succeeded	Copy data	4/16/2024, 6:35:24 PM	19s	AutoResolveIntegra
Copy_uhd	Succeeded	Copy data	4/16/2024, 6:35:24 PM	19s	AutoResolveIntegra
Copy_uhd	Succeeded	Copy data	4/16/2024, 6:35:24 PM	16s	AutoResolveIntegra
ForEach_uhd	Succeeded	ForEach	4/16/2024, 6:35:24 PM	22s	

15. Now go to Data and open your Pool Database there you can see your tables.

The screenshot shows the Azure Synapse Studio interface. On the left, there's a navigation sidebar with icons for Home, Data (selected), Develop, Integrate, Monitor, and Manage. The main area is titled 'Data' and shows a 'Workspace' tab selected. Below it is a search bar with the placeholder 'Filter resources by name'. Under 'SQL database', there are two entries: 'demodb (SQL)' and 'demopooldb (SQL)'. The 'demopooldb (SQL)' entry is expanded, showing a 'Tables' folder which contains four tables: 'dbo.DimCustomer', 'dbo.DimProduct', 'dbo.FactSales', and 'dbo.pool_logdata'. The last two are also highlighted with a red box.

16. In SSMS also if you will go and refresh your Pool Database. You can see your tables.

The screenshot shows the SSMS Object Explorer. It displays a tree structure under the database 'datasynapse1234.sql.azuresynapse.net'. The 'Tables' node for the 'demopooldb' database is expanded, showing four tables: 'dbo.DimCustomer', 'dbo.DimProduct', 'dbo.FactSales', and 'dbo.pool_logdata'. Each table is represented by a small icon and a plus sign.

17. Now in SSMS if you go and open new query for Pool Database and run the Select statement for new tables.

18. Then you will get the result accordingly.

SQLQuery4.sql - dat...(sqladminuser (0))

```
SELECT * FROM DimCustomer
SELECT * FROM DimProduct
SELECT * FROM FactSales
```

150 %

Results Messages

	CustomerID	CompanyName	SalesPerson
1	1	A Bike Store	adventure-works\pamela0
2	546	Field Trip Store	adventure-works\linda3
3	29889	Separate Parts Corporation	adventure-works\shu0
4	2	Progressive Sports	adventure-works\david8
5	547	Curbside Sporting Goods	adventure-works\shu0
6	29890	Basic Bike Company	adventure-works\david8
7	3	Advanced Bike Components	adventure-works\jillian0
8	550	Remote Bicycle Specialists	adventure-works\josé1
9	29891	Fabrikam Inc., West	adventure-works\michael9
10	4	Modular Cycle Systems	adventure-works\jillian0
11	551	Vinyl and Plastic Goods Corporation	adventure-works\josé1
12	29892	Non-Slip Pedal Company	adventure-works\josé1
13	5	Metropolitan Sports Supply	adventure-works\shu0
14	552	Consolidated Messenger	adventure-works\garrett1

Query executed successfully.

datasynapse1234.sql.azuresy... | sqladminuser (0) | demopooldb | 00:00:00 | 847 rows