Azure Data Factory, Azure Logic Apps and Power BI for everyone!!!

Regular 60 minute session

Thu 7th April 06 PM

Alpa Buddhabhatti

- **Senior Azure Consultant @Cluster reply, UK**
- **Speaker @ Events and Conferences**

Your contacts

- Linkedin:
https://www.linkedin.com/in/alpabuddhabhatti/

Your sites

- Slideshare:

Home · alpaBuddhabhatti/PowerBI-UK-User Group Wiki (github.com)

GitHub:

 alpaBuddhabhatti/PowerBI-UK-User Group at ADF (github.com)

Microsoft Certified Trainer 2021-2022
Microsoft

Microsoft Certified: Azure Data Engineer Associate
Microsoft

Microsoft Certified: Azure Data Scientist Associate
Microsoft

Microsoft Certified: Azure Developer Associate
Microsoft

Agenda

1. Azure Data Factory (ADF) Overview
   Demo – ADF Quick Tour !!!

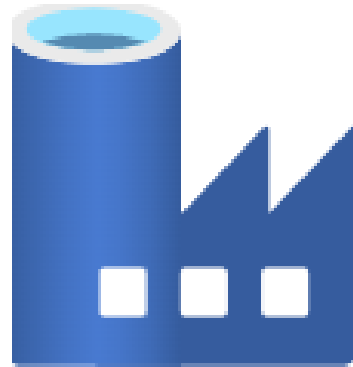2. Azure Logic Apps Overview
   Demo – Azure Logic Apps Tour!!!
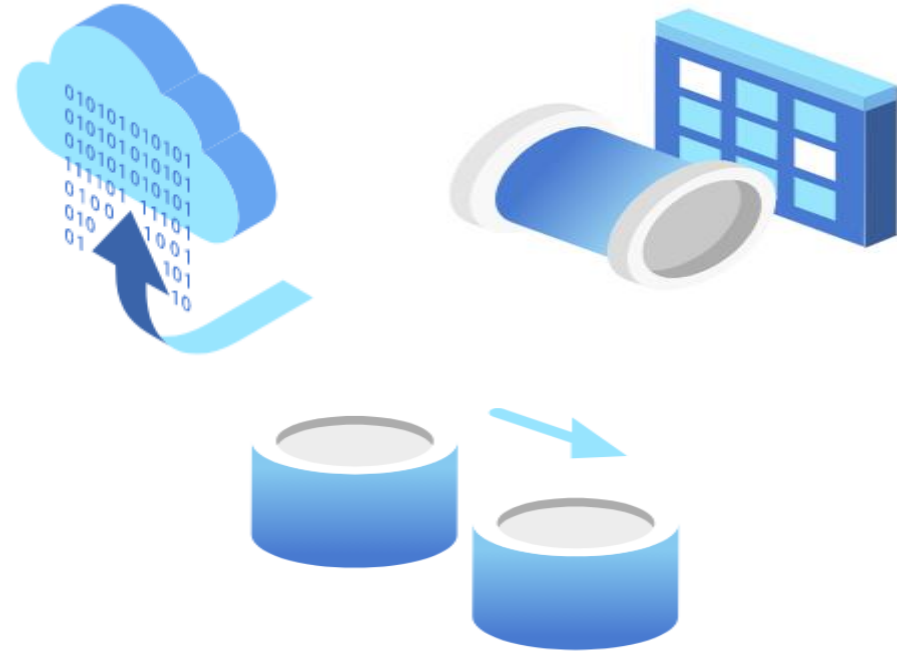
3. Power BI Overview

4. DEMO –
   Refresh Power BI Dataset using Azure Data Factory & Logic Apps

1. Azure Data Factory (ADF)

What is Azure Data Factory(ADF)?

A cloud-based data integration service that orchestrates and automates the movement and transformation of data

What is Azure Data Factory(ADF)?

- ✓ Azure PaaS Service
- ✓ It is Serverless
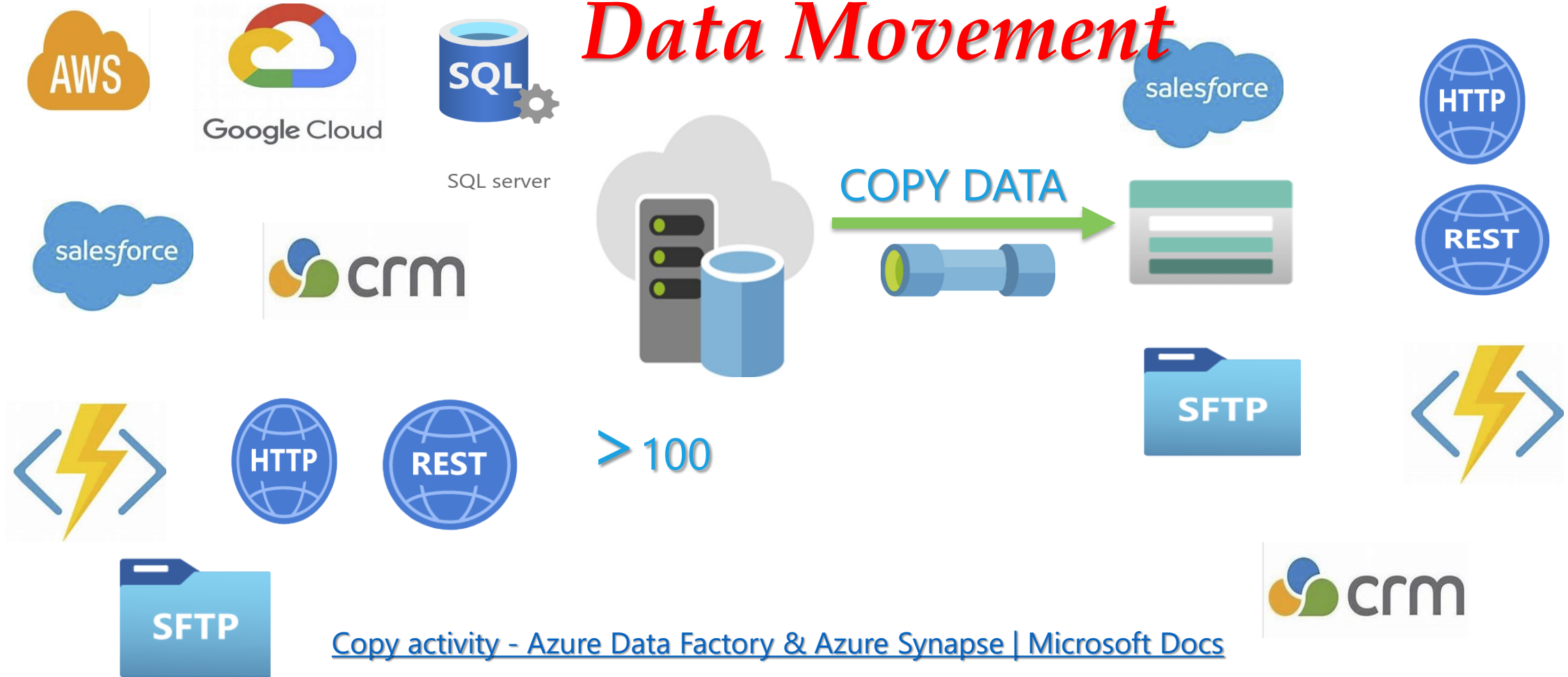- ✓ Only pay for what you have use
- ✓ Low-code and no-code Solutions

What are Key Components of ADF?

1   Linked services

2   Datasets

3   Activities

4   Pipelines

5   Triggers

What can you do in ADF?

Data Movement

COPY DATA

> 100

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

What can you do in ADF?

Data Transformation

Snowflake

SQL server

Azure SQL Database Managed Instance

REST

REST

TRANSFORMATION

Snowflake

~12

SQL server

Azure SQL Database Managed Instance

Source transformation in mapping data flow - Azure Data Factory & Azure Synapse | Microsoft Docs

What can you do in ADF?

✓ Pipelines are JSON, ready for Source Control

✓ Git Integration built in
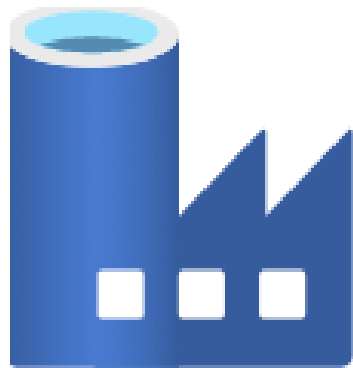
✓ Monitor

✓ Manage

{ JSON }

Azure DevOps Git

GitHub

What can you do in ADF?

Trigger pipeline

✓ A Specific Time

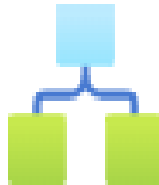✓ File created or deleted from Blob Storage

✓ Customer Activity such as

DEMO

Lets have a Quick ADF Tour!!!

SQLBits2020/Azure Data Factory.docx at main · alpaBuddhabhatti/SQLBits2020 (github.com)

2. Azure Logic Apps Overview

What is Azure Logic Apps?

It is a cloud-based platform for creating and running automated workflows that integrate your apps, data, services, and systems

Few example:

✓ Schedule and send email notifications

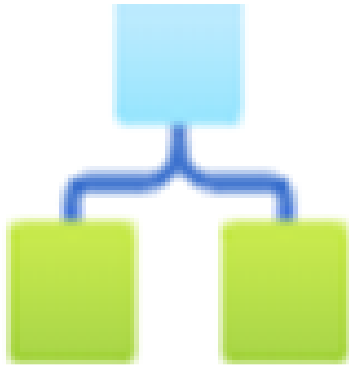✓ Move uploaded files from an SFTP or FTP server to Azure Storage

What is Azure Logic Apps?

✓It provides a cloud based serverless engine (hosting , Scaling , Managing , Monitoring, and Maintaining solution)

✓Pay for what it has used for

✓No code or Low code Solution

✓200+ connectors for expansion

https://docs.microsoft.com/en-us/azure/logic-apps/quickstart-create-first-logic-app-workflow

✓Create your Custom connectors

Microsoft
POWER BI - UK
USER GROUP

DEMO

Azure Logic Apps Quick Tour!!

3. Power BI Overview

What is Power BI?

- ✓ Collection of software services, apps, and connectors
- ✓ Desktop vs Service
- ✓ Data can be in
    - Excel spreadsheets
    - Cloud
    - On-premises

- ✓ Connect to data sources
- ✓ Model the data
- ✓ Enhance model with DAX
- ✓ Visualize
- ✓ Share and collaborate

What is Power BI? – Power BI | Microsoft Docs

Power BI Components

①   **Power BI Desktop**

- ✓ Windows Application
- ✓ Report authoring tool
- ✓ Create reports (connect to data, apply data transformations, generate new columns, create a data model)

②   **Power BI Service**

- ✓ Dashboards and Apps
- ✓ Sharing and collaboration
- ✓ Dataflows

③   **Power BI mobile apps**

- ✓ Consume reports via mobile apps on iOS, Android, or Windows mobile devices

4.*DEMO*

A Power BI imported dataset would be refreshed after populating data in Azure SQL Table

Problem Statements

- ✓ Azure Data Factory Pipelines Or Logic Apps

- ✓ Power BI Desktop Imported Dataset

- ✓ Frequency of refreshing dataset more than 48 times per day
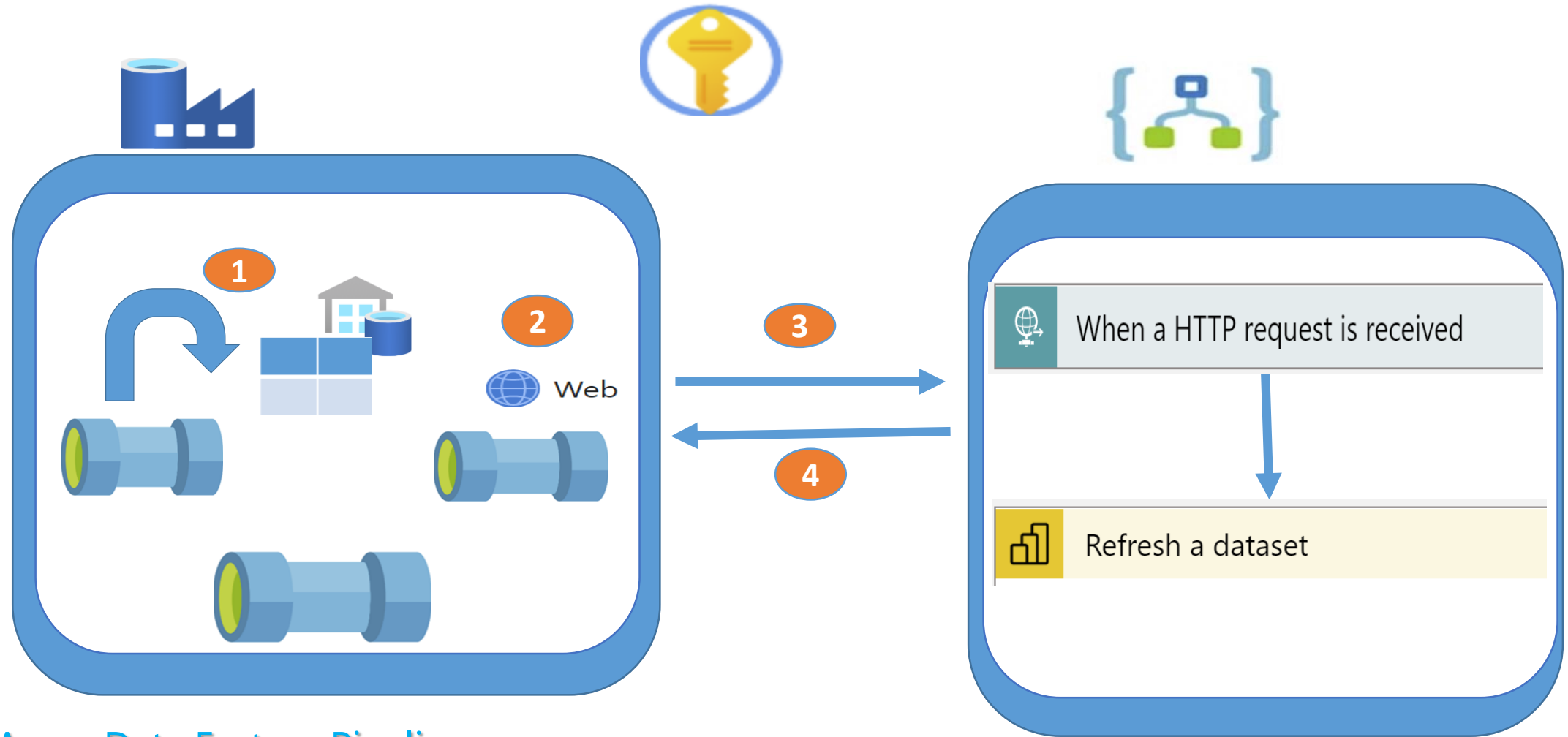
    OR

- ✓ Power BI Dataset should only updated when your Source data changed or Data warehouse populated

    OR

- ✓ Refresh your dataset as part of Orchestration

High Level Solution Design

Azure Data Factory Pipelines

Azure Logic Apps

When a HTTP request is received

Refresh a dataset

Home · alpaBuddhabhatti/SQLBits2020 Wiki (github.com)

Conclusion

1. Azure Data Factory
   - ✓ Cloud based Data Integration Service
   - ✓ Azure Platform as Services (PaaS)
   - ✓ Serverless
   - ✓ No code, Low code Solution
   - ✓ Operationalized, Parameterized and Orchestra pipelines and work flow
   - ✓ ETL or ELT

2. Azure Logic Apps
   - ✓ It is Azure Integration Services.(Apps, Data, Systems , service etc.)
   - ✓ Azure Platform – as Service (PAAS)
   - ✓ Serverless Engine
   - ✓ No code, Low code Solution
   - ✓ Automated Workflow

Conclusion

3. Power BI Overview

- ✓ Collection of software services, apps, and connectors
- ✓ Build Model
- ✓ Visualized
- ✓ Share

4. Refresh Power BI dataset

Power BI Imported dataset has been refreshed just after populating Azure SQL Table during ADF pipelines

Thank you !!!

Alpa Buddhabhatti
Azure Consultant, Cluster Reply
https://www.linkedin.com/in/alpabuddhabhatti/

Questions !!!

Alpa Buddhabhatti
Azure Consultant, Cluster Reply
https://www.linkedin.com/in/alpabuddhabhatti/

Useful links

https://www.mssqltips.com/sqlservertip/5976/refresh-power-bi-dataset-from-azure-data-factory-part-1/

https://www.mssqltips.com/sqlservertip/5979/refresh-power-bi-dataset-using-azure-logic-apps-part-2/#:~:text=Debug%20the%20ADF%20pipeline%20to%20trigger%20the%20Logic,on%20the%20ellipsis%20to%20go%20to%20its%20settings.

https://www.moderndata.ai/2019/05/powerbi-dataset-refresh-using-adf/

https://www.moderndata.ai/2019/05/powerbi-dataset-refresh-using-adf/

https://datasavvy.me/2020/07/09/refreshing-a-power-bi-dataset-in-azure-data-factory/