

Architecture diagram for pipeline

The overview of the process is

1. Linked Service & Blob Account (Source)

Linked Service: Acts as a connection configuration in Azure Data Factory (ADF) to external sources like Azure Blob Storage.

Blob Account: Contains the source files (sales_data.csv, product_master.csv) in a specific container or folder.

ADF uses this linked service to read the files during ingestion.

2. Scheduled Trigger

Purpose: Automates the pipeline execution.

Set to run daily, hourly, or on a specific schedule.

3. Ingest CSV Files from Blob Storage

Uses Copy Activity to move or load the raw CSV files from Blob Storage to:

Staging Layer in Azure Data Lake

Or directly into Azure SQL DB for small datasets

This step ensures data is available for transformation and analysis.

4. Data Cleaning & Transformation (ADF Data Flow / Azure Databricks)

This is the heart of the processing logic.

ADF Data Flow (No-code) or Databricks Notebook (Code-based, scalable)

5. Store Results in Data Lake / Azure SQL DB

Store processed output in:

A curated layer in Azure Data Lake Storage (ADLS) (for downstream analytics)

Or in Azure SQL Database (for dashboarding with Power BI)

Files can be saved as CSV, or table records.

6. Monitoring, Logging & Alerts

Built-in ADF Monitoring dashboard shows run status, duration, errors.

This is simple Architecture diagram

[Scheduled Trigger]

[Ingest CSV Files from Blob Storage]

[Data Cleaning & Transformation (Data Flow / Databricks)]

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[Generate Aggregates and Summary Reports]

[Store Results in Data Lake / Azure SQL DB]

[Monitoring, Logging & Alerts]