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# Azure Data Factory

## 1 Introduction to ADF

- What is Linked Service?
- What is Dataset?
- What is Pipeline?

## 2 Integration Runtimes

- Auto Resolve integration Runtime
- Self-hosted Integration Runtime
- Azure SSIS Integration Runtime

## 3 Pipeline execution and Triggers

- Schedule Trigger
- Tumbling Window Trigger
- Event Trigger

## 4 Activities

- Copy Activity
- Lookup Activity
- Stored Procedure Activity
- Get Metadata Activity
- Execute Pipeline Activity
- If Activity
- For each Activity
- Filter Activity
- Until Activity
- Set Variable Activity
- Append Variable Activity
- Wait Activity
- Web Activity/ Web Hook Activity
- Switch Activity
- Delete Activity
- Fail Activity

## 5 Dataflow Transformations

- Source
- Sink
- Aggregate
- Alter row
- Assert
- Cast
- Conditional split
- Derived column
- External call
- Exists
- Filter
- Flatten
- Flowlet
- Join
- Lookup
- New branch
- Parse
- Pivot
- Rank
- Select
- Sink
- Sort
- Stringify
- Surrogate key
- Union
- Unpivot
- Window

## 6. Parameters and Variables

- Dataset parameters
- Pipeline Parameters
- Global Parameters
- Variables

## 7. Logic Apps

- Send Mail
- Trigger Pipelines
- Copy Files from source to Destination

## 8. Automation Account

- Credentials
- Modules
- Runbooks
- Run SQL Commands from Runbook
- Run Pipeline from Runbook

## 9 Types of Security in ADF

- Key Vault
- Service Principal
- Managed Identity

## 10 Types of Storages in Azure

- Blob
- Data lake

## 11 Real Time Scenarios

- Copy Data from Blob to Blob
- Copy Data from Blob to SQL Server
- Copy Data from SQL Server to SQL Server
- Copy Data from On Premise SQL server to
- Azure SQL Server
- Copy Data from Multiple Files to Single Table in SQL Server
- Copy Data from Multiple files to multiple Tables
- with Same Structure

## 14 Latest Announced ADF Features

- REST API using ADF
- CDC (Change Data Capture) using ADF
- JSON using ADF

## 12 Real Time Scenarios

- Copy Data from Multiple files to multiple Tables with different Structure
- Copy Data from Multiple Tables to multiple Tables with different Structure
- Create pipeline to Copy Data from file if exists
- Copy Data from Excel file to SQL Server
- Copy Data from Multiple Excel files with Multiple Excel Sheets into SQL Server
- Load data from Multiple Databases from Multiple tables using Single Pipeline
- Load data from REST API using ADF
- Load data from Json file using ADF
- Load data from parquet/Avro file using ADF
- Create a pipeline to implement Nested foreach loop
- Create a pipeline to insert metadata Data into Azure SQL server
- Create a pipeline to load data on incremental basis
- using Date using Lookup Activity
- Create a pipeline to load data on incremental basis
- using Data flow Transformations
- Create a pipeline to load Latest file using ADF
- Create a pipeline to load data from CSV, Excel and SQL Table using single pipeline

## 13 Deployment

- Manual Deployment
- Using ARM Templates