

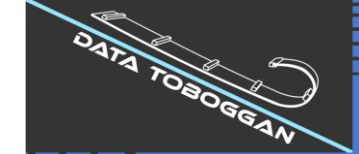


Sentiment Analysis using Azure Synapse and Azure Cognitive service





Azure Synapse Analytics



About Me



Alpa Buddhhabhatti

Azure Consultant, Cluster Reply

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Agenda

1. Azure Synapse Analytics overview

2. Azure Cognitive service for Language Overview

3. Demo

Sentiment Analysis using Azure Synapse Data pipeline & Cognitive Services

1. Azure Synapse Analytics overview



What is Azure Synapse Analytics?

An analytics service that combines **data integration**, **data warehousing**, **business functions** and **Big Data analysis** in a shared space.

A limitless analytics service, that brings together enterprise data warehousing and Big Data analytics



Azure Data Lake Storage



Azure SQL Data Warehouse



Azure Analytics

The freedom to query data on your own terms, using either serverless or dedicated resources at scale.

<https://docs.microsoft.com/en-us/azure/synapse-analytics/>

Why we need it?

- Serverless and PaaS Azure Services
- No code or Low code data integration capabilities
- Notebooks supports different languages E.g. Python , Scala , C#
- Support more than 95 data source connector
- All in one environment (ETL or ELT, Analytics, Machine Learning, Visualization)
- Increases the speed of queries (Massively Parallel Processing Architecture)
- Cost effective as storage and computing are paid separately

Data Integration

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

What can you do in Data Integration Pipeline?

- Data Movements
- Data Transformation
- Orchestration
- Automation
- Easy to integrate

What can you do in Data Integration Pipeline?

- Pipelines are JSON, ready for Source Control
- Built in Git Integration
- Monitor
- Manage

{ JSON }

 Azure DevOps Git

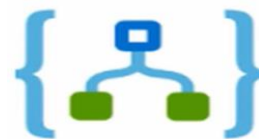
 GitHub



What can you do in Data Integration Pipeline?

Trigger pipeline

- A Specific Time
- File created or deleted from Blob Storage
- Customer Activity such as



2. Azure Cognitive service for Language



Azure Cognitive Services
Text Analytics

Sentiment Analysis

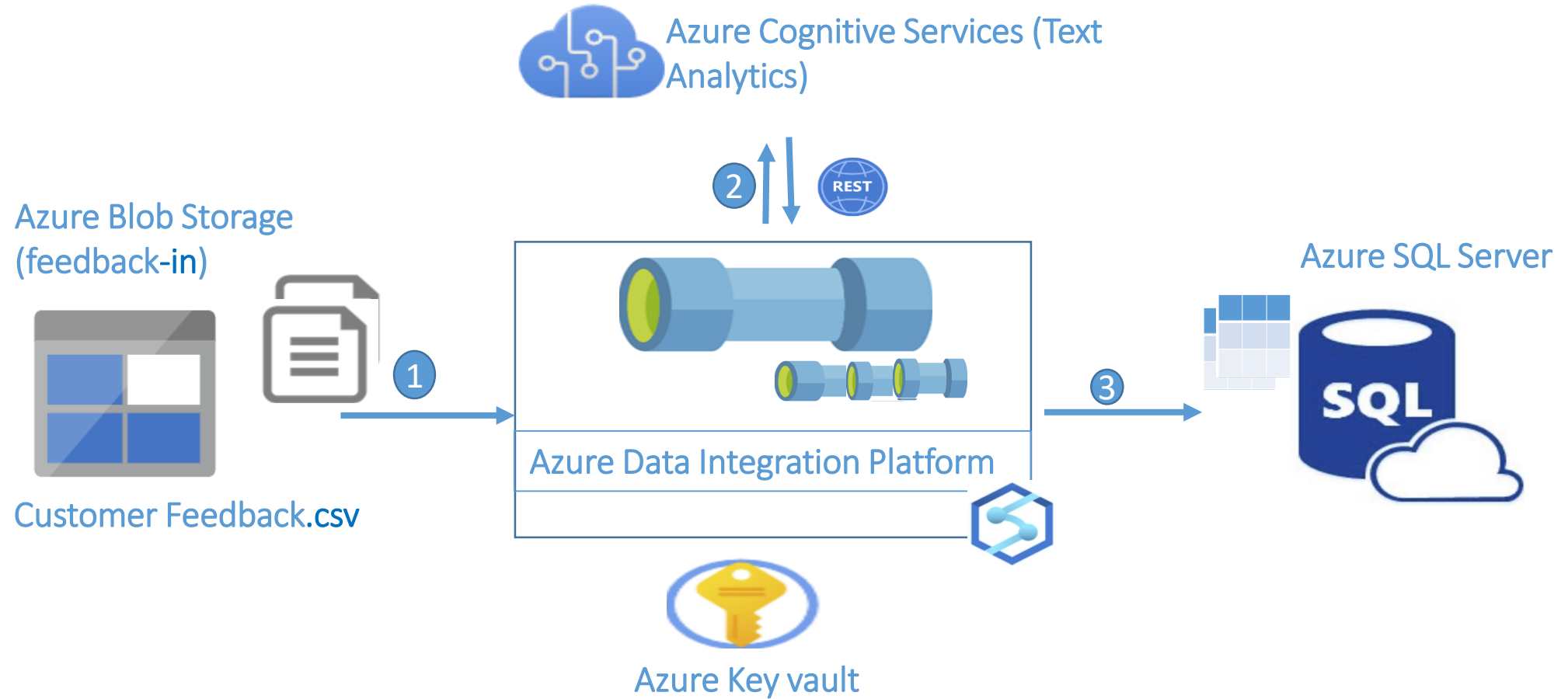
- Azure Cognitive Service for Language
- Text Analytics (Text, Documents)
- Extract, Classify and Understand text within documents
- Sentiment labels (such as "negative", "neutral" and "positive")
- NLP - Natural Language processing technique
- No code or Low code
- Create an Azure Language resource
- The REST API or the client library for C#, Java, JavaScript, and Python

3. DEMO

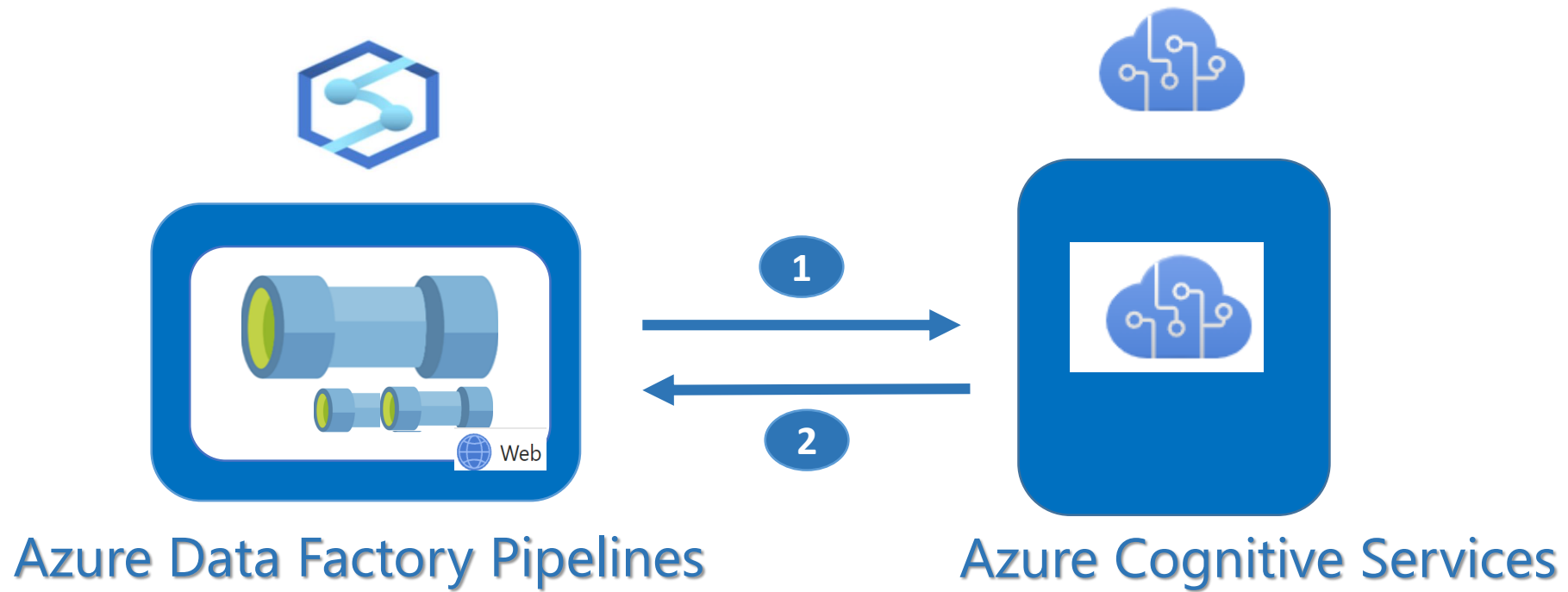
Sentiment Analysis using ADF using Cognitive Services



Highlevel Design



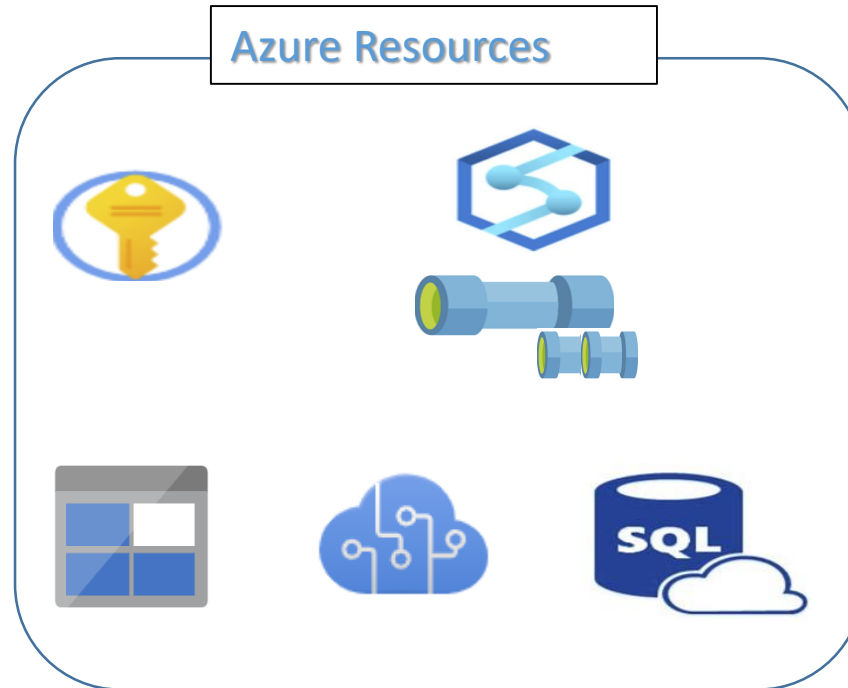
How to Integration them?



DEMO



Azure Resources



Key Takeaway

Azure Synapse Analytics



- Connect data sources into Synapse Workspace
- Process data using Dedicated SQL Pool
- Transform data using Apache Spark Pool
- Ingest, transform & orchestrate using Pipelines
- Query data using Serverless SQL Pool
- Easy to integrate with other Azure services (Cosmos DB, Power BI etc)

Key Takeaway

Azure Cognitive Services



- It summarized big documents and provide sentiments
- A wide range of languages
- Understand common topics and trends
- A Gain deeper understanding about your customer sentiments

Key Takeaway

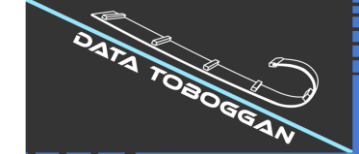
DEMO



- Read Feedbacks from Blob storage
- Apply sentiment analysis on each feedback
- Apply transformation and store data to Azure SQL Table



Azure Synapse Analytics



Thank you !!!



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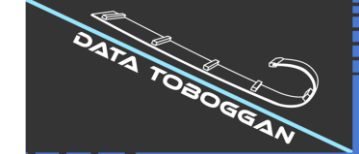


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Azure Synapse Analytics



Q & A



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Useful links

[Introduction to Azure Synapse Analytics - Learn | Microsoft Docs](#)

[Introduction to Azure Synapse Analytics \(microsoft.com\)](#)