



#### Chicago Data Professionals

# **Azure Data Factory for everyone**

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Slideshare & GitHub Repo

<u>alpaBuddhabhatti/ChicagoDataProfessionals-</u> <u>AzureDataFactory (github.com)</u>





Microsoft Certified: Azure Data Engineer Associate



Microsoft Certified: Azure Data Scientist Associate

Microsoft



Microsoft Certified: Azure Developer Associate

Microsoft



#### Agenda

- 1. Azure Data Factory (ADF) Overview
  - 1.1 What is Azure Data Factory?
  - 1.2 What are Key Components of Azure Data Factory?
  - 1.3 What can you do in ADF?
  - 1.4 How Azure Data Factory Works?
- 2. **DEMO** -
  - 2.1 ADF Quick Tour !!!
  - 2.2 Data Movement & Data Transformation using ADF



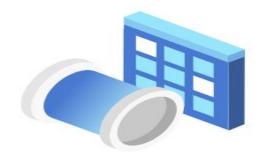
# 1. Azure Data Factory (ADF)

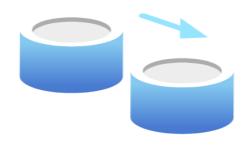


#### What is Azure Data Factory(ADF)?

A cloud-based data integration service that <u>orchestrates</u> and <u>automates</u> the <u>movement</u> and <u>transformation</u> of data.









#### What is Azure Data Factory(ADF)?

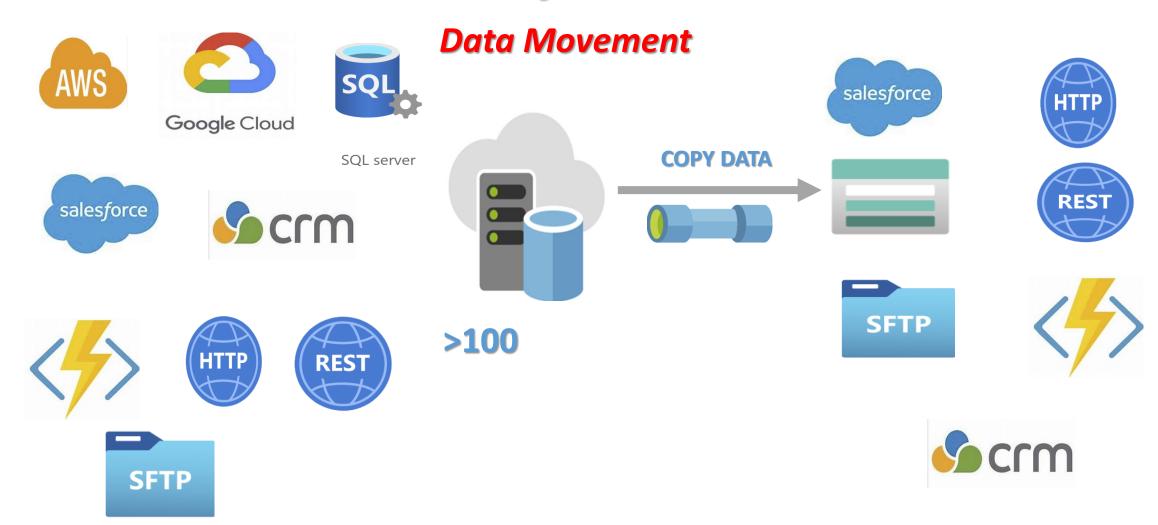
- **✓** Azure Platform as a Service (PaaS)
- **✓ It is Serverless**
- **✓** Only pay for what you have use
- **✓ Low-code and no-code Solutions**



#### What are Key Components of ADF?

- 1 Linked services
- 2 Datasets
- 3 Activities
- 4 Pipelines
- 5 Triggers





**Copy activity - Azure Data Factory & Azure Synapse | Microsoft Docs** 





Snowflake



Azure SQL Database Managed Instance



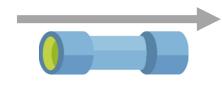
SQL server







**TRANSFORMATION** 









Snowflake



SQL server



Azure SQL Database Managed Instance



~16

<u>Source transformation in mapping data flow - Azure Data Factory & Azure Synapse | Microsoft Docs</u>



✓ Pipelines are JSON, ready for Source Control



- **✓** Git Integration built in
- **✓** Monitor

**✓ Manage** 











**✓ Trigger pipeline** 

**A Specific Time** 

File created or deleted from Blob Storage

**Customer Activity such as** 











service -

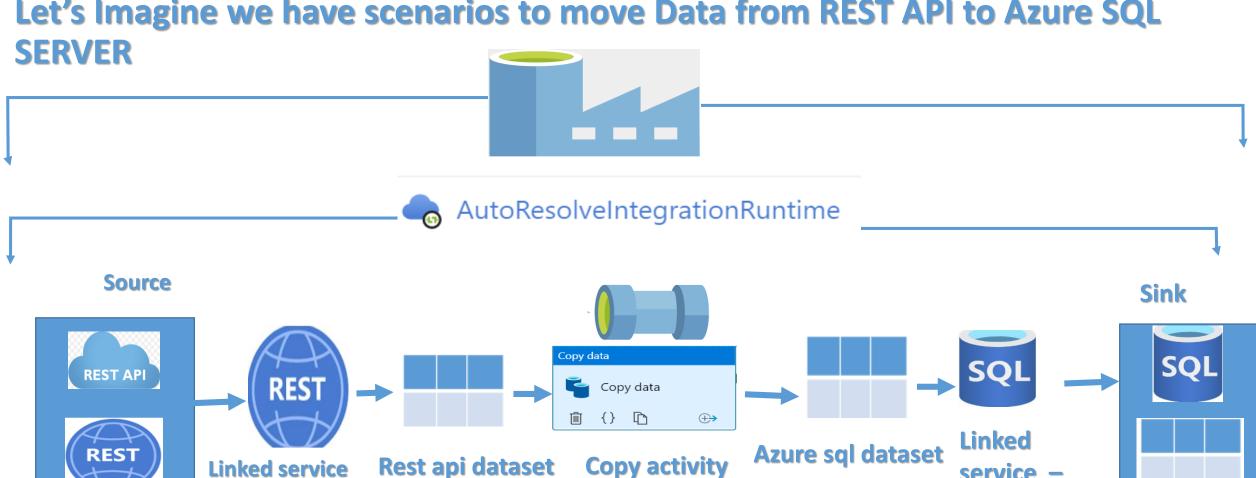
azure sql

#### **How Data Factory Works?**

**Linked service** 

- rest api

Let's Imagine we have scenarios to move Data from REST API to Azure SQL

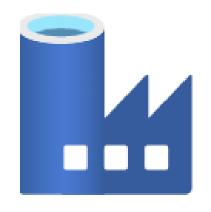




### 2.DEMO



#### **DEMO**



**Lets have a Quick ADF Tour!!!** 

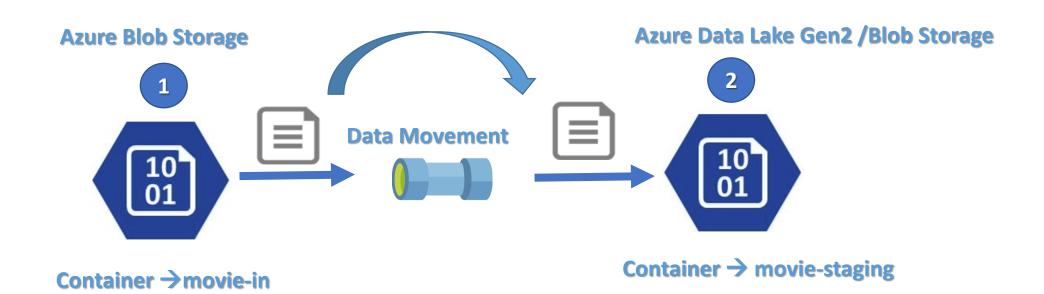
<u>ChicagoDataProfessionals-AzureDataFactory/Azure Data Factory.docx at main · alpaBuddhabhatti/ChicagoDataProfessionals-AzureDataFactory (github.com)</u>



# DEMO Data Movement & Data Transformation using ADF

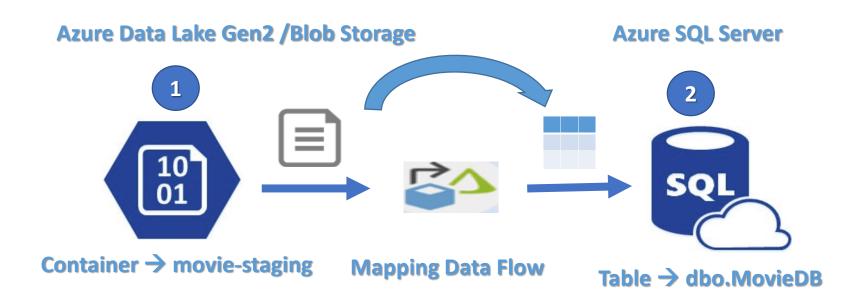


#### Pipeline 1





#### Pipeline 2





#### **DEMO**

#### **Scenarios:**

Moving data from Azure Blob storage to Azure Data Lake Gen2.

Apply Transforming on data using Azure data flow and store to Azure SQL Server.

Following Azure resources needed per environment

- ✓ Azure Resource group
- ✓ Azure Data factory
- **✓ Azure Data Lake**
- ✓ Azure Blob Storage
- **✓ Azure SQL Server**
- **✓ Azure Key Vault**



#### Conclusion

- 1. Quick Overview of Azure Data Factory
- 2. Key Component of Azure Data Factory
- 3. Azure Data Factory Quick Tour!!!
- 4. Data Movement & Data Transformation solution



# Thank you!!!!



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# Questions !!!



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