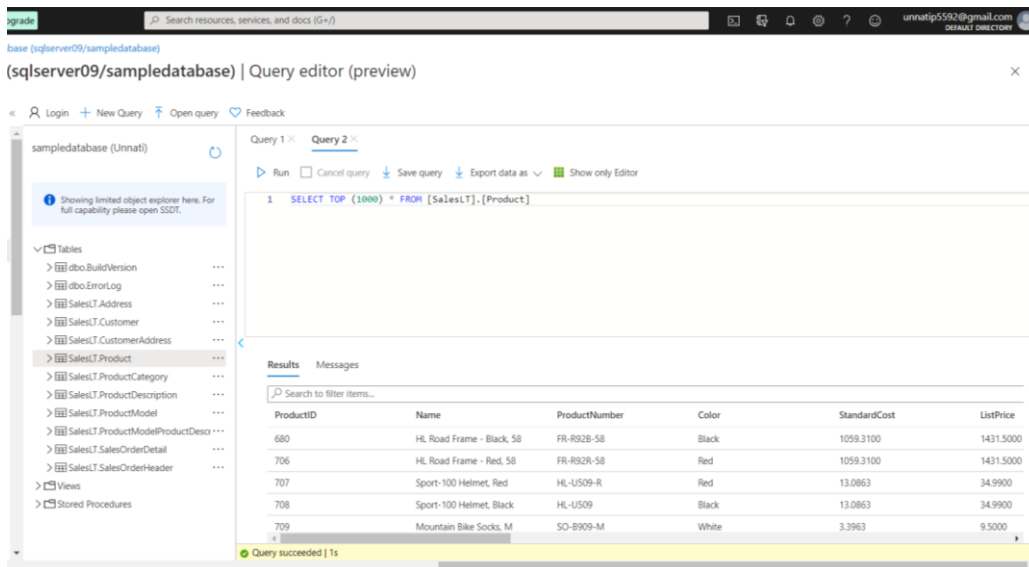
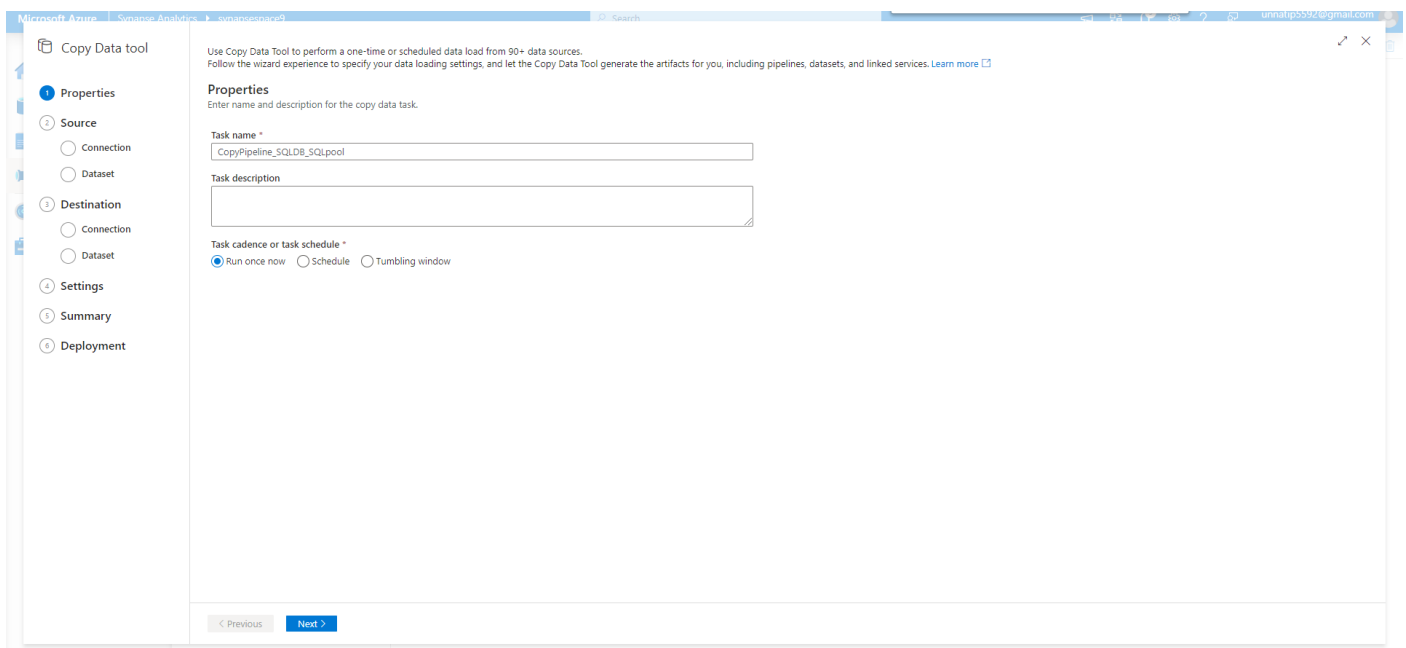


## Demo: Copy activity using Data factory Inside Synapse Analytics

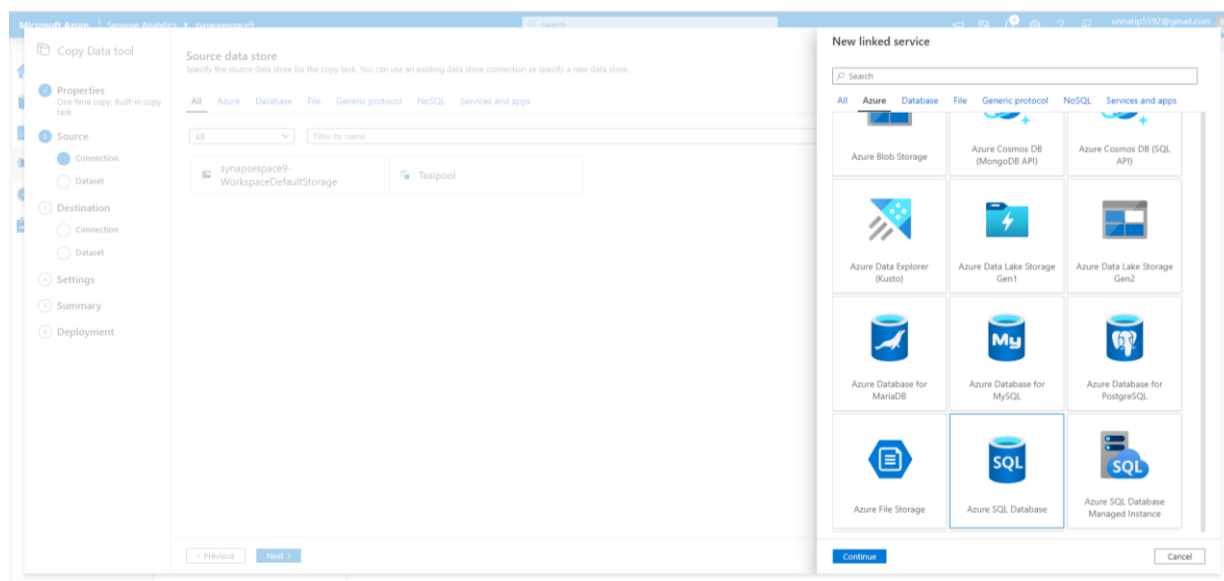
In this demo, I created a copy activity using data factory from inside Synapse workspace. I am going to move data from SQL Server to Sqlpool data warehouse. So from this SQL Server, we will move data into our second one, which is data warehouse.



I have simply use Copy Data tool to copy data from Azure SQL server to data warehouse. For a scheduling I have kept it for Run once now.



Now I have created new New Linked service to connect it to source database which is Azure SQL Database. Azure Provides more than 99 connects to all possible sources you can think of.





Give name to this connection according to your naming convention. Then choose your Azure Subscription, SQL server name, Database name and authentication type.


**New linked service (Azure SQL Database)**


Name: AzureSqlDatabase1


Description:


Connect via integration runtime \* : AutoResolveIntegrationRuntime

Connection string:  **Connection string** Azure Key Vault

Account selection method : ☒ From Azure subscription ☐ Enter manually


Azure subscription: 


Server name \*: sqlserver09 

Database name \*: sampledatabase 


Authentication type \*: SQL authentication


User name \*: Unnati

**Password**  Azure Key Vault

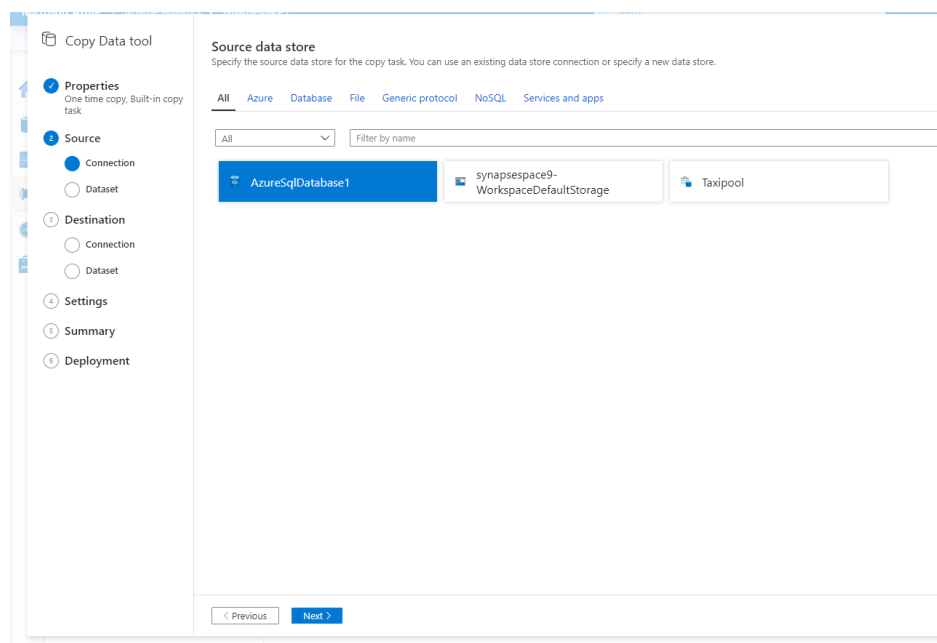
Password \*: 

Additional connection properties:

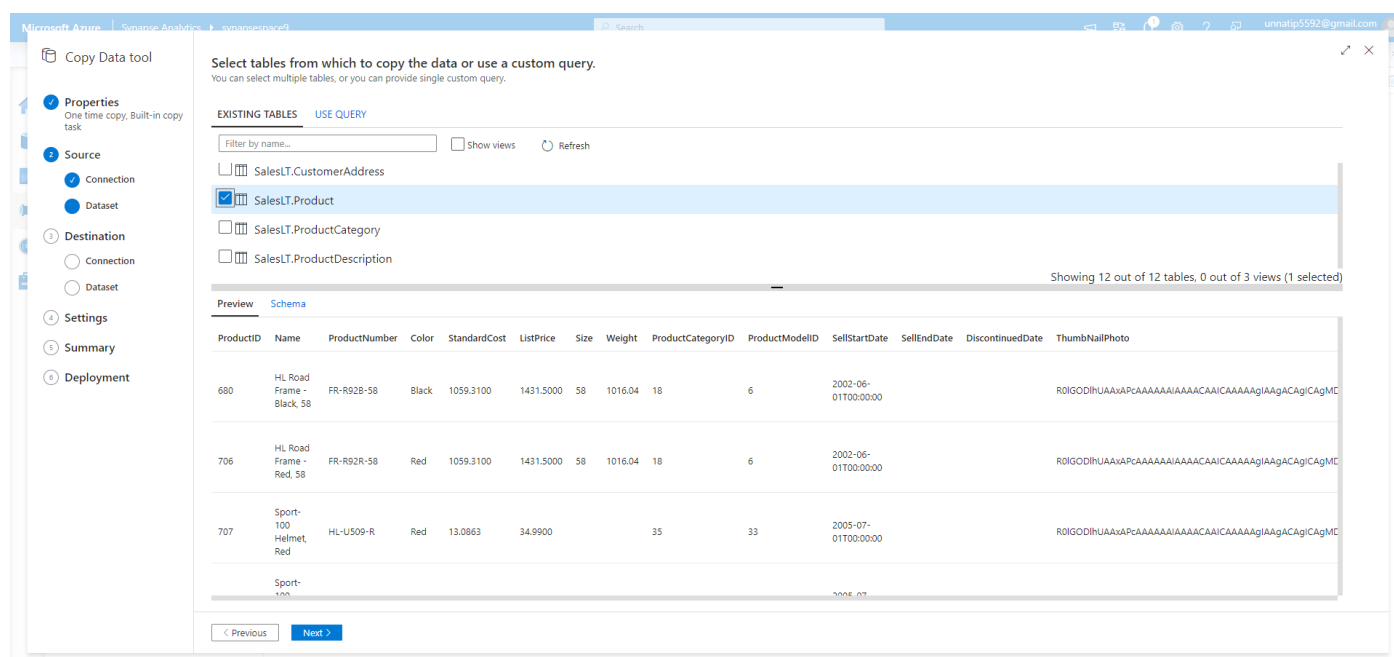
 Connection successful

**Create** **Back**  **Test connection** **Cancel**

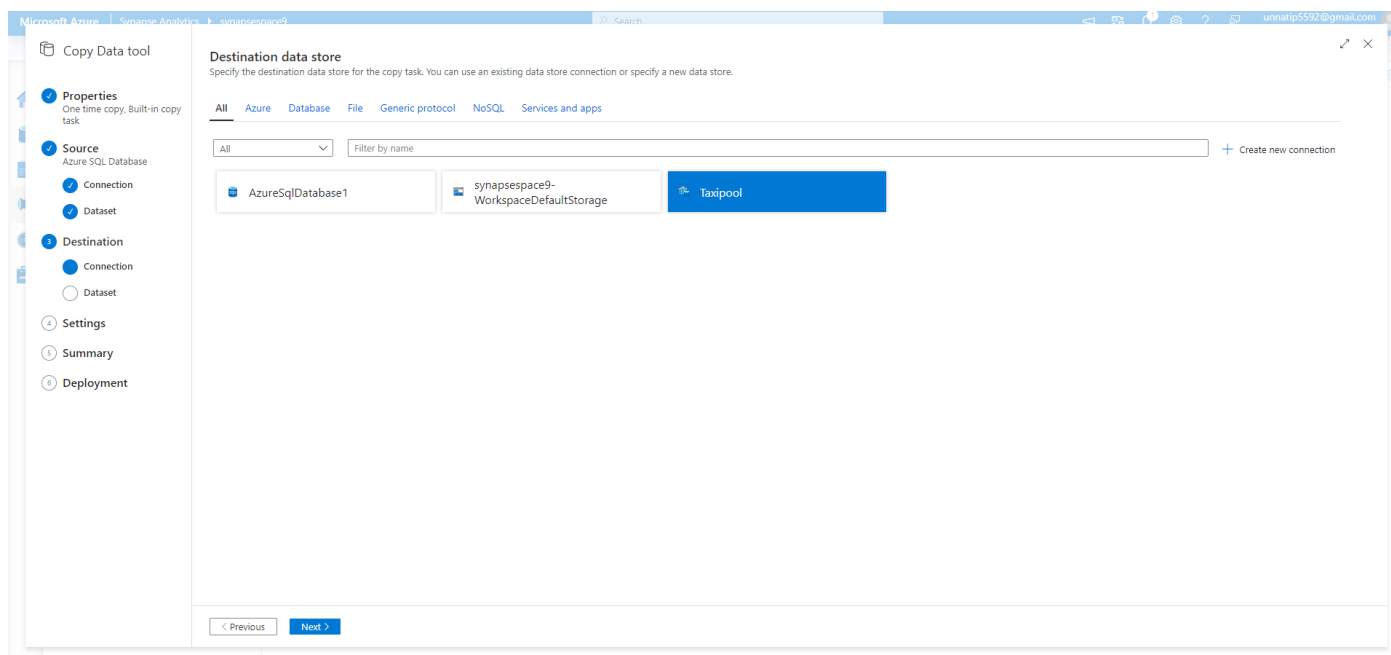
So once I have this connection here, I can select this one and then I have to select which table I want to move. I have select product table to move it to data warehouse.



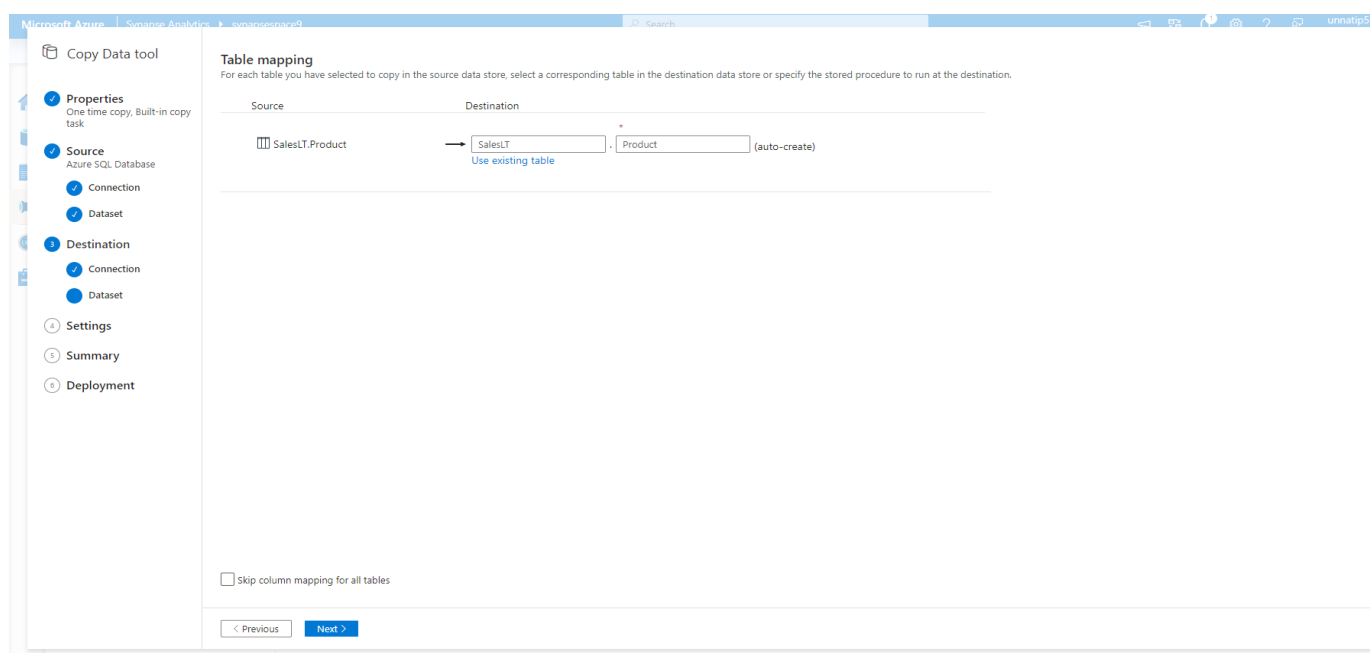
Before moving the data we will preview the data in the table and its schema. Instead of moving full table you can also write query to join the tables and create the dataset basically.



Finally, I have to configure my destination which is SQL pool (Taxipool) that I have already created for my another demo



Next we have to decided where we want to move this data in SQL Pool, I dont have any table in the pool where i can dump this data so I have let azure create a table for me which is auto created, and that table name will be Product.



Here we need to map columns from our source data base to the destination database and data factory

Microsoft Azure | Synapse Analytics | **Copy Data tool**

**Column mapping**  
Choose how source and destination columns are mapped

**Table mappings (1)**

- Source: SalesLT.Product
- Destination: SalesLT.Product

**Column mappings**

Type conversion settings

Source	Type	Destination	Type
ProductID	int	ProductID	int32
Name	nvarchar	Name	String
ProductNumber	nvarchar	ProductNumber	String
Color	nvarchar	Color	String
StandardCost	money	StandardCost	Decimal
ListPrice	money	ListPrice	Decimal
Size	nvarchar	Size	String

Azure Synapse dedicated SQL pool sink properties

Pre-copy script

Advanced

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Next there are few configurations you need to look into most importantly the one that is Allow Polybase make sure it is checked, use Polybase to improve query performance. I have let all configuration default.

Microsoft Azure | Synapse Analytics | **Copy Data tool**

**Settings**  
More options for data movement

Fault tolerance

Enable logging

**Performance settings**

Enable staging

Allow PolyBase

Reject type

Reject value

Use type default

Data integration unit

Degree of copy parallelism

You will be charged # of used DIUs \* copy duration \* \$0.25/DIU-hour. Local currency and separate discounting may apply per subscription type. [Learn more](#)

Advanced

< Previous Next >

This is the summary of what we configure above. So we are taking data from Azure SQL Database source to destination which is SQL data warehouse destination using Copy Data Tool.

Everything looks good and this is going to deploy my new pipeline and will also execute the pipeline.

**Copy Data tool**

**Summary**  
You are running pipeline to copy data from Azure SQL Database to Azure Synapse dedicated SQL pool.

**Diagram:** Azure SQL Database → Azure Synapse dedicated SQL pool

**Properties**

Task name	CopyPipeline_SQLDB_SQLPOOL	<a href="#">Edit</a>
Task description		

**Source**

Connection name	AzureSqlDatabase1	<a href="#">Edit</a>
Dataset name	SourceDataset_joy	
Table name	SalesLT.Product	

**Destination**

Connection name	Taxipool	<a href="#">Edit</a>
Dataset name	DestinationDataset_joy	
Table name	SalesLT.Product	

**Copy settings**

Timeout	7:00:00:00	<a href="#">Edit</a>
Retry	0	
Retry interval	30	
Secure output	false	

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Deploying... I hope It should not take much time.

**Copy Data tool**

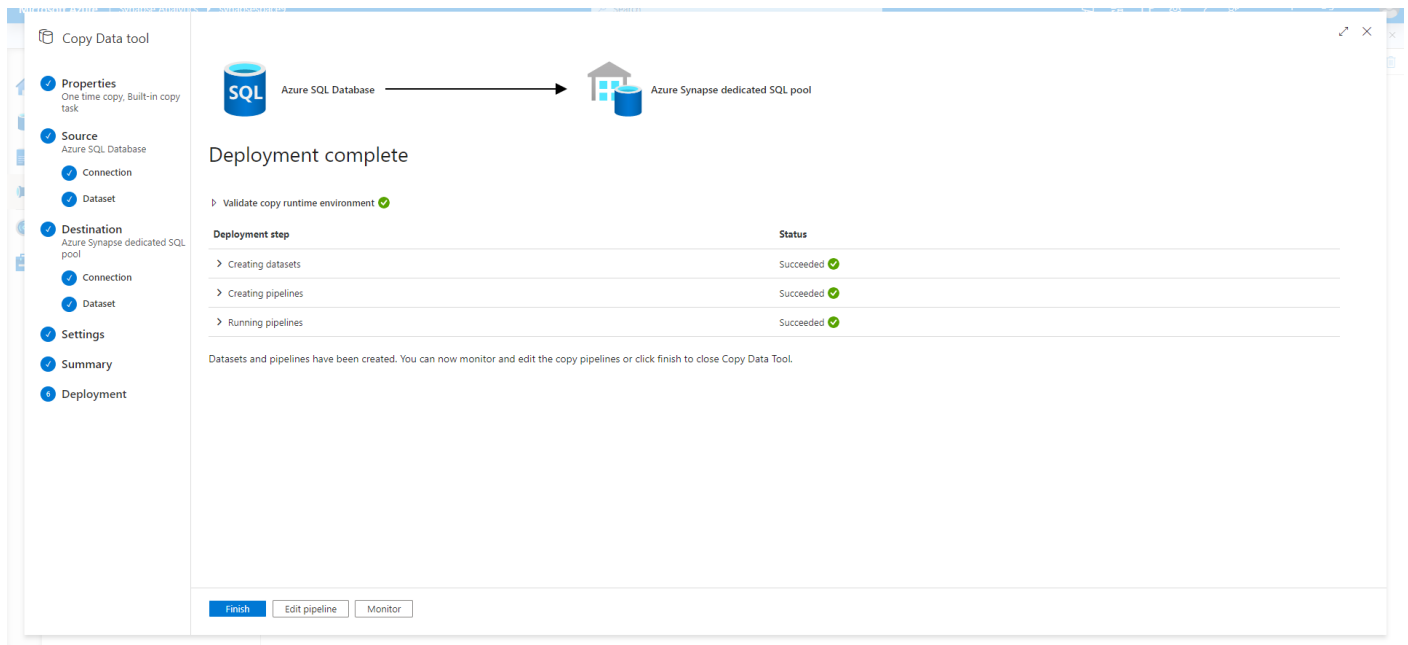
**Diagram:** Azure SQL Database → Azure Synapse dedicated SQL pool

**Deploying ...**

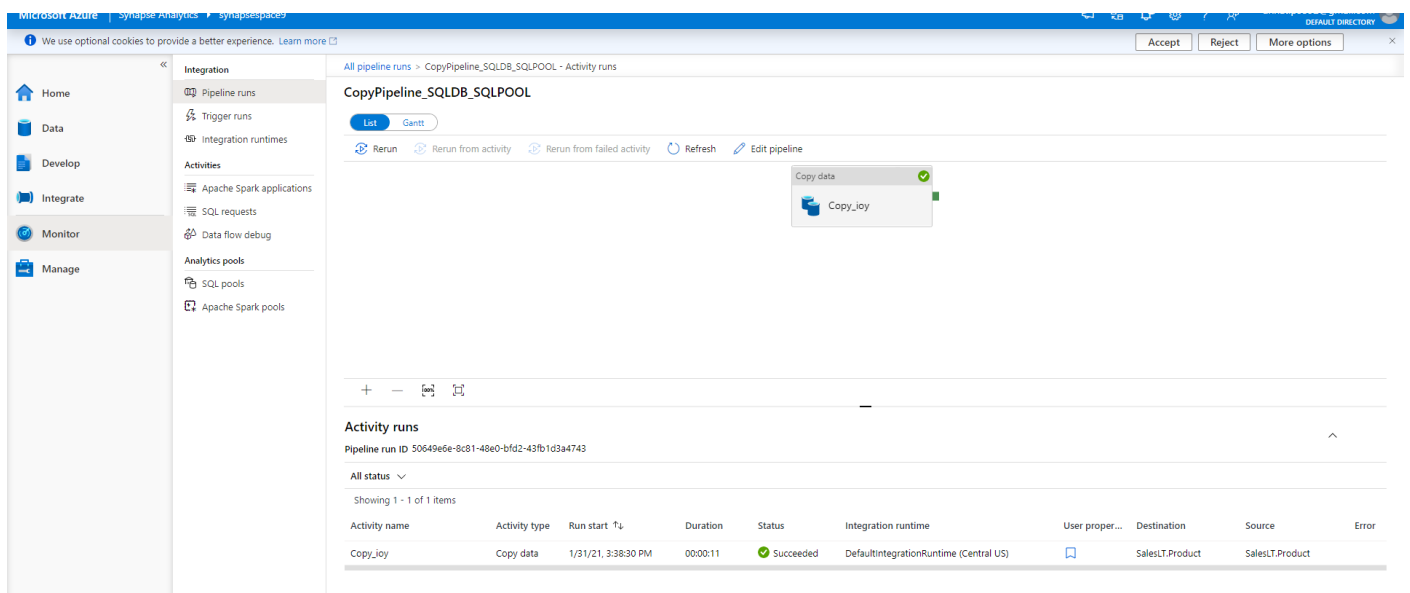
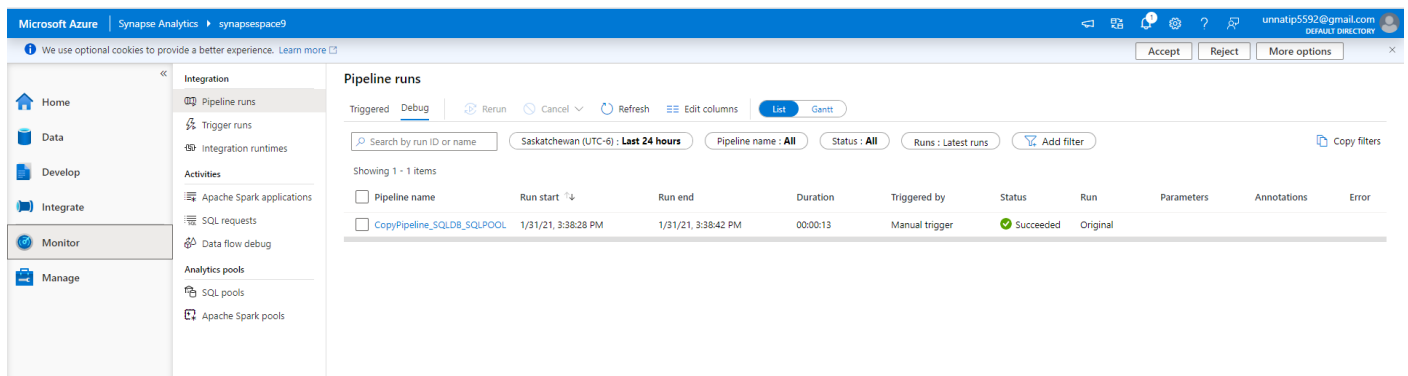
Validate copy runtime environment ✔

Deployment step	Status
> Creating datasets	In progress <span style="color: blue;">🔄</span>
> Creating pipelines	Pending <span style="color: blue;">🕒</span>
> Running pipelines	Pending <span style="color: blue;">🕒</span>

Deployment has Completed, now click finish to monitor your Pipeline.



You can Monitor your Pipeline after it's successfully deployed, to see the duration, status, run time etc of your Pipeline



Now, I will check that my pipeline copied all data from the source tabel to destination. I will go back to my destination, which is SQL pool and I can see the product table, and making sure that all the data copied to the destination table.

Microsoft Azure

Synapse Analytics

synapsespace9

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Filter resources by name

Databases2

Taxipool (SQL)

Tables

dbo.Trip

SalesLT.Product

Columns

External tables

External resources

Views

Programmability

Schemas

Security

mydbname (SQL)

SQL script 3

Run

Undo

Publish

Query plan

Connect toTaxipool

Use databaseTaxipool

1SELECT TOP (100) [ProductID]

2,[Name]

3,[ProductNumber]

4,[Color]

5,[StandardCost]

6,[ListPrice]

7,[Size]

8,[Weight]

9,[ProductCategoryID]

10,[ProductModelID]

11,[SellStartDate]

12,[SellEndDate]

Results

Messages

View

Table

Chart

Export results

Search

ProductID	Name	ProductNumber	Color	StandardCost	ListPrice	Size	Weight	ProductCatego...	ProductModelID	SellStartDate
680	HL Road Frame...	FR-R92B-58	Black	1059.3100	1431.5000	58	1016.04	18	6	2002-06-01T00:...
724	LL Road Frame ...	FR-R30B-62	Black	204.6251	337.2200	62	1133.98	18	9	2005-07-01T00:...
742	HL Mountain Fr...	FR-M94S-46	Silver	747.2002	1364.5000	46	1288.20	16	5	2005-07-01T00:...
751	Road-150 Red, ...	BK-R93R-48	Red	2171.2942	3578.2700	48	6409.23	6	25	2005-07-01T00:...
760	Road-650 Red, ...	BK-R50R-60	Red	486.7066	782.9900	60	9026.44	6	30	2005-07-01T00:...
769	Road-650 Black...	BK-R50B-48	Black	486.7066	782.9900	48	8677.18	6	30	2005-07-01T00:...
778	Mountain-100 ...	BK-M82B-48	Black	1898.0944	3374.9900	48	9715.90	5	19	2005-07-01T00:...
787	Mountain-300 ...	BK-M47B-44	Black	598.4354	1079.9900	44	11852.31	5	21	2006-07-01T00:...
795	Road-250 Black...	BK-R89B-52	Black	1554.9479	2443.3500	52	6994.36	6	26	2006-07-01T00:...

00:00:09 Query executed successfully.