Azure Data Factory (ADF) V2

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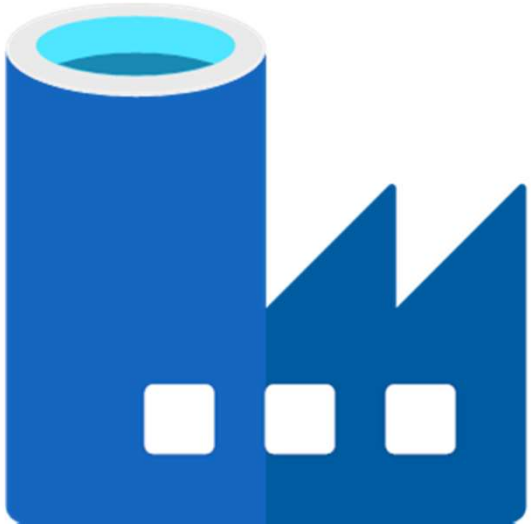
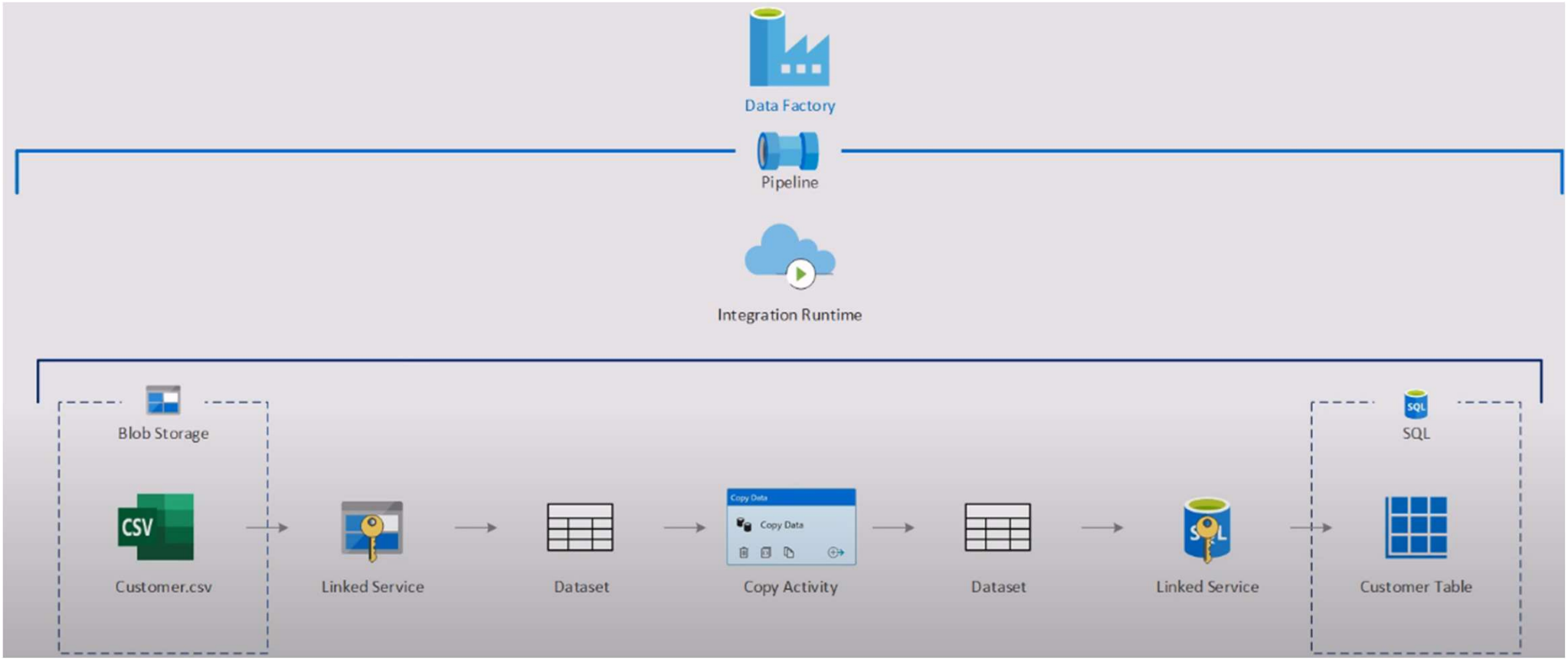
- A powerful Cloud ETL tool
- ETL/ELT tool.
- Allow developers to integrate disparate data sources
- Provides access to
  - On-premises
  - Cloud data



Azure Data Factory

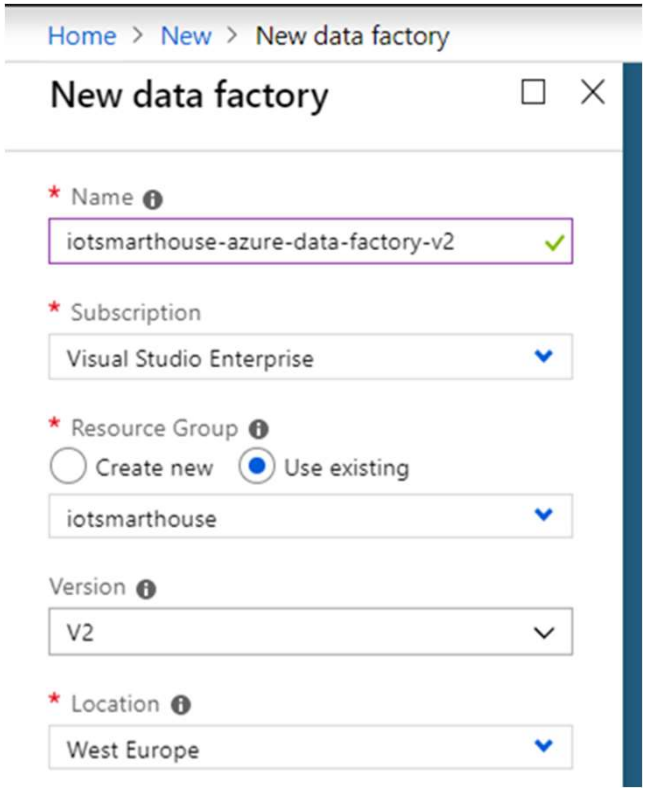


ADF allows you to..

Move data	• From on-premises and cloud sources to a centralized data store
Transform and integrate	• Big data processing and machine learning
Has visual interface.	
Invoke pipelines with	• Manual • Event • Scheduling

Hands-On: Create Azure Data Factory

- First, you do not install it, you create a service in Azure by:
  - New -> Analytics -> Data Factory
- Then, you need to set the
  - name,
  - select your subscription,
  - resource group,
  - version (1 or 2) and
  - location.



What ADF can do

Data Pipelines	• Create • Schedule • Monitor
Accelerate	• Data integration with multiple native data connectors.
Modernize	• Data warehouse with big data integration.
Orchestrate	• Data integration workflows wherever your data lives.

How ADF works

Connect and Collect	• Connecting various data sources and copying into a centralized location.
Transform and enrich	• Process or transform centralized data by using compute services such as HDInsight Hadoop, Spark, Data Lake Analytics, and Machine Learning.
Publish	• After the data convert into a actionable form, then load data into analytic engine where business intelligence tools can access.
Monitor	• After deploying the pipeline it is important to monitor the scheduled activities and pipelines for success and failure rates • ADF has build in support for pipeline monitoring.

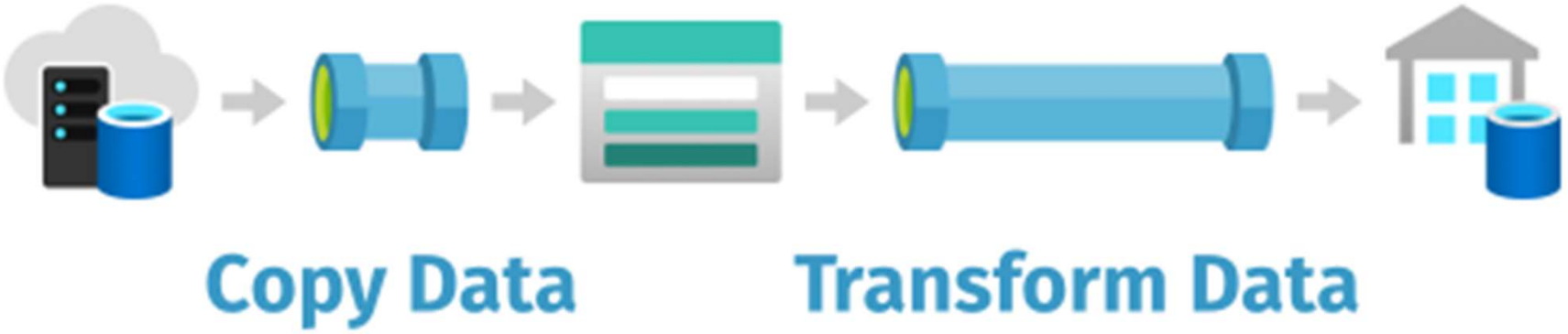
ADF concepts

- Pipeline
- Activity
- Datasets
- Linked services
- Triggers
- Pipeline runs
- Parameters
- Control Flow
- Variables

Hands-On: Explore Azure Data Factory

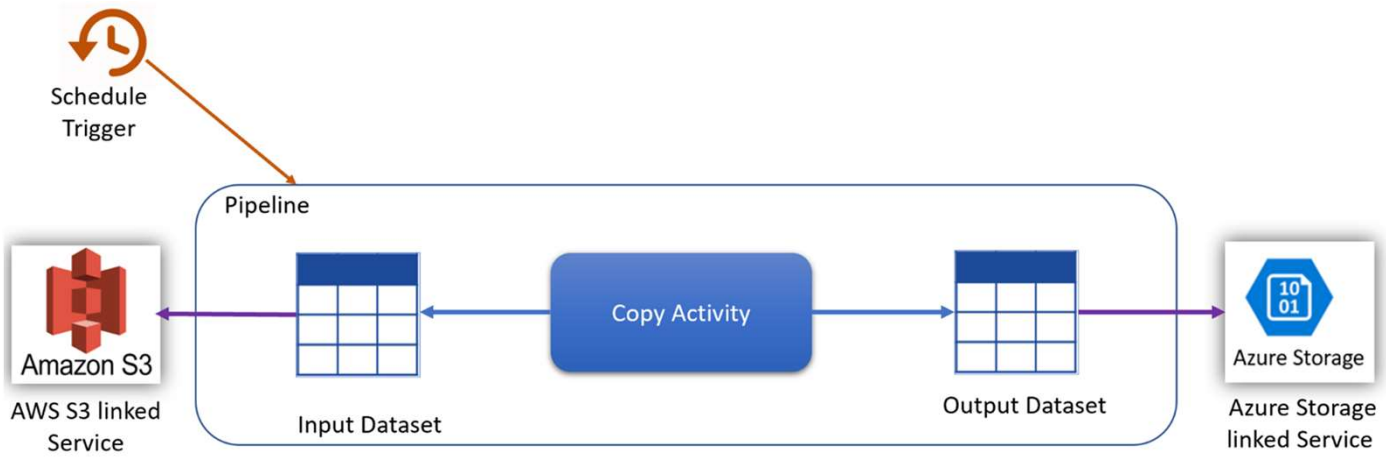
Pipeline

- Logical grouping of activities that performs a unit of work
- Together, the activities in a pipeline perform a task
- For example
  - A pipeline can contain a group of activities that ingests data from an Azure blob, and
  - Then runs a Hive query on an HDInsight cluster to partition the data.



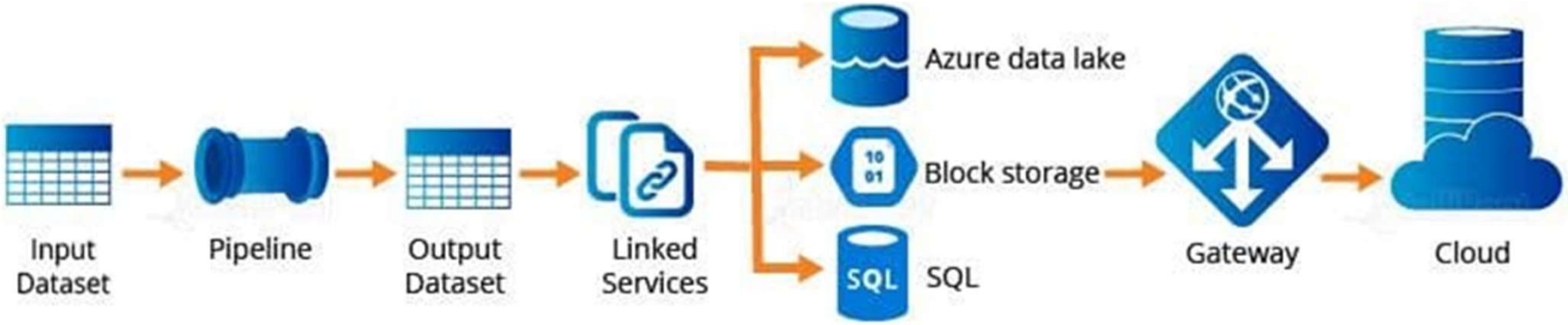
Activity

- Represent a processing step in a pipeline
- Example: Use a copy activity to copy data from one data store to another data store
- Data Factory supports three types of activities
  - Data movement
  - Data transformation
  - Control activities



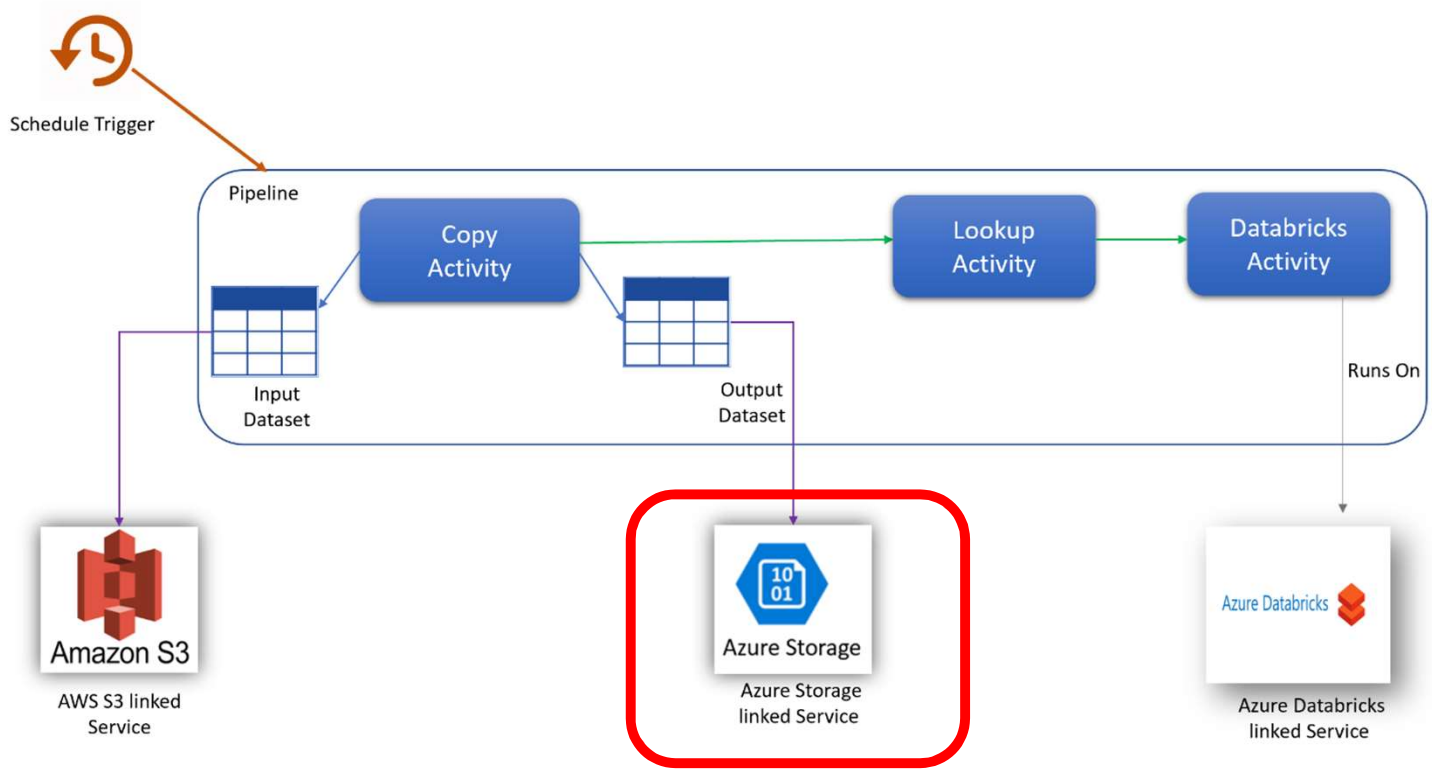
Datasets

- Represent data structures within the data stores
- It simply point to or reference the data you want to use in your activities as inputs or outputs.



Linked services

- Are much like connection strings, which define the connection information
- It's needed for Data Factory to connect to external resources

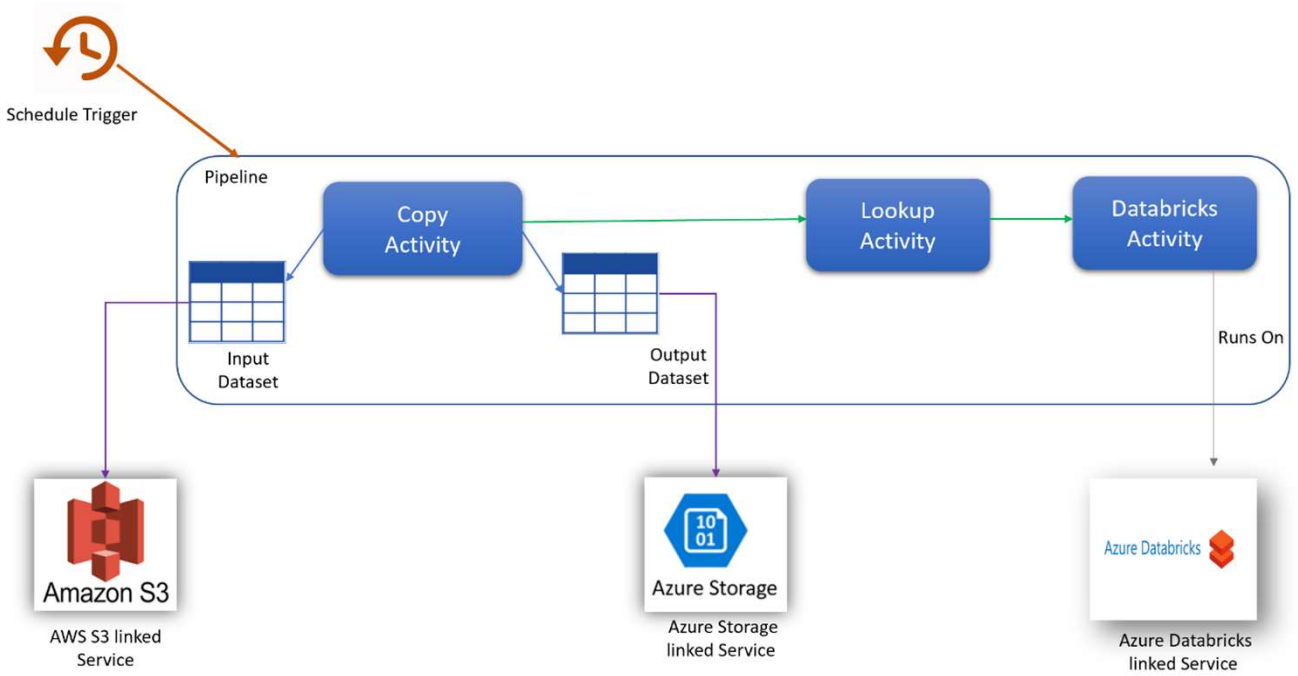


Hands-On: Explore Azure Data Factory

- Explore Azure Data Factory

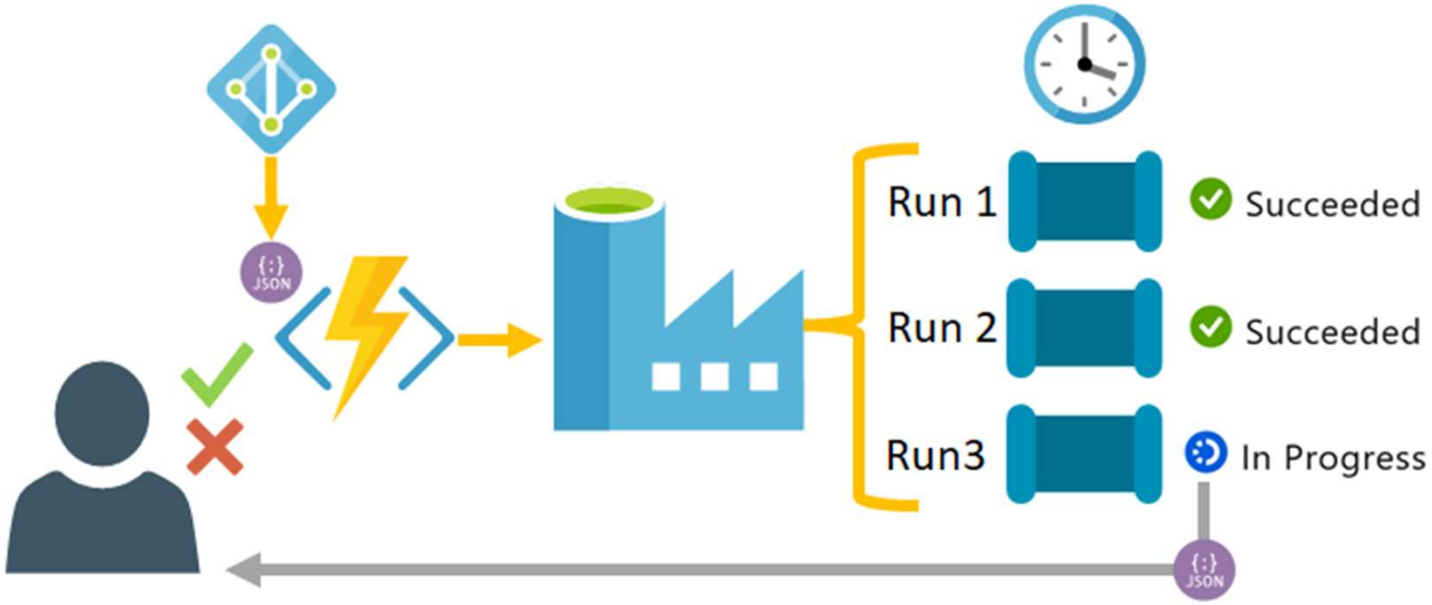
Triggers

- Triggers represent the unit of processing that determines when a pipeline execution needs to be kicked off
- There are different types of triggers for different types of events.



Pipeline runs

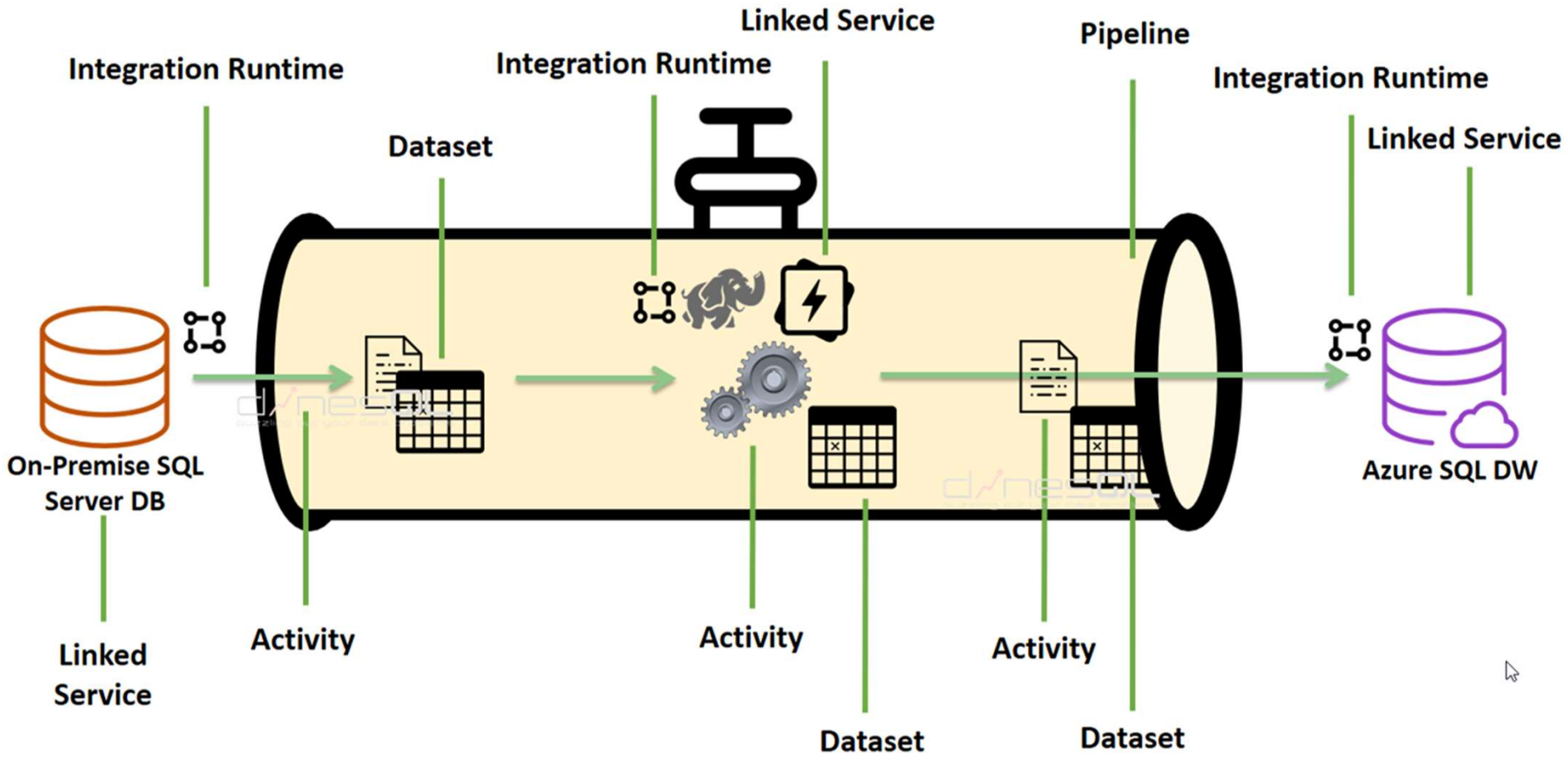
- An instance of the pipeline execution
- Pipeline runs are typically instantiated by passing the arguments to the parameters that are defined in pipelines
- The arguments can be passed manually or within the trigger definition.



Hands-On: Create a Pipeline and Run it

- Create a Pipeline and Run it

How Azure Data Factory Works?




thanks