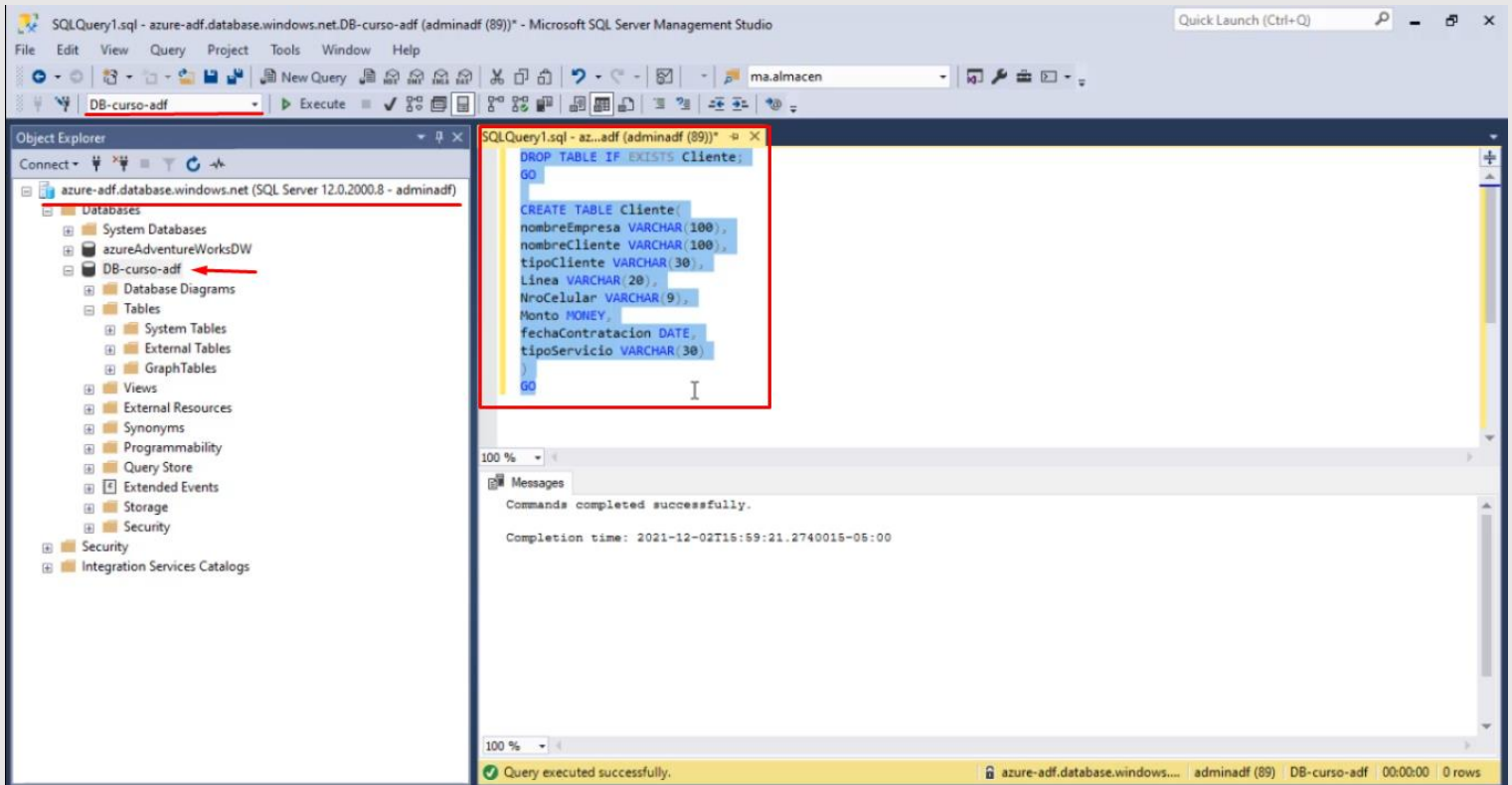
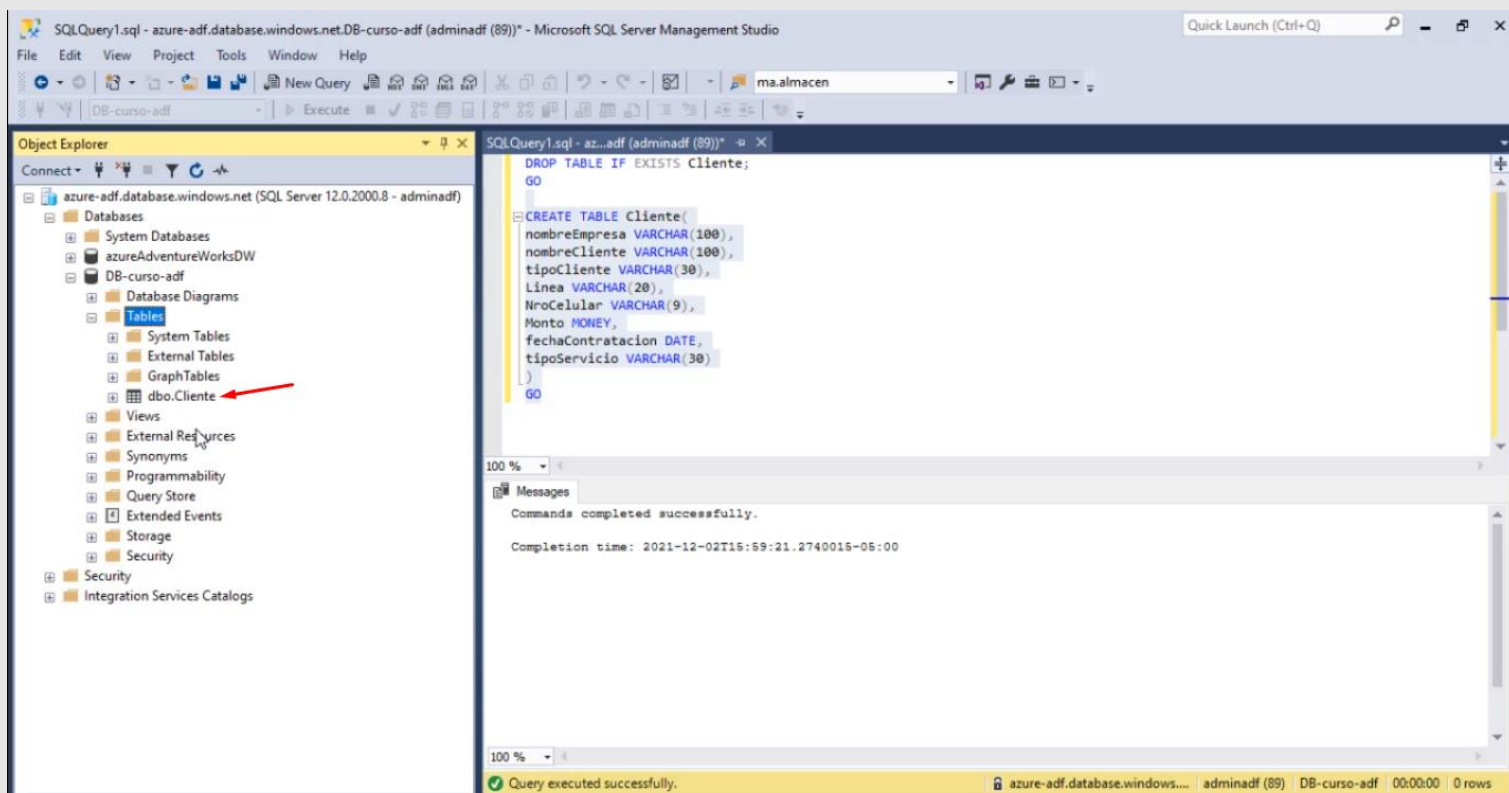


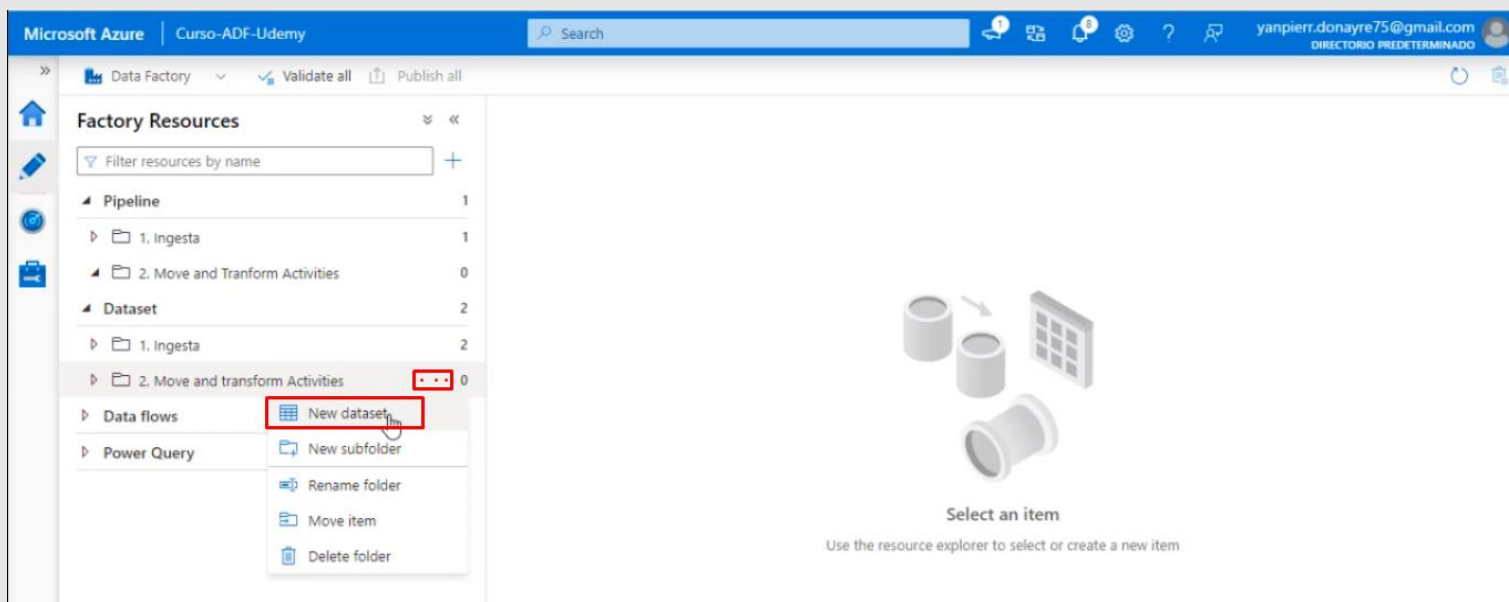
Copiar datos desde Azure Data Lake Storage a un Azure SQL Database

Partiremos creando una tabla en la base de datos dentro de Azure SQL Database





Luego, desde Azure Data Factory copiaremos los datos creando previamente los datasets de la fuente y de destino.



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Data Factory | Validate all | Publish all

Factory Resources

Filter resources by name

Pipeline

1. Ingesta

2. Move and Tranform Activities

Dataset

1. Ingesta

2. Move and transform Activities

Data flows

Power Query


New dataset

In pipeline activities and data flows, reference a dataset to specify the location and structure of your data within a data store. [Learn more](#)


Select a data store

lake


All | Azure | Database | File | Generic protocol | NoSQL | Services and apps




Azure Data Lake Storage Gen1



Azure Data Lake Storage Gen2



Azure Databricks Delta Lake



Snowflake

Continue

Cancel

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Factory Resources

Filter resources by name

Pipeline

1. Ingesta

2. Move and Tranform Activities

Dataset

1. Ingesta


2. Move and transform Activities

Data flows


Power Query

Select format


Choose the format type of your data




Avro




Binary




DelimitedText




Excel



JSON



ORC



XML

Continue

Back

Cancel

Name: nombre del dataset de la fuente

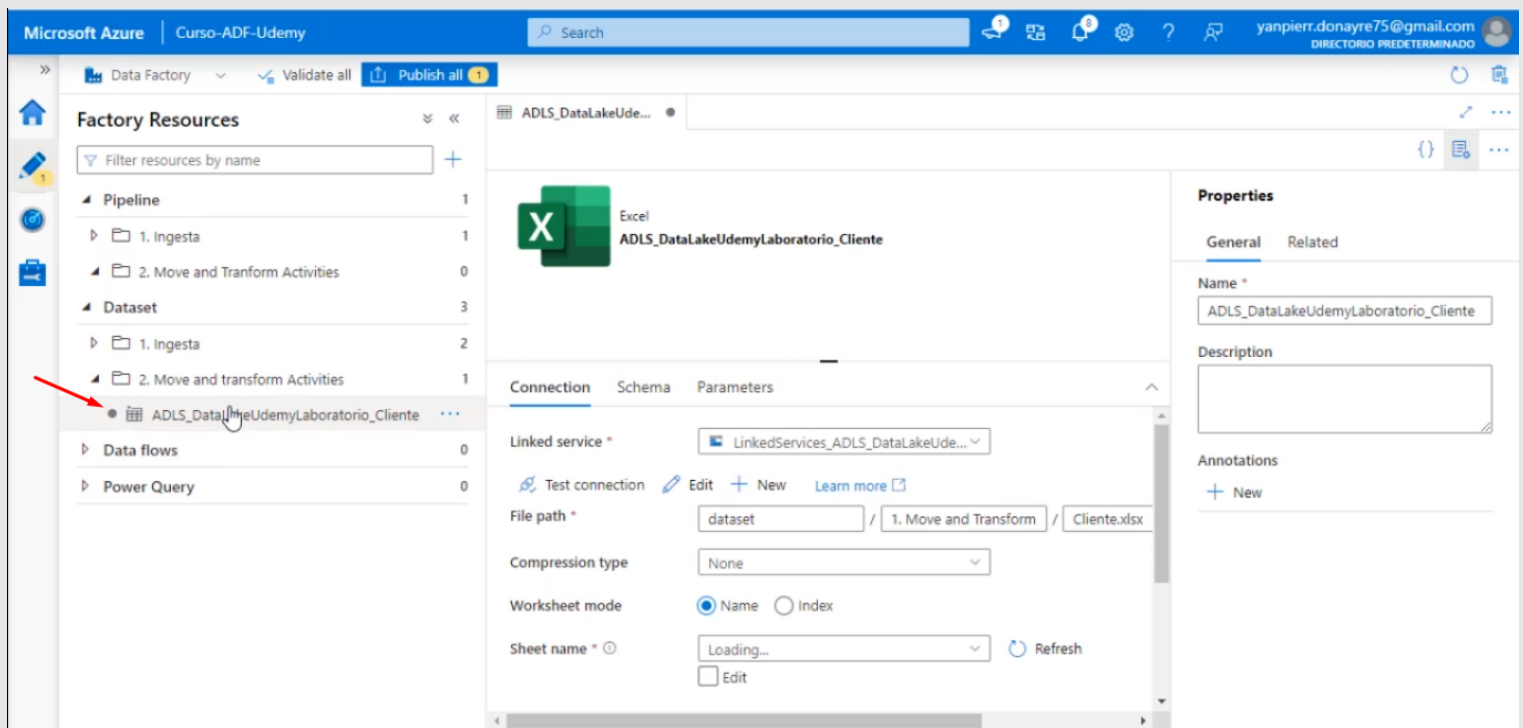
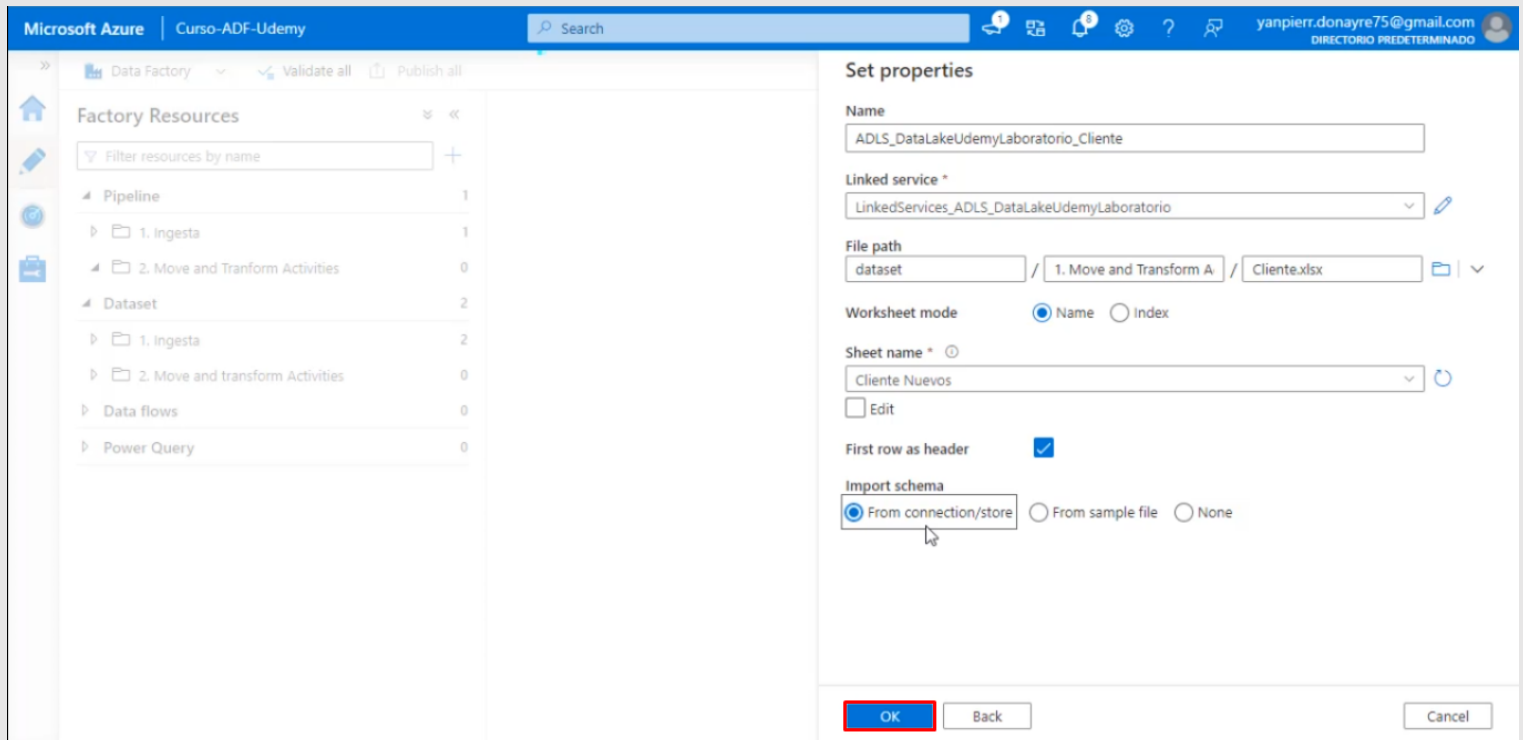
Linked Service: conexión con Azure Data Lake Storage

File path: la ruta donde se encuentra el archivo Excel

Sheet name: nombre de la hoja en el archivo Excel

First row as header: primera fila como encabezado

Import schema: importar el schema desde el archivo en cuestión



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Data Factory | Validate all | Publish all 1

Factory Resources

Filter resources by name

- Pipeline 1
 - 1. Ingesta 1
 - 2. Move and Transform Activities 0
- Dataset 3
 - 1. Ingesta 2
 - 2. Move and transform Activities 1
- ADLS_DataLakeUdemyLaboratorio_Cliente
- Data flows 0
- Power Query 0

ADLS_DataLakeUde...

Excel

ADLS_DataLakeUdemyLaboratorio_Cliente

Connection Schema Parameters

Linked service * LinkedServices_ADLS_DataLakeUde... [Test connection](#) [Edit](#) [New](#) [Learn more](#)

File path * dataset / 1. Move and Transform / Cliente.xlsx [Browse](#)

Compression type None

Worksheet mode ☒ Name ☐ Index

Sheet name * Cliente Nuevos [Refresh](#) [Preview data](#)

☐ Edit

Range e.g. A3:H5

Null value

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Data Factory | Validate all | Publish all 1

Factory Resources

Filter resources by name

- Pipeline 1
 - 1. Ingesta 1
 - 2. Move and Transform Activities 0
- Dataset 3
 - 1. Ingesta 2
 - 2. Move and transform Activities 1
- ADLS_DataLakeUdemyLaboratorio_Cliente
- Data flows 0
- Power Query 0

ADLS_DataLakeUde...

Excel

ADLS_DataLakeUdemyLaboratorio_Cliente

Connection Schema Parameters

Compression type None

Worksheet mode ☒ Name ☐ Index

Sheet name * Cliente Nuevos [Refresh](#) [Preview data](#)

☐ Edit

Range e.g. A3:H5

Null value

First row as header ☒

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Preview data

Linked service: LinkedServices_ADLS_DataLakeUdemyLaboratorio

Object: Cliente.xlsx

Nombre Empresa	Nombre Cliente	Tipo Cliente	Linea	Nro Celular	Monto	Fecha Contratacion	Tipo Servicio
Entel	Abbas E Abbas	Persona	Prepago	956237612	89.9	2021-02-05	Portabilidad
Claro	Abel R. Abel	Persona	Prepago	956237613	69.9	2020-12-10	Nuevo Usuario
Movistar	Abercrombie Abercrombie	Persona	Postpago	956237614	99.9	2020-11-04	Migracion
Bitel	Abercrombie B Abercrombie	Persona	Postpago	956237615	99.9	2021-02-10	Portabilidad
Bitel	Abolrous Abolrous	Persona	Postpago	956237616	29.9	2020-11-24	Nuevo Usuario
Entel	Abolrous E Abolrous	Persona	Prepago	956237617	99.9	2020-12-21	Migracion
Claro	Acevedo Acevedo	Persona	Prepago	956237618	49.9	2021-02-25	Portabilidad
Movistar	Achong Achong	Persona	Prepago	956237619	59.9	2020-11-12	Nuevo Usuario
Claro	Ackerman Ackerman	Persona	Prepago	956237620	59.9	2021-02-07	Migracion

Recordar que los archivos de texto para todas sus columnas SIEMPRE SERÁN EL TIPO DE DATO "STRING"

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Factory Resources

Filter resources by name

- Pipeline 1
 - 1. Ingesta 1
 - 2. Move and Transform Activities 0
- Dataset 3
 - 1. Ingesta 2
 - 2. Move and transform Activities 1
- ADLS_DataLakeUdemyLaboratorio_Cliente
 - Data flows 0
 - Power Query 0

ADLS_DataLakeUde...

Excel
ADLS_DataLakeUdemyLaboratorio_Cliente

Connection **Schema** Parameters

Import schema Clear

Column name	Type
Nombre Empresa	String
Nombre Cliente	String
Tipo Cliente	String
Linea	String
Nro Celular	String

Vamos a crear el dataset de destino

The screenshot shows the Microsoft Azure Data Factory interface. On the left, the 'Factory Resources' pane is expanded to '2. Move and transform Activities', which has a red box around it. A context menu is open for 'ADLS_DataLakeUde...', with 'New dataset' highlighted in red. The main pane shows the 'Excel' dataset 'ADLS_DataLakeUde...' with the 'Connection' tab selected. The 'File path' is set to 'dataset / 1. Move and Transform / Cliente.xlsx'.

The screenshot shows the 'New dataset' dialog in the Microsoft Azure Data Factory interface. The 'Select a data store' search bar contains 'sql'. The 'All' tab is selected, showing a grid of data store options. 'Azure SQL Database' is highlighted with a red box. The 'Continue' button is also highlighted with a red box.

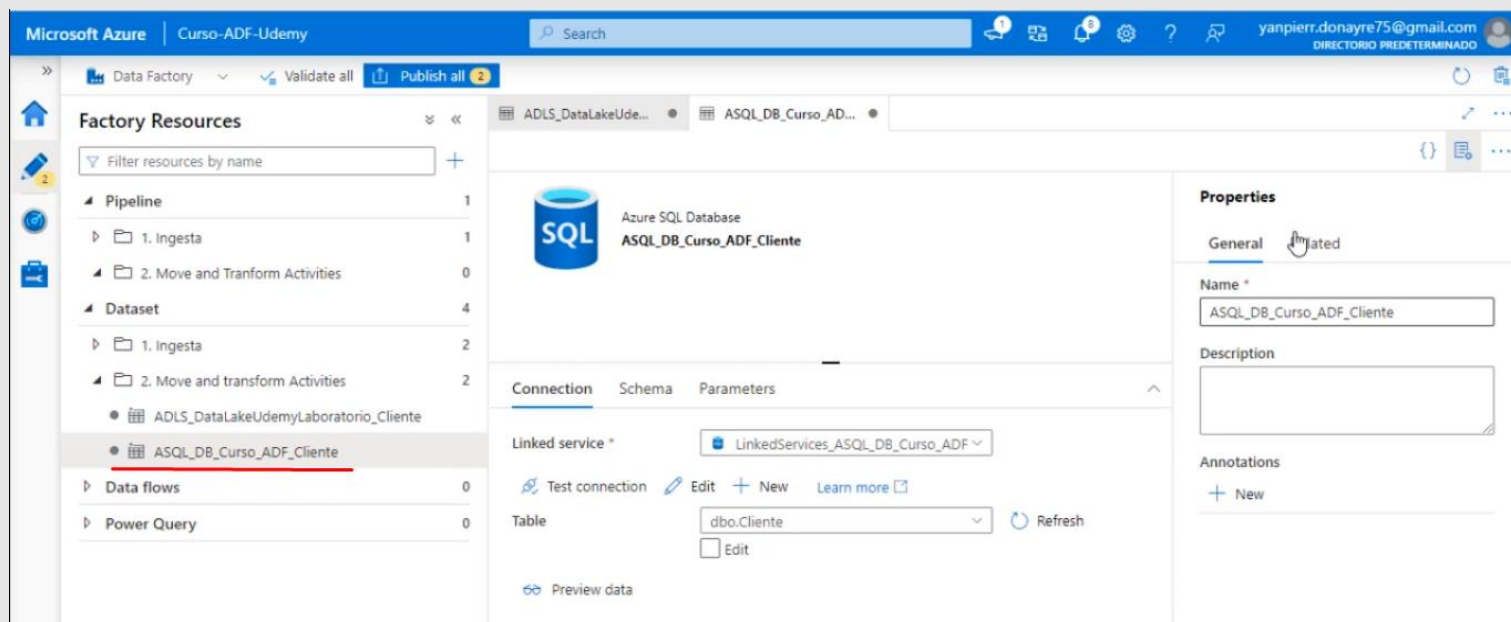
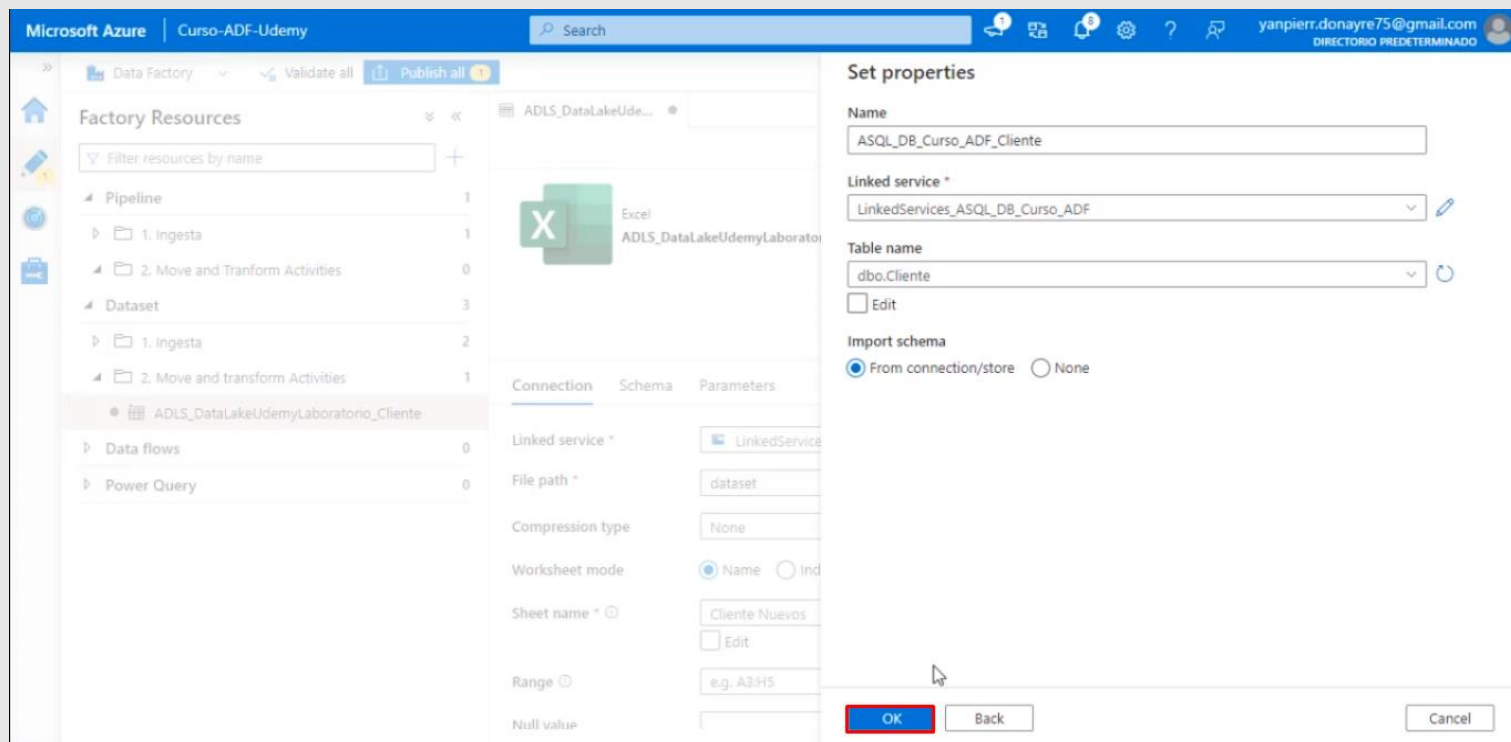
All	Azure	Database	File	Generic protocol	NoSQL	Services and apps

Name: nombre del dataset de destino

Linked Service: conexión con Azure SQL Database

Table name: nombre de la tabla donde se copiarán los datos del archivo Excel

Import schema: importar schema desde la tabla en cuestión



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Factory Resources

- Pipeline
 - 1. Ingesta
 - 2. Move and Tranform Activities
- Dataset
 - 1. Ingesta
 - 2. Move and transform Activities
 - ADLS_DataLakeUdemyLaboratorio_Cliente
 - ASQL_DB_Curso_ADF_Cliente
- Data flows
- Power Query

ADLS_DataLakeUde... ASQL_DB_Curso_AD...

Azure SQL Database
ASQL_DB_Curso_ADF_Cliente

Connection Schema Parameters

Import schema Clear

Column name	Type
nombreEmpresa	varchar
nombreCliente	varchar
tipoCliente	varchar
Linea	varchar
NroCelular	varchar

Luego de haber creado los datasets de la fuente y de destino, debemos crear un PIPELINE en el cual utilizemos la actividad COPY DATA, y desde ahí utilizar los dos datasets que hemos creado. Por otro lado, también tenemos la opción de crear los datasets desde la actividad de COPY DATA, sin tener la necesidad de crearlos previamente.

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Factory Resources

- Pipeline
 - 1. Ingesta
 - 2. Move and Transform Activities
 - Cliente_Copy_Cliente_Excel_ASQL
- Dataset
 - 1. Ingesta
 - ADLS_Lego_Themes
 - HTTP_Lego_Themes
 - 2. Move and transform Activities
 - ADLS_DataLakeUdemyLaboratorio_Cliente
 - ASQL_DB_Curso_ADF_Cliente
- Data flows
- Power Query

Activities

- Move & transform
 - Copy data
 - Data flow
- Azure Data Explorer
- Azure Function
- Batch Service
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

Copy data

Copy_Cliente_Excel_ASQL

General Source Sink Mapping Settings User properties

Source dataset * ADLS_DataLakeUdemyLaboratorio_C...

File path type ☒ File path in dataset ☐ Wildcard file path ☐ List of files

Filter by last modified

Start time (UTC) End time (UTC)

Recursively ☒

Enable partition discovery ☐

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Data Factory | Validate all | Publish all

Factory Resources

Filter resources by name

- Pipeline (2)
 - 1. Ingesta (1)
 - 2. Move and Transform Activities (1)
 - Cliente_Copy_Cliente_Excel_ASQL
- Dataset (4)
 - 1. Ingesta (2)
 - ADLS_Lego_Themes
 - HTTP_Lego_Themes
 - 2. Move and transform Activities (2)
 - ADLS_DataLakeUdemyLaboratorio_Cliente
 - ASQL_DB_Curso_ADF_Cliente
- Data flows (0)
- Power Query (0)

Activities

Search activities

- Move & transform
 - Copy data
 - Data flow
- Azure Data Explorer
- Azure Function
- Batch Service
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

Copy data

Copy_Cliente_Excel_ASQL

General | Source | Sink | Mapping | Settings | User properties

Sink dataset * ASQL_DB_Curso_ADF_Cliente

Open + New Learn more

Stored procedure name Select... Refresh

Edit

Import parameter

Parameter + New

Table option ☒ None ☐ Auto create table

Pre-copy script

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Data Factory | Validate all | Publish all

Factory Resources

Filter resources by name

- Pipeline (2)
 - 1. Ingesta (1)
 - Lego_Copy_Themes_HTTP_ADLS
 - 2. Move and Transform Activities (1)
 - Cliente_Copy_Cliente_Excel_ASQL
- Dataset (4)
 - 1. Ingesta (2)
 - ADLS_Lego_Themes
 - HTTP_Lego_Themes
 - 2. Move and transform Activities (2)
 - ADLS_DataLakeUdemyLaboratorio_Cliente
 - ASQL_DB_Curso_ADF_Cliente
- Data flows (0)
- Power Query (0)

Activities

Search activities

- Move & transform
 - Copy data
 - Data flow
- Azure Data Explorer
- Azure Function
- Batch Service
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

Copy data

Copy_Cliente_Excel_ASQL

General | Source | Sink | Mapping | Settings | User properties

Type conversion settings

Import schemas Preview source + New mapping Clear Reset Delete

Add Semantic content [Alt+Shift+D]

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Data Factory | Validate all | Publish all 1

Cliente_Copy_Clien...

Activities

- Move & transform
 - Copy data
 - Data flow
- Azure Data Explorer
- Azure Function
- Expand resources pane
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

General Source Sink **Mapping** Settings User properties

Type conversion settings

Import schemas Preview source + New mapping Clear Reset Delete

Source	Type	Destination	Type
Select or edit column		nombreEmpresa	varchar
✖ Mapping source is empty.			
Select or edit column		nombreCliente	varchar
✖ Mapping source is empty.			
Select or edit column		tipoCliente	varchar
✖ Mapping source is empty.			
Linea	String	Linea	varchar

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Data Factory | Validate all | Publish all 1

Cliente_Copy_Clien...

Activities

- Move & transform
 - Copy data
 - Data flow
- Azure Data Explorer
- Azure Function
- Batch Service
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

General Source Sink **Mapping** Settings User properties

Nombre Empresa	String	nombreEmpresa	varchar
Nombre Cliente	String	nombreCliente	varchar
Tipo Cliente	String	tipoCliente	varchar
Linea	String	Linea	varchar
Nro Celular	String	NroCelular	varchar
Monto	String	Monto	money
Precision: 19 Scale: 4			
<input type="checkbox"/> Fecha Contratacion	String	fechaContratacion	date
⚠ Copying from column Fecha Contratacion to column fechaContratacion may have data truncation.			
Tipo Servicio	String	tipoServicio	varchar

Add dynamic content [Alt+Shift+D]

Validamos, publicamos y luego ejecutamos

The screenshot shows the Microsoft Azure Data Factory interface. In the top right, the user is logged in as 'yanpierr.donayre75@gmail.com'. The main area displays a pipeline named 'Cliente_Copy_Clien...'. The 'Activities' pane on the left shows 'Copy data' and 'Data flow'. The 'Mapping' tab is selected, showing a table with columns: 'Nombre Empresa', 'Nombre Cliente', 'Tipo Cliente', 'Linea', 'Nro Celular', and 'Monto'. The 'Mapping' tab shows the data flow from the source to the sink, with columns mapped to their respective data types (String, Varchar, Money).

Activities:

- Move & transform
- Copy data
- Data flow
- Azure Data Explorer
- Azure Function
- Batch Service
- Databricks
- Data Lake Analytics
- General
- HDInsight
- Iteration & conditionals
- Machine Learning
- Power Query

Mapping:

Source	String	Sink	Mapping	Destination	Money
Nombre Empresa		nombreEmpresa		varchar	
Nombre Cliente		nombreCliente		varchar	
Tipo Cliente		tipoCliente		varchar	
Linea		Linea		varchar	
Nro Celular		NroCelular		varchar	
Monto		Monto		money	

Trigger now: Trigger on-demand run of the last published pipeline

The screenshot shows the Microsoft SQL Server Management Studio interface. The query executed is:

```
GO
CREATE TABLE Cliente(
    nombreEmpresa VARCHAR(100),
    nombreCliente VARCHAR(100),
    tipoCliente VARCHAR(30),
    Linea VARCHAR(20),
    NroCelular VARCHAR(9),
    Monto MONEY,
    fechaContratacion DATE,
    tipoServicio VARCHAR(30)
)
GO

SELECT * FROM Cliente
```

The query executed successfully, returning 10 rows of data. The results are displayed in a table with columns: nombreEmpresa, nombreCliente, tipoCliente, Linea, NroCelular, Monto, fechaContratacion, and tipoServicio.

	nombreEmpresa	nombreCliente	tipoCliente	Linea	NroCelular	Monto	fechaContratacion	tipoServicio
5746	Bitel	COMERCIAL Y DISTRIB...	Empresa	Postpago	956243357	39.90	2021-01-12	Migracion
5747	Movistar	COMERCIAL Y REPRES...	Empresa	Postpago	956243358	89.90	2020-12-05	Migracion
5748	Entel	COMERCIAL YATACO R...	Empresa	Postpago	956243359	49.90	2021-01-18	Portabilidad
5749	Bitel	COMERCIAL YUTOHI E.I...	Empresa	Postpago	956243360	39.90	2020-12-30	Migracion
5750	Movistar	COMERCIAL ZEGARRA ...	Empresa	Postpago	956243361	39.90	2020-12-30	Migracion
5751	Entel	COMERCIALIZ DERIVAD...	Empresa	Postpago	956243362	49.90	2020-12-01	Migracion
5752	Entel	COMERCIALIZACIONES ...	Empresa	Postpago	956243363	69.90	2021-01-26	Portabilidad
5753	Claro	COMERCIALIZADORA C...	Empresa	Postpago	956243364	49.90	2021-01-07	Migracion
5754	Entel	COMERCIALIZADORA D...	Empresa	Postpago	956243365	39.90	2020-12-01	Portabilidad
5755	Entel	COMERCIALIZADORA D...	Empresa	Postpago	956243366	79.90	2021-02-02	Nuevo Usuario
5756	Claro	COMERCIALIZADORA D...	Empresa	Postpago	956243367	59.90	2020-11-09	Migracion

Query executed successfully. azure-adf.database.windows... adminadf (93) DB-curso-adf 00:00:02 5,756 rows