

## **IMPLEMENT CI/CD PIPELINE IN AZURE DEVOPS, AZURE DATA FACTORY, AZURE DATABRICKS**

Continuous Integration and Continuous Deployment (CI/CD) is a DevOps practice that automates the process of integrating, testing, and deploying code changes. It ensures that updates to Azure Data Factory pipelines or Azure Databricks notebooks are automatically deployed across environments.

### **Git Integration with Azure Data Factory**

The first step is to connect Azure Data Factory with a Git repository in Azure DevOps. This allows all pipelines, datasets, and linked services to be version-controlled.

### **Build Pipeline (Continuous Integration)**

In Azure DevOps, a build pipeline is created to generate deployable artifacts whenever changes are pushed to the main branch. The pipeline exports ARM templates from ADF. These templates capture the structure of pipelines, datasets, and linked services. The artifacts are then published for further deployment.

### **Release Pipeline (Continuous Deployment)**

The release pipeline in Azure DevOps automates the deployment process. It takes the ARM template artifacts generated by the build pipeline and applies them to the target environments such as Development, Test, and Production. Environment-specific values are handled through parameter files. The same template can be deployed across multiple environments consistently.

### **Process:**

- Developer makes changes in ADF and commits them to the Git repo.
- The CI pipeline triggers automatically, generating updated ARM templates.
- The CD pipeline takes the templates and deploys them to the chosen ADF environment.

### **Benefits:**

- Automated deployments reduce manual errors.
- Consistent deployments across environments.
- Version control ensures rollback if needed.
- Faster delivery cycle and better collaboration.

Microsoft Azure

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Home >

hexadata Data factory (V2)

List triggers associated with this Data factory (V2). Summarize the properties of this Data factory (V2). Show me integration runtime metrics for this Data factory (V2).

Search

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

Resource visualizer

Settings

Getting started

Monitoring

Automation

Help

Delete

Essentials

Resource group (move) : rg-azuser4032\_mmllocal-541cn

Status : Succeeded

Location : East US

Subscription (move) : MML Learners

Subscription ID : 2a3c6418-97b9-4d96-a24b-2c2d763d3775

Type : Data factory (V2)

Getting started : [Quick start](#)

JSON View

## Azure Data Factory Studio

Launch studio

Quick Starts

Tutorials

Template Gallery

Training Modules

Microsoft Azure | Data Factory > hexadata

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Would you like to see Data Factory inside of Microsoft Fabric, Microsoft's newest cloud-first data analytics SaaS platform? Click here to get started with Fabric Data Factory!

Validate all Save all Publish

Preview experience ☐ Off

General

Connector upgrade advis...

Factory settings

Connections

Linked services

Integration runtimes

Microsoft Purview

ADF in Microsoft Fabric

Source control

Git configuration

ARM template

Author

Triggers

Global parameters

Data flow libraries

Security

### Git repository

Git repository information associated with your data factory. [CI/CD best practices](#)

Edit Overwrite live mode Disconnect Import resources

Repository type	Azure DevOps Git
Azure DevOps Account	azuser4032mmllocal
Project name	hexaproject
Repository name	project
Collaboration branch	master
Publish branch	adf_publish
Root folder	/
Last published commit	7facace8f14159e7bbeba625a280ebd43a071deb
Tenant	7540734b-e567-46c3-9ad3-ec9fb9e50140
Publish (from ADF Studio)	Enabled
Custom comment	Enabled

Azure DevOps azuser4032mmllocal / hexaproject / Overview / Summary

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hexaproject

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Describe your project and make it easier for other people to understand it.

+ Add Project Description

### Project stats

Period: Last 7 days

Repos

0 Pull requests opened

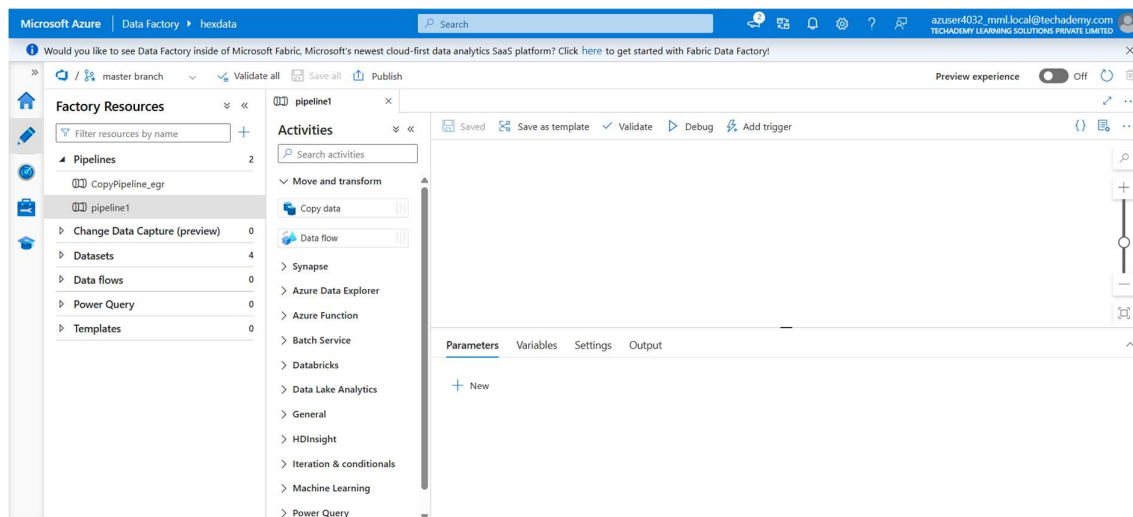
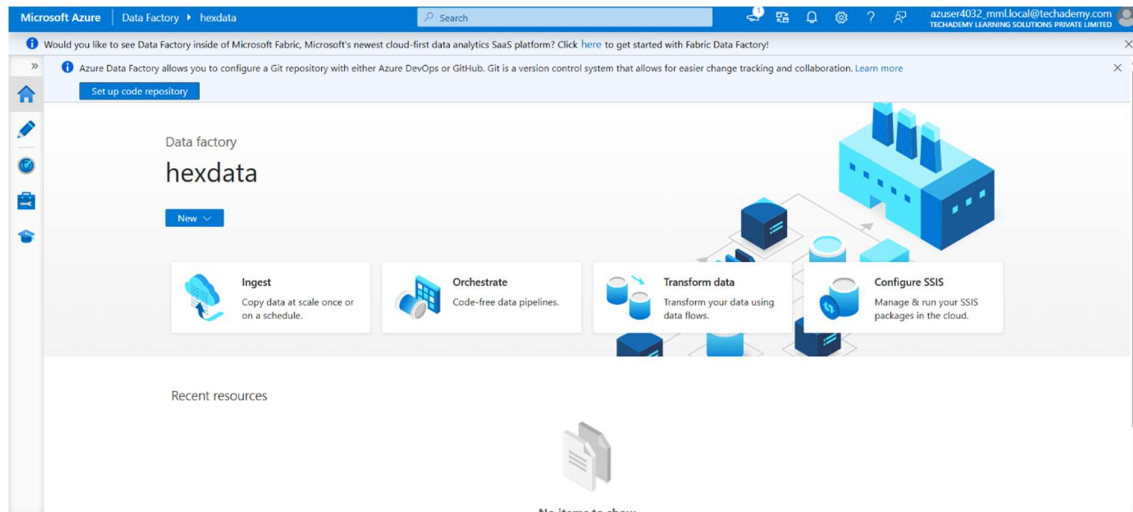
16 Commits by 1 authors

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3

A A A

Project settings



Implementing CI/CD pipelines in Azure DevOps for ADF ensures automation, reliability, and efficiency in data engineering workflows. It accelerates delivery and enables teams to manage data pipelines in a structured, collaborative manner.