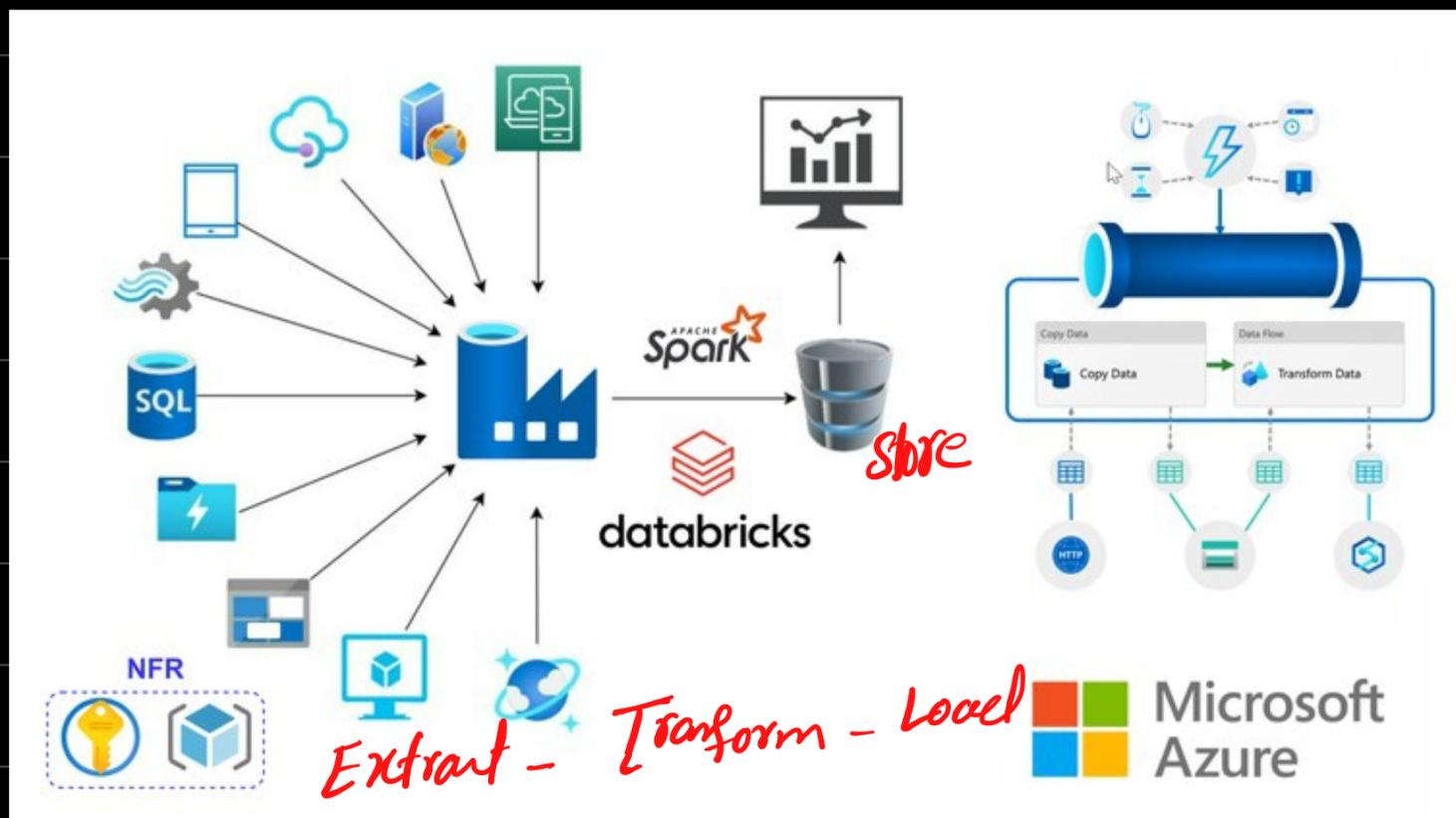


Data Integration with Microsoft Azure Data Factory :-

- Create data pipeline
- Azure Synapse Pipeline
- Data Ingest Method
- Data transform
- Data movement.
- SQL Server Integrate.

ETL = Perform ETL by Data factory.

- Around 100 connector.



when we have large data then we use ELT and apply simple query.

Two type Data Integration:-

- modern Data warehouse workload
- Advance Analytical workload.

Data factory Process:-



• Linked Service

Used to connect external source in Data factory.

ADF → Linked Service → Power BI
(Trigger).

Execution of data pipeline called Trigger.

- Event base

- Scheduled base

-

Component

= Pipeline, trigger, linked service

Orchestration:-

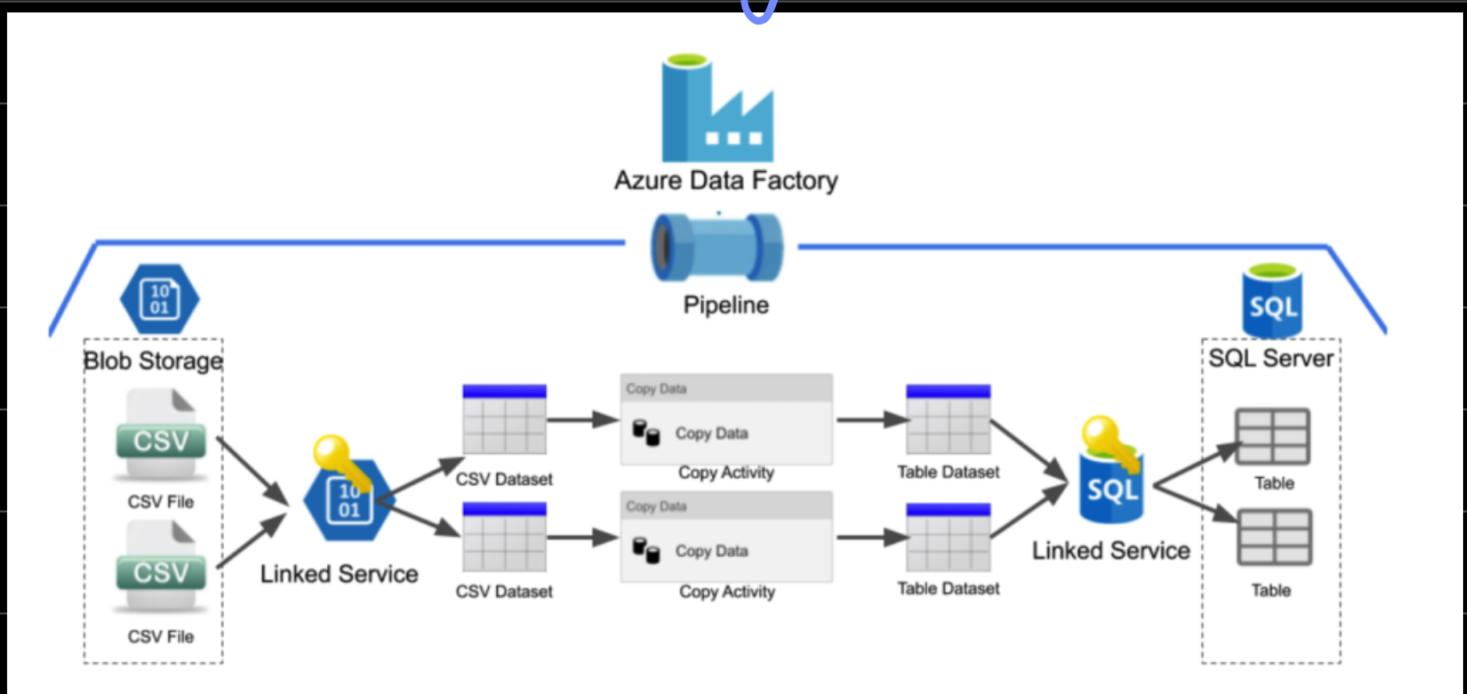
- Code free data pipeline.

= ADF have Native functionality to ingest data.

Data Factory Setup:- Login -----

Source and sink link used to join two sources.

Source → Factory → Destination.



Data Ingestion Methods:- ③

- ✓ Copy activity — no need to transform.
- ✓ SSIS - (Sql Server Integration Service)
- ✓ Compute Resource — For data transformation.

Connectors:-

- around 100 , cloud, Amazon relational & non-relational, Files.

Integration Runtime:-

provide bridge between activity and Linked Service.

- Cloud base , self hosted , SSIS IR

Data Ingestion Security

NSG-on virtual network.

Azure Data Factory Transformation
method

clean, aggregate, delete, filter, debug - Integrate data.

= { SSIS Transformation }
= { Mapping data flow }

Mapping (data flow)

Mapping data flow do transformation without coding.

- joins, operations.....

★ synapse Analytic Pipeline
Slowly changing Dimension.

It used when values changed slowly without setting up scheduled.

Change in table data

Track the change.

= Fact and dimension Table

Pipeline



ADF Triggers:

- Scheduled trigger
- Event Trigger
- Tumbling window

Trigger (

Activity

- Data movement
- Data Transform
- Control Flow

Activity (A) - - - -> Activity (B)

- Debug Pipeline

Parametrized linked service-

global parameter for streaming.
Data flow.

linked service define connection information
to a data set.

★Debug Data Pipeline

when click on debug data pipeline.

the debug mode on and Run data pipeline also.

- Pipeline
- debug
- Linked Service
- Publish and run pipeline.

★ SSIS to Azure cloud.

- SSIS used to create ETL solution..
 - Migration Project.
- = Azure SSIS Integration Runtime
- = SSIS Package.

SSIS in SQL Server, create data pipeline to handle on-premises data warehouse.



on-premises SSIS workloads to Azure cloud.
lift and shift.

★ ADF Data Integration Solution

- ADF provide Data pipeline monitor:-



Create Pipeline Alerts:-

Add email to get Notification.



Ingest data Azure Data share to ADF.

- Azure data share work with ADF.
- Share and receive data.

data source + data set = linked service

Ingest data to gen 2.

Simple Aggregate Data Flow

