

Incremental Load Pipeline in Azure Data Factory

1. Created SQL Tables with Watermark Column

In both SourceDB and DestinationDB:

sql

CopyEdit

CREATE TABLE Customers (

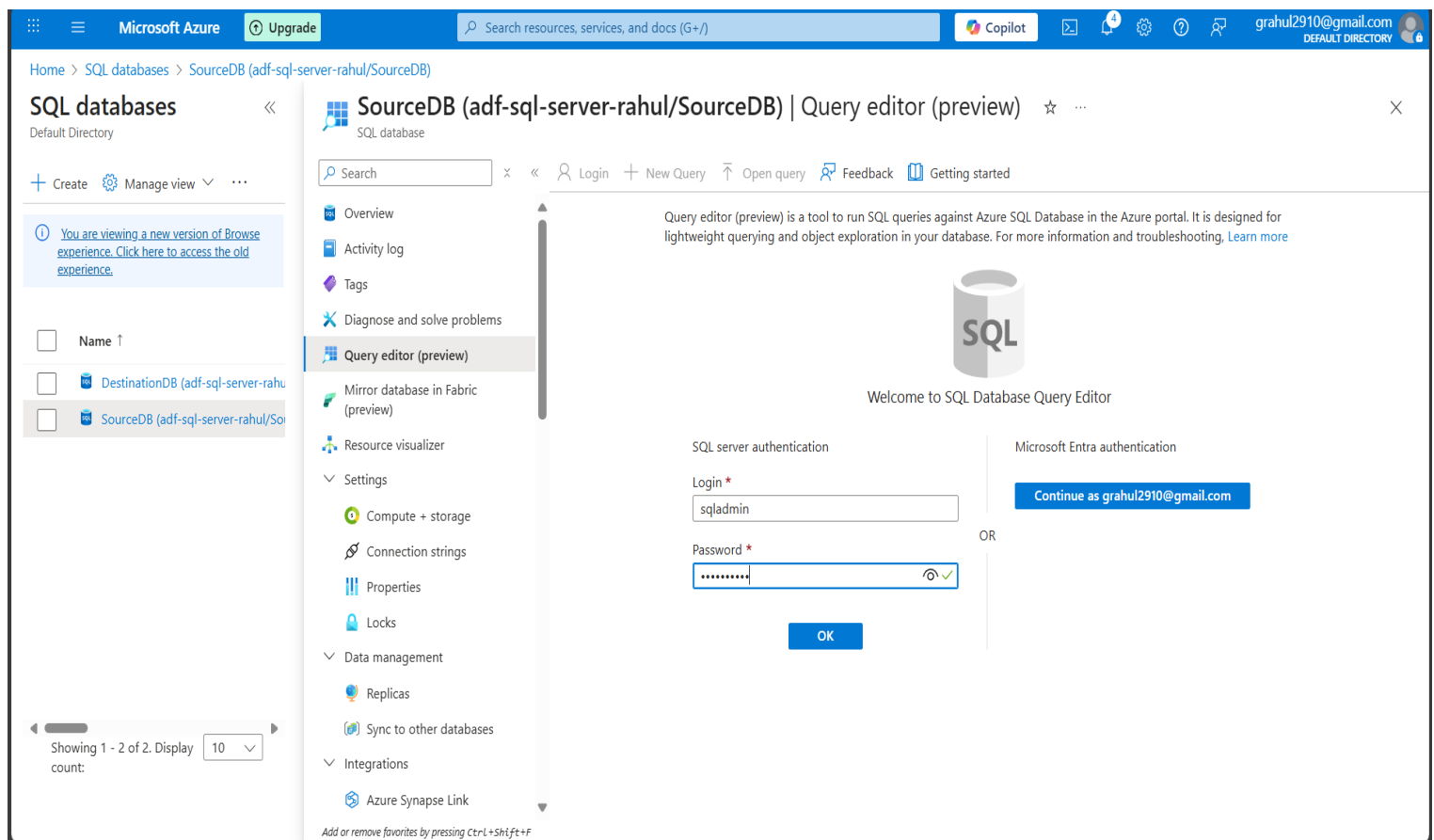
CustomerID INT PRIMARY KEY,

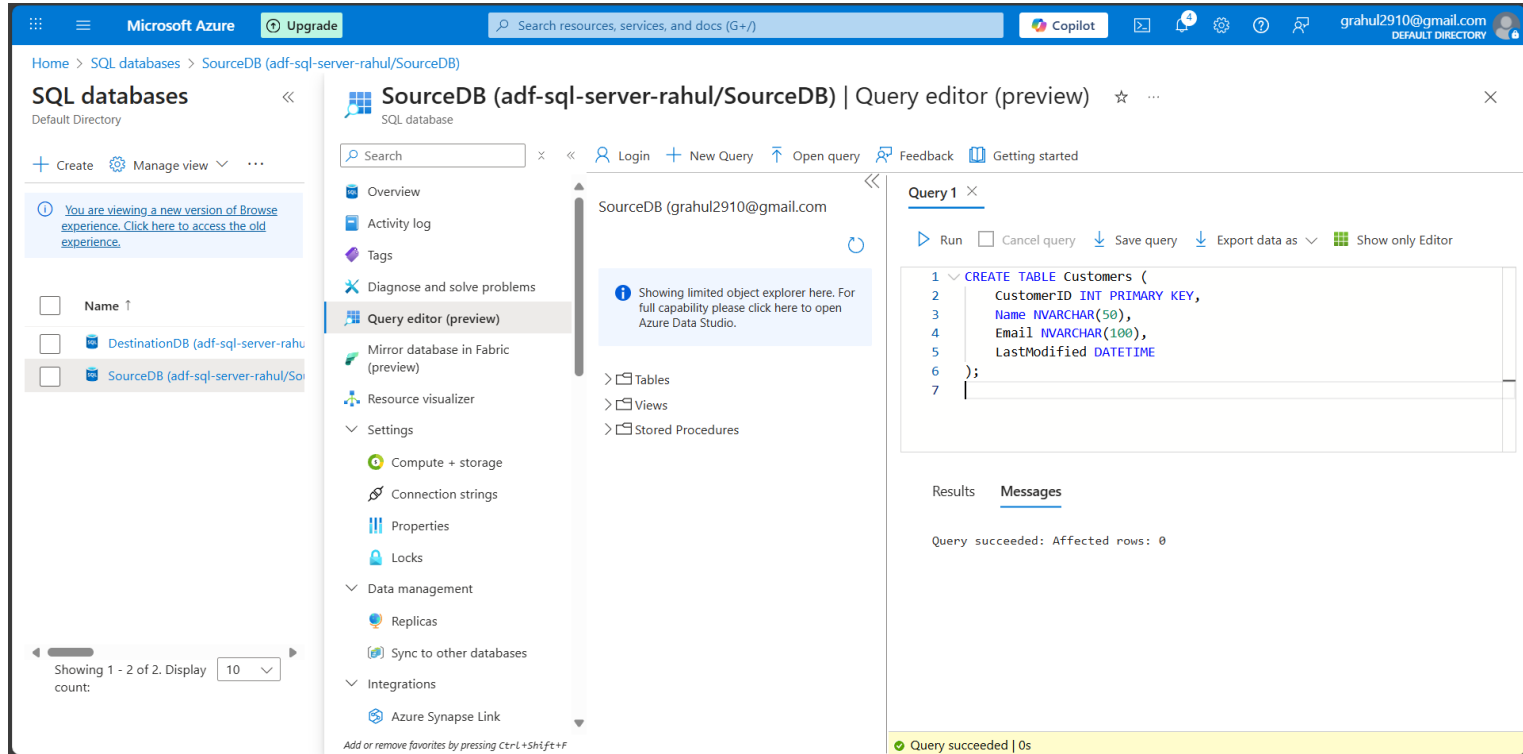
Name NVARCHAR(50),

Email NVARCHAR(100),

LastModified DATETIME

);





2. Inserted Initial Sample Data into SourceDB

sql

CopyEdit

INSERT INTO Customers (CustomerID, Name, Email, LastModified)

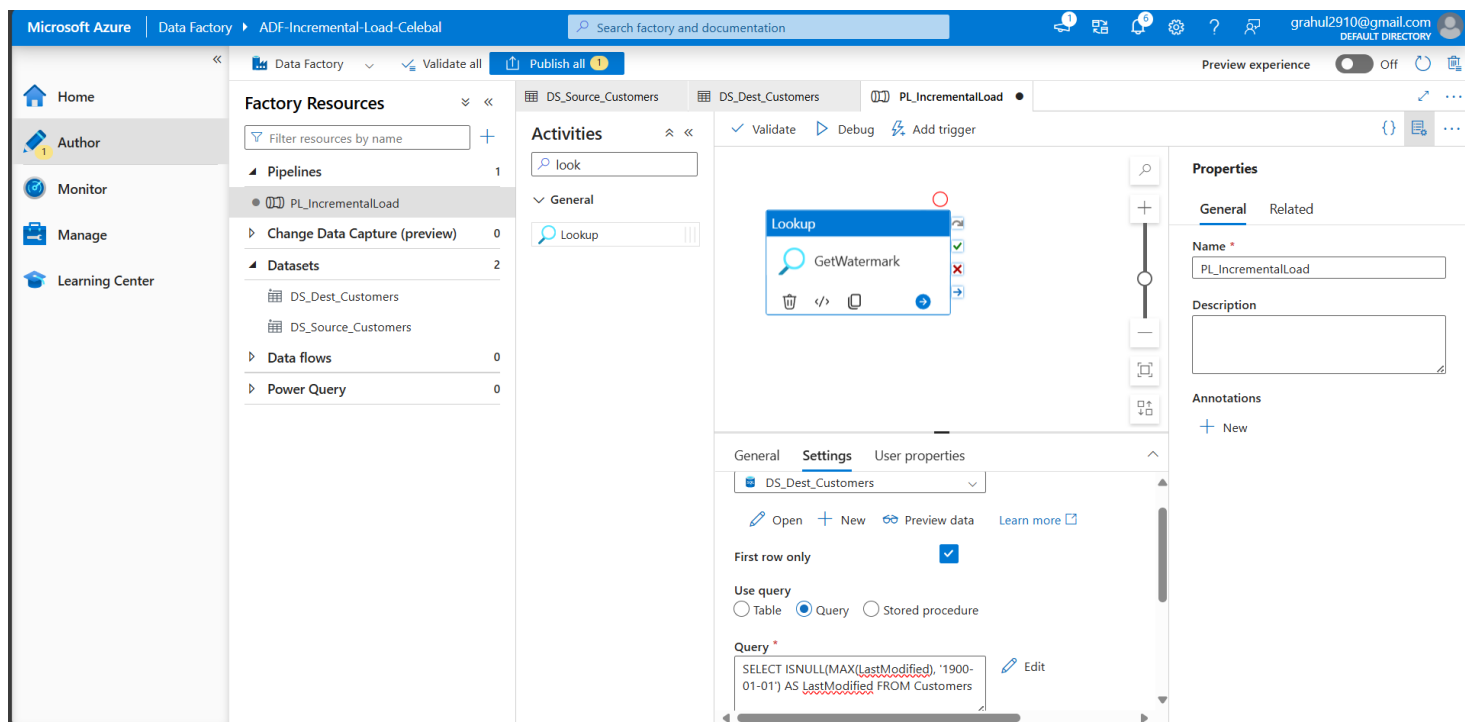
VALUES

(1, 'Rahul Sharma', 'rahul@example.com', GETDATE()),

(101, 'New User', 'newuser@example.com', GETDATE());

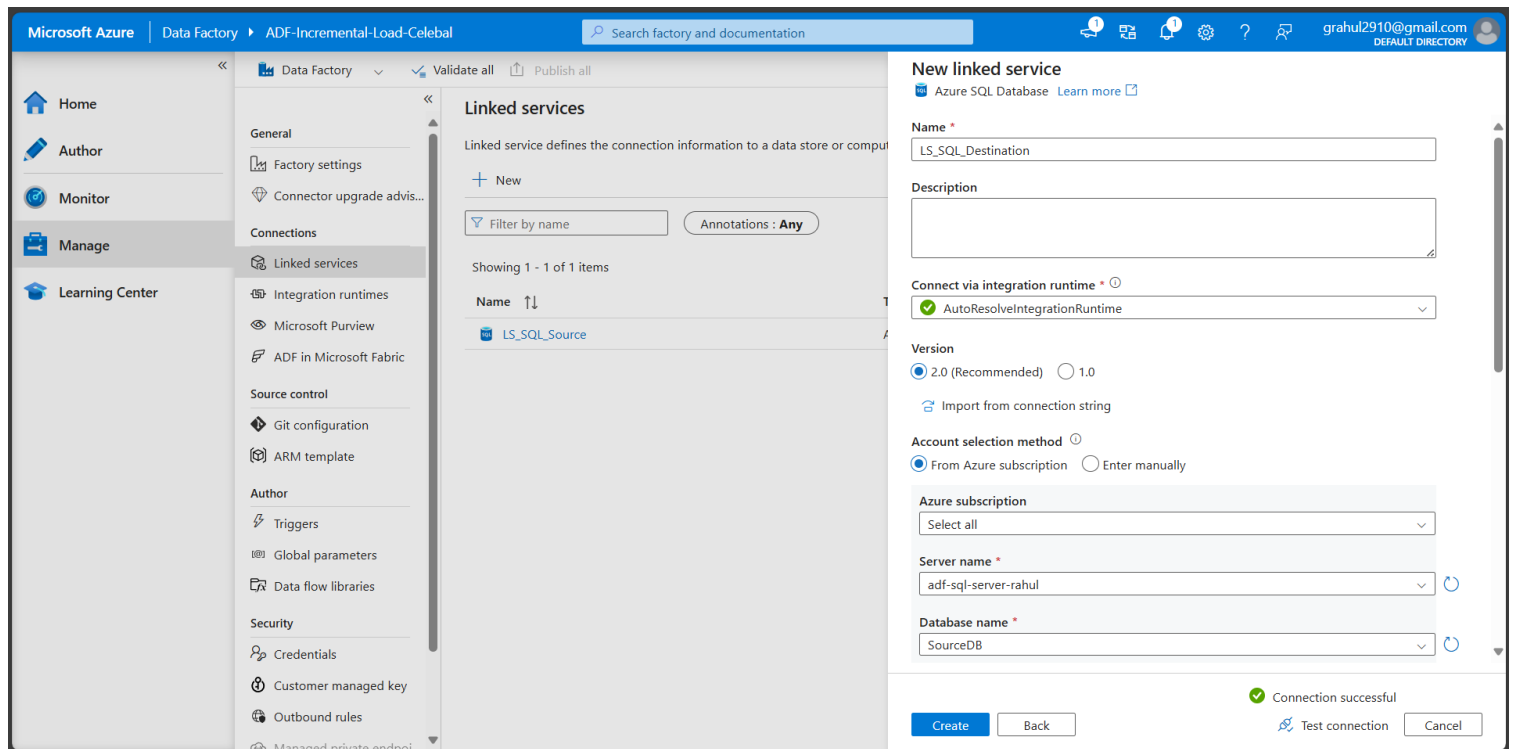
3. Launched ADF Studio and Created the Pipeline

- Pipeline Name: PL_IncrementalLoad



4. Created Linked Services

- LS_SQL_Source → Connected to SourceDB
- LS_SQL_Destination → Connected to DestinationDB



5. Created Datasets

- DS_Source_Customers → Table: Customers, from LS_SQL_Source
- DS_Dest_Customers → Table: Customers, from LS_SQL_Destination

6. Added Lookup Activity: GetWatermark

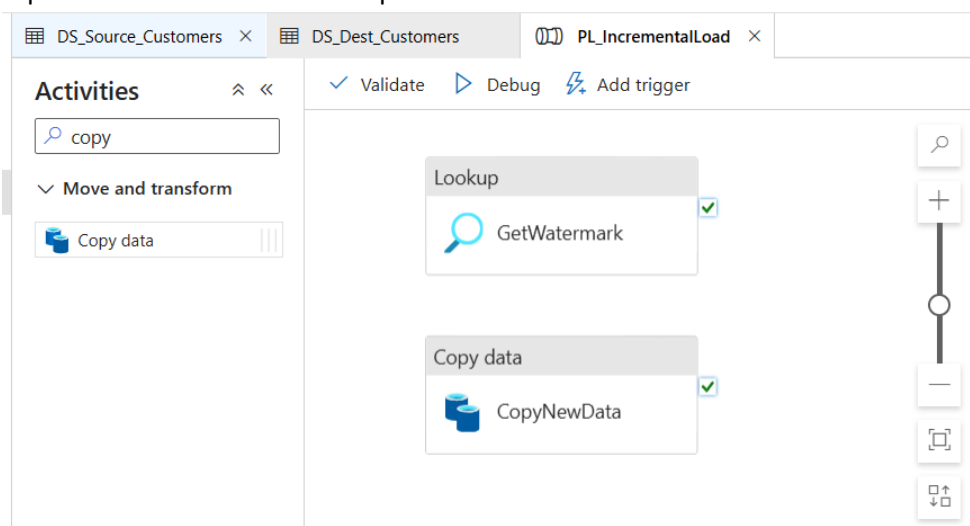
- SQL Query:

sql

CopyEdit

SELECT ISNULL(MAX>LastModified), '1900-01-01') AS LastModified FROM Customers

- Purpose: Get the latest timestamp from destination table to use as a watermark



7. Added Copy Data Activity: CopyNewData

- Source:
 - Use query:

sql

CopyEdit

```
SELECT * FROM Customers
```

```
WHERE LastModified > '{@activity('GetWatermark').output.firstRow.LastModified}'
```

- Sink:
 - Dataset: DS_Dest_Customers
 - Write Behavior: Upsert
 - Key Column: CustomerID

8. Created a Scheduled Trigger

- Type: Recurring (every 1 day)
- Attached to pipeline PL_IncrementalLoad

New trigger

Name *

trigger1

Description

Type *

Schedule

Start date * ⓘ

7/11/2025, 10:54:39 AM

Time zone * ⓘ

Chennai, Kolkata, Mumbai, New Delhi (UTC+5:30)

Recurrence * ⓘ

Every 1 Day(s)

Advanced recurrence options

Execute at these times ⓘ

Hours

Minutes

Schedule execution times

10:54

☐ Specify an end date

OK

Cancel

9. Verified the Pipeline

Collapse table of contents

Pipeline runs

Triggered

Debug

Rerun

Cancel options

Refresh

Edit columns

List

Gantt

Filter by run ID or name

Chennai, Kolkata, Mu... : Last 24 hours

Pipeline name : All

Status : All

Copy filters

Export to CSV

Add filter

Showing 1 - 4 items

Last refreshed 0 minutes ago

| <input type="checkbox"/> | Pipeline name ↑↓ | Run start ↑↓ | Run end ↑↓ | Duration | Status ↑↓ | Triggered by | Run ID | Para |
|--------------------------|--------------------|--------------------|--------------------|----------|-------------|----------------|-----------------------|------|
| <input type="checkbox"/> | PL_IncrementalLoad | 7/11/2025, 9:15:49 | 7/11/2025, 9:16:12 | 24s | ✓ Succeeded | Manual trigger | 6bf5e78e-451e-4173... | |
| <input type="checkbox"/> | PL_IncrementalLoad | 7/11/2025, 9:03:19 | 7/11/2025, 9:03:42 | 24s | ✓ Succeeded | Manual trigger | d224c3d4-89f1-4259... | |

Search resources, services, and docs (G+)

Copilot

grahul2910@gmail.com

DEFAULT DIRECTORY

sql-server-rahul/DestinationDB)

DestinationDB (adf-sql-server-rahul/DestinationDB) | Query editor (preview)

Search

Login

New Query

Open query

Feedback

Getting started

Overview

Activity log

Tags

Diagnose and solve problems

Query editor (preview)

Mirror database in Fabric (preview)

Resource visualizer

Settings

Compute + storage

Connection strings

Properties

Locks

Data management

Replicas

Sync to other databases

Integrations

Azure Synapse Link

DestinationDB (grahul2910@gmail.com)

Showing limited object explorer here. For full capability please click here to open Azure Data Studio.

Tables

Views

Stored Procedures

Query 1

Run

Cancel query

Save query

Export data as

Show only Editor

```
1 SELECT * FROM Customers ORDER BY LastModified DESC;
2
```

Results

Messages

Search to filter items...

| CustomerID | Name | Email | LastModified |
|------------|----------------------|----------------------|---------------------|
| 1 | Rahul Sharma Updated | rahul@example.com | 2025-07-11T15:45:38 |
| 102 | Aarav Mehta | aarav@example.com | 2025-07-11T15:45:03 |
| 101 | New User | newuser@example.c... | 2025-07-11T11:09:07 |
| 2 | Neha Verma | neha@example.com | 2025-07-11T09:53:21 |
| 3 | Amit Singh | amit@example.com | 2025-07-11T09:23:21 |

Query succeeded | 0s