Microsoft

Microsoft Fabric
Community Conference

Building a **Metadata - Driven** Framework with **Fabric SQL Database** and **Data Factory**

Let’s connect

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Winner

Partner of the Year Awards

Country Award Data & AI
Global Award Identity

Problem statement

Content of each pipeline

Agenda

- Data platform challenges
- Fabric SQL Database
- Data Pipeline Parameters
- Metadata Driven Framework
- Logging
- Summarize Pipelines
- Q & A

Data platform Challenges

'From data source to data model' to report

- Data Lineage
- Data Catalog
- Data Monitoring
- Capacity Control
- Incremental Loading
- Data Alerts
- Version Control
- Creation of Data Pipeline
- Historical Data
- Medallion Architecture
- Large # of data sources

- Data Orchestration
- Data Modeling
- Data Privacy
- Data Governance
- Data Enrichment
- Data Security
- Data Quality

What would help????

- Simplicity in connecting data sources
- Fast results
- Focus on business value instead of data integration
- Detailed logging, auditing and process information
- From data “Spaghetti to Lasagna”
  - Building a uniform data architecture
- Metadata Driven
  - Standardized data pipelines, Notebooks, orchestration and Way of Work

I am the Chief Data Information Officer and don’t want to be the Chief Integration Officer

Help me to simplify and automate my Data Orchestration

Don't Repeat Yourself

Repetition is the root of all software evil.

Out-of-the-Box Framework

- Ready-to-use.
- Rapid implementation.
- Limited customization.
- Lower development effort.
- Lower upfront costs.
- Ongoing support and updates.

Custom-Made Framework

- Tailored to specific needs.
- Full control over design and features.
- Higher development effort.
- Flexibility and extensibility.
- Higher upfront costs.

Custom-Made Framework

- Based on parameters
- Metadata => Fabric SQL Database / Json / ……
- Microsoft Fabric but also on Azure Synapse Analytics and Azure Data Factory
- Based on a Uniform Data Architecture

And today we will get a third option

- ?????
- More on that later

Microsoft Fabric

The unified data platform for AI transformation

Data Factory

Analytics

Databases

Real-Time Intelligence

Power BI

Industry Solutions

Partner workloads

AI

OneLake

Microsoft Purview

Microsoft Fabric

The unified data platform for AI transformation

Fabric Database

Fabric Database

- SQL database in Microsoft Fabric is a developer-friendly transactional database, based on Azure SQL Database, that allows you to easily create your operational database in Fabric. A SQL database in Fabric uses the same SQL Database Engine as Azure SQL Database.

Important

This feature is in preview.

Fabric Database

Simple

Autonomous and secure

Optimized for AI

Why use SQL database in Fabric?

- No need for any Infra as code setup in Azure Environment
- No Networking to be setup
- Can be used by different experiences in Fabric
- Running on the Fabric Capacity

Fabric Data Factory

Parameters

Who is already using Parameters?

Pipeline Parameters

- Pass through from
  - Pipeline to Pipeline

Pipeline Parameters

Parameters | Variables | Settings | Output

+ New | Delete

Name	Type	Default value
key_vault_name	String	demoekeuwdvlmvaultoxgnt
log_warehouse_endpoint	String	nl7yhqnbrscude3yv6mas6b
log_warehouse_guid	String	488bce6a-42dc-4bba-a1ad-
log_workspace_guid	String	33f5c5be-c680-4684-ab19-
log_storedproc_name	String	[logging].[sp_AuditPipeline]

General | Settings

Currently Pipeline return value is only supported with ADF & Synapse pipelines. To fetch pipeline return value for Fabric pipelines, please use Invoke Pipeline (Legacy)

Type: Fabric | Azure Data Factory | Synapse

Connection *: CON_FMD_FABRICPIPELINES — Refresh | Edit

Workspace *: FMD1 CODE (D) FMD — Refresh

Pipeline *: PL_FMD_LOAD_LANDINGZONE — Refresh | Open | + New

Parameters

+ New | Delete

Name	Type	Value
key_vault_name	String	@pipeline().parameters.key_vault_na...
log_warehouse_endpoi	String	@pipeline().parameters.log_warehou...
log_warehouse_guid	String	@pipeline().parameters.log_warehou...
log_workspace_guid	String	@pipeline().parameters.log_workspa...
log_storedproc_name	String	@pipeline().parameters.log_storedpr...

Wait on completion ☑

Pipeline Parameters

- Pass through from
  - Pipeline to Activity

```
# This cell is generated from runtime parameters. Learn more:
log_client_secret_secret_name = None
DataSourceNamespace = "aw"
logwarehouse_guid = ""
PipelineParentRunGuid = "00000000-0000-0000-0000-000000000000"
TargetName = "Product"
TargetWorkspace = "40e27fdc-775a-4ee2-84d5-48893c92d7cc"
log_client_id_secret_name = None
PipelineGuid = "a130a279-5f6b-43bf-b8df-a101bf2101e2"
SourceSchema = "SalesLT"
TriggerTime = "2025-03-19T11:23:10.5679955Z"
TargetSchema = "SalesLT"
logwarehouse_endpoint = ""
TriggerType = "Manual"
WorkspaceGuid = "2bdaef03-9e79-46da-9b07-391e87b56416"
SourceLakehouse = "5b2306b4-122c-4269-b41f-b77aef342f48"
SilverLayerEntityId = "1"
SourceName = "Product"
driver = "{ODBC Driver 18 for SQL Server}"
TargetLakehouseName = "LH_SILVER_LAYER"
cleansing_rules = ""
NotebookExecutionId = "b4e04081-47a9-4dab-9147-630ff69b9e76"
SourceLakehouseName = "LH_BRONZE_LAYER"
TriggerGuid = "d7515b5d-ae94-4438-8fd7-e34733a872ad"
log_workspace_guid = "7db968e8-e86b-488e-b5ac-ffca009c89d7"
SourceWorkspace = "40e27fdc-775a-4ee2-84d5-48893c92d7cc"
TargetLakehouse = "50d7d4c9-7db0-4d4d-a324-31e18b536fe4"
SourceFileType = "Delta"
log_database = ""
```

What about the Third option

Fabric

Metadata Driven

Framework

Fabric Metadata Driven Framework

- What if you get a Framework
- Which meets most of your needs
- Which gives you Full control over design and features.
- Which gives you less development effort.
- Which gives you Flexibility and extensibility.
- Which gives you lower upfront costs.

Fabric Metadata Driven Framework

- Efficient data management is a cornerstone of modern organizations, and leveraging the right tools can make all the difference.
- The Fabric Metadata -Driven Framework is a cutting-edge solution designed to optimize data handling and utilization.
- This innovative framework harnesses the powerful capabilities of the Fabric SQL Database to build a robust, scalable, and flexible Metadata -driven architecture.

Fabric Metadata Driven Framework(FMD) Key Features

Scalability and Flexibility	The framework is designed to scale seamlessly with your organization's growth, adapting to evolving data needs without compromising performance.
Cost Efficiency	By optimizing data processes and reducing redundancy, **FMD** helps organizations achieve significant cost savings.
Streamlined Data Integration	**FMD** simplifies the integration of diverse data sources, providing a unified view of your data landscape.
Enhanced Data Governance	**FMD** ensures comprehensive data governance by maintaining detailed Metadata , enabling better data quality, consistency, and compliance.

Fabric Metadata Driven Framework Overview

Workspaces

- Creation of a collaborative data environment (D-T-A-P)
- Data and Code workspaces are separated for easy deployments and enhanced security
- Workspace for Data Orchestration
- Workspace for Data Logging

Lakehouses

- Following the medallion architecture
- Data Landingzone
- Bronze Layer
- Silver Layer

Data Pipelines and Notebooks

Connections (Required)

- Required Connections
  - Fabric Data Pipelines
    - Authentication OAuth
  - Fabric SQL database
    - Authentication Oauth

All other connections are based on your configuration

On-premises | Virtual network | Cloud

Connection name *

CON_FMD_FABRIC_SQL

Connection type *

Fabric SQL database

Authentication

Authentication method *

OAuth 2.0

Edit credentials

General

Privacy level *

Organizational

Allow this connection to be utilized with either on-premises data gateways or VNet data gateways.

On-premises | Virtual network | Cloud

Connection name *

CON_FMD_FABRICPIPELINES

Connection type *

Fabric Data Pipelines

Authentication

Authentication method *

OAuth 2.0

Edit credentials

General

Privacy level *

Organizational

Allow this connection to be utilized with either on-premises data gateways or VNet data gateways.

Connections

Currently Supported

- SQL Server
- Data Lake Gen 2
- Onelake Tables
- Onelake Files
- ADF (Connect to ADF pipeline)

- All other connections can easily be added
  - Every connection needs a new Data Pipeline

LET'S GET
STARTED

Getting started with Fabric Metadata Driven Framework

- Download Notebooks from Github

Getting started with Fabric Metadata Driven Framework

- Download Notebooks from Github
- Create Workspace Name is up to you:
  - **FMD_FRAMEWORK_CONFIGURATION**
- Assign a capacity
- Copy the Notebooks to this Workspace

Getting started with Fabric Metadata Driven Framework

- Open Notebook
- NB_FMD_DEPLOYMENT_MULTI_ENV
- Create Configuration Lakehouse

Create Lakehouse if not exists and Attach Lakehouse

```
try:
    notebookutils.lakehouse.create(name = "LH_FMD_CONFIGURATION")
except Exception as ex:
    print('Lakehouse already exists')
```

```
%%configure -f
{
    "defaultLakehouse": {
        "name":  "LH_FMD_CONFIGURATION"
    }
}
```

Getting started with Fabric Metadata Driven Frame

- Github
- Framework Name (max 6)
- Capacity Id's
- Workspace Roles

Parameters

```
deploy_from_github = True
driver = '{ODBC Driver 18 for SQL Server}'
# target connections guid
# add the correct id for every connections
# change the capacity id
# change the workspace roles

FrameworkName= 'DEMO' # max 6 characters for better visibility, no spaces and t  of the name
#'560C908C-072A-478C-939C-CFC4398D2FDB
capacity_id_dvlm = '560C908C-072A-478C-939C-CFC4398D2FDB'       # Which capaci  l be used for these worksp
capacity_id_prod = '560C908C-072A-478C-939C-CFC4398D2FDB'       # Which capac  l be used for these worksp
capacity_id_config = '2BDC6A16-1EE7-4BAD-9127-5EF6BEB00E84'     #'Which capac  ll be used for this workspa
capacity_id_log = '560C908C-072A-478C-939C-CFC4398D2FDB'        #'Which capa  ll be used for this workspa

workspace_roles = [ # Keep emtpy [] if you only want to assign this to your  nal account
                    {
                        "principal": {
                            "id": "ba4a392b-9596-46d8-9486-53eb2c2b22bf",
                            "displayName": "sg-fabric-contributor",
                            "type": "Group"
                        },
                        "role": "Contributor"  # Admin, Member, Contributor, Viewer
                        },
                        {
                        "principal": {
                            "id": "39b98289-1540-4866-b9f0-3935f9eeebd6",
                            "displayName": "sg-fabric-admin",
                            "type": "Group"
                        },
                        "role": "Admin"
                        }
                    ]
```

Getting started with Fabric Metadata Driven Framework

- Logging (Fabric Warehouse)
- Configuration (Fabric Database)

```
logging = {
                    'workspace': {
                        'name' : FrameworkName + ' LOG FMD', # Name of target workspace
                        'roles' : workspace_roles,
                        'capacity_id' : capacity_id_log
                    },
                    'WarehouseName' : 'WH_LOG' # Name of target logging warehouse
}
```

```
configuration = {
                    'workspace': {
                        'name' : FrameworkName + ' CONFIG FMD', # Name of target workspace
                        'roles' : workspace_roles,
                        'capacity_id' : capacity_id_config
                    },
                    'DatabaseName' : 'SQL_FMD_FRAMEWORK' # Name of target configuration SQL Database
}
```

Getting started with Fabric Metadata Driven Framework

- Environments(Stages)
  - For every environment
  - Connections

```
environments = [
        {
            'environment_name' : 'development', # Name of target environment
            'workspaces': {
                'data' : {
                    'name' : FrameworkName + ' DATA (D) FMD', # Name of target
                    'roles' : workspace_roles,
                    'capacity_id' : capacity_id_dvlm
                },
                'code' : {
                    'name' : FrameworkName + ' CODE (D) FMD', # Name of target data workspace for
                    'roles' : workspace_roles,
                    'capacity_id' : capacity_id_dvlm
                }
            },
            'connections' : {
                'CON_FMD_FABRIC_SQL' : '372237f9-709a-48f8-8fb2-ce06940c990e', # Required Guid to the Fa  connection
                'CON_FMD_FABRIC_PIPELINES' : '6d8146c6-a438-47df-94e2-540c552eb6d7', # Required Guid to the Fabric datapipelines connection
                'CON_FMD_ASQL_01' : 'cf673e6a-13f6-4ebb-9cbb-4ba4ab390818', # Optional Guid to an Azure SQL database connection
                'CON_FMD_ASQL_02' : '11a8e5fe-fbca-4822-9ba4-9162cf56e6dd', # Optional Guid to an second Azure SQL database connection
                'CON_FMD_ADLS_01' : 'a0581b6e-5e38-46eb-bab2-7f08e9a35c30', # Optional Guid to an Azure SQL Datalake storage connection
                'CON_FMD_ADF_PIPELINES' : 'e93f565a-e2bc-4b60-900e-1907e825e37c' # Optional Guid to an Azure Datafactory connection
            }
        },
        {
            'environment_name' : 'production', # Name of target environment
            'workspaces': {
                'data' : {
                    'name' : FrameworkName + ' DATA (P) FMD',
                    'roles' : workspace_roles,
                    'capacity_id' : capacity_id_prod
                },
                'code' : {
                    'name' : FrameworkName + ' CODE (P) FMD',
                    'roles' : workspace_roles,
                    'capacity_id' : capacity_id_prod
                }
            },
            'connections' : {
                'CON_FMD_FABRIC_SQL' : '372237f9-709a-48f8-8fb2-ce06940c990e',
                'CON_FMD_FABRIC_PIPELINES' : '6d8146c6-a438-47df-94e2-540c552eb6d7',
                'CON_FMD_ASQL_01' : 'cf673e6a-13f6-4ebb-9cbb-4ba4ab390818',
                'CON_FMD_ASQL_02' : '11a8e5fe-fbca-4822-9ba4-9162cf56e6dd',
                'CON_FMD_ADLS_01' : 'a0581b6e-5e38-46eb-bab2-7f08e9a35c30',
                'CON_FMD_ADF_PIPELINES' : 'e93f565a-e2bc-4b60-900e-1907e825e37c'
            }
        }
    ]
```

DEMO

What is deployed?

Fabric FMD CODE (D) FMD

Workspaces

Search

My workspace

All

- FMD CODE (D) FMD
- FMD CODE (P) FMD
- FMD CONFIG FMD
- FMD DATA (D) FMD
- FMD DATA (P) FMD
- FMD LOG FMD
- FMD_FRAMEWORK_C...

FMD CODE (D) FMD

New item | New folder | Import

FMD CODE (D) FMD > Filtered results

Clear all | Type: Data pipeline

Name	Location	Type
PL_FMD_LDZ_COMMAND_ADF	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COMMAND_ADLS	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COMMAND_ASQL	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COMMAND_ONELAKE	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COPY_FROM_ADF	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COPY_FROM_ADLS_01	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COPY_FROM_ASQL_01	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COPY_FROM_ASQL_02	FMD CODE (D) FMD	Data pipeline
PL_FMD_LDZ_COPY_FROM_ONELAKE_TABLES_01	FMD CODE (D) FMD	Data pipeline
PL_FMD_LOAD_ALL	FMD CODE (D) FMD	Data pipeline
PL_FMD_LOAD_BRONZE	FMD CODE (D) FMD	Data pipeline
PL_FMD_LOAD_LANDINGZONE	FMD CODE (D) FMD	Data pipeline
PL_FMD_LOAD_SILVER	FMD CODE (D) FMD	Data pipeline
PL_TOOLING_POST_ASQL_TO_FMD	FMD CODE (D) FMD	Data pipeline

FMD CODE (D) FMD

New item | New folder | Import

FMD CODE (D) FMD > Filtered results

Clear all | Type: Notebook

Name	Location	Type	Task
NB_FMD_DQ_CLEANSING	FMD CODE (D) FMD	Notebook	—
NB_FMD_LOAD_BRONZE_SILVER	FMD CODE (D) FMD	Notebook	—
NB_FMD_LOAD_LANDING_BRONZE	FMD CODE (D) FMD	Notebook	—

What is deployed?

Datamodel

- Integration
- Execution
- Logging

Landingzone Entity Table

- Source Schema
- Source Name
- SourceCustomSelect
- File Type
- IsIncremental
- Incremental Column

SourceSchema	SourceName	FileName	FileType	FilePath	IsIncremental	IsIncrementalColumn
SalesLT	Product	SalesLT_Product	parquet	fmd	False	
SalesLT	Customer	SalesLT_Customer	parquet	fmd	True	ModifiedDate
Sales	Invoices	Sales_Invoices	parquet	fmd	False	NULL
dbo	Employees	dbo_Employees	parquet	fmd	False	
demo1	customers.csv	customers	csv	fmd	False	NULL
dl	people	people	parquet	fmd	False	NULL
Purchasing	PurchaseOrders	Purchasing_PurchaseOrders	parquet	fmd	False	NULL
Purchasing	PurchaseOrderLines	Purchasing_PurchaseOrderLines	parquet	fmd	False	NULL
Sales	CustomerCategories	Sales_CustomerCategories	parquet	fmd	False	NULL
Sales	OrderLines	Sales_OrderLines	parquet	fmd	False	NULL
Sales	Orders	Sales_Orders	parquet	fmd	False	NULL
Sales	BuyingGroups	Sales_BuyingGroups	parquet	fmd	False	NULL
Sales	InvoiceLines	Sales_InvoiceLines	parquet	fmd	False	NULL

BronzeLayer Entity Table

- Schema
- Name
- Primarykeys
- CleansingRules

ABC Schema	ABC Name	ABC PrimaryKeys	ABC FileType	ABC CleansingRules
SalesLT	Product	ProductID	Delta	NULL
SalesLT	Customer	CustomerID	Delta	NULL
Sales	Invoices	InvoiceID	Delta	NULL
dbo	Employees	EmployeeID	Delta	NULL
demo1	customers	CustomerId	Delta	NULL
dl	people	UserId	Delta	NULL
Purchasing	PurchaseOrders	PurchaseOrderID	Delta	NULL
Purchasing	PurchaseOrderLines	PurchaseOrderLineID	Delta	NULL
Sales	CustomerCategories	CustomerCategoryID	Delta	NULL
Sales	OrderLines	OrderLineID	Delta	NULL
Sales	Orders	OrderID	Delta	NULL
Sales	InvoiceLines	InvoiceLineID	Delta	NULL
Sales	BuyingGroups	BuyingGroupID	Delta	NULL

Silver Layer Entity Table

- Schema
- Name
- CleansingRules

Schema	Name	FileType	CleansingRules
SalesLT	Product	delta	NULL
SalesLT	Customer	delta	NULL
Sales	Invoices	delta	NULL
dbo	Employees	delta	NULL
demo1	customers	delta	NULL
dl	people	delta	NULL
Purchasing	PurchaseOrderLines	delta	NULL
Purchasing	PurchaseOrders	delta	NULL
Sales	CustomerCategories	delta	NULL
Sales	OrderLines	delta	NULL
Sales	InvoiceLines	delta	NULL
Sales	Orders	delta	NULL
Sales	BuyingGroups	delta	NULL

How to get data easily into Fabric MetaDriven data model

Import favorites | For quick access, place your favorites here on the favorites bar. Looking for your favorites? Check your profiles

PL_TOOLING_POST_ASQL_TO_FMD | Internal | Search | Trial: 51 days left

Home | Activities | Run | View

Validate | Cancel | Schedule | Add trigger (preview) | View run history | Copy data | Dataflow | Notebook | Lookup

Home | Workspaces | OneLake catalog | Monitor | Real-Time | Workloads | DEMO CODE (D) ... | PL_TOOLING_POST_A... | PL_FMD_LDZ_COPY_F... | PL_FMD_LOAD_ALL

Parameters | Variables | Settings | Output

Pipeline run ID: d76a7a4c-7ba3-4311-bed0-a844915b5dc1 | **Pipeline status** In progress | Export to CSV | Filter | Column Options

Showing 6 items

Activity name	Activity status	Run start	Duration	Input	Output
LKP LH BRONZE LAYER	Queued	3/21/2025, 8:02:12 PM	11s		
LKP CONNECTION	Queued	3/21/2025, 8:02:12 PM	11s		
LKP LH DATA LANDINGZONE	Queued	3/21/2025, 8:02:12 PM	11s		
LKP LH SILVER LAYER	Queued	3/21/2025, 8:02:12 PM	11s		

DEMO

Import favorites | For quick access, place your favorites here on the favorites bar. Looking for your favorites? Check your profiles

PL_FMD_LOAD_ALL | Internal

Search

Trial: 52 days left

Home | Activities | Run | View

Validate | Cancel | Schedule | Add trigger (preview) | View run history | Copy data | Dataflow

Running
Successfully running PL_FMD_LOAD_ALL (Pipeline).

Home | Workspaces | OneLake catalog | Monitor | Real-Time | Workloads | DEMO CODE (D) ... | PL_FMD_LOAD_ALL | NB_FMD_DEPLOYMEN...

Parameters | Variables | Settings | Output

New | Delete

Name	Type	Default value
key_vault_name	String	demoekeuwdvlmvaultoxgn(
log_warehouse_endpoint	String	nl7yhqnbrscude3yv6mas6b:
log_warehouse_guid	String	9bddb0fb-6dd6-4099-891a
log_workspace_guid	String	1b2c15d0-d791-4cf2-b1bd-
log_storedproc_name	String	[logging].[sp_AuditPipeline]

Logging

- Log Start and End Time of records
- Log Extracted Records
- Log Execution Failure

Logging

- Add Information about pipelines
- Adding System Variables

Logging

- Add Information about pipelines
- Adding System Variables
- Add Information about Notebooks

```
"status": "Succeeded",
"result": {
    "runId": "10883ea1-cac8-4d1b-92d3-03f8ca451054",
    "runStatus": "Succeeded",
    "sessionId": "188bc363-7872-453e-9369-8a18c115f6e8",
    "sparkPool": "1acc1c9e-b8d2-4f1d-ba36-5ba8e5088067",
    "error": null,
    "lastCheckedOn": "2025-03-17T18:29:37.44Z",
    "metadata": {
        "isForPipeline": null,
        "runStartTime": "2025-03-17T18:25:13.2077314Z",
        "runEndTime": "2025-03-17T18:29:37.4521264Z"
    },
    "highConcurrencyModeStatus": null,
    "exitValue": "[{'TableName': 'Sales_Orders_0_0', 'exitVal': \"{'CopyOutput':
},
"message": "Notebook execution is in Succeeded state, runId: 10883ea1-cac8-4d1b-9
"SparkMonitoringURL": "https://app.powerbi.com/workloads/de-ds/sparkmonitor/fcd42
"executionDuration": 266
```

Logging

PipelineExecution

Data preview - PipelineExecution

Showing 1000 rows

Search

	UID Workspace...	UID PipelineRun...	UID PipelinePare...	UID PipelineGuid	ABC PipelineName	ABC PipelinePara...	ABC TriggerType	UID TriggerGuid	TriggerTime	ABC LogType	LogDateTime	ABC LogData
1	1ACC1C9E-B8D2...	C19BCD8F-6F46...	NULL	67B39D07-7CE2...	PL_FMD_LOAD_...	NULL	Manual	AA34BEA8-E884...	2025-03-17 18:1...	EndPipeline	2025-03-17 18:3...	{ "Action" : "End" }
2	1ACC1C9E-B8D2...	1C939008-FF26-...	NULL	DC3E6A24-2155...	PL_FMD_LOAD_S...	NULL	Manual	6C182932-0447-...	2025-03-17 18:3...	EndPipeline	2025-03-17 18:3...	{↵ "Action" : "En...
3	1ACC1C9E-B8D2...	1C939008-FF26-...	NULL	DC3E6A24-2155...	PL_FMD_LOAD_S...	NULL	Manual	6C182932-0447-...	2025-03-17 18:3...	StartPipeline	2025-03-17 18:3...	{ "Action" : "Start...
4	1ACC1C9E-B8D2...	2BB79DC5-CB19...	NULL	69523C39-B819-...	PL_FMD_LOAD_B...	NULL	Manual	AA45F0C5-24D3...	2025-03-17 18:2...	StartPipelineActi...	2025-03-17 18:2...	{ "Action" : "Start...
5	1ACC1C9E-B8D2...	C19BCD8F-6F46...	NULL	67B39D07-7CE2...	PL_FMD_LOAD_...	NULL	Manual	AA34BEA8-E884...	2025-03-17 18:1...	EndPipeline	2025-03-17 18:2...	{↵ "Action" : "Err...
6	1ACC1C9E-B8D2...	2BB79DC5-CB19...	NULL	69523C39-B819-...	PL_FMD_LOAD_B...	NULL	Manual	AA45F0C5-24D3...	2025-03-17 18:2...	EndPipelineActiv...	2025-03-17 18:3...	{↵ "Action" : "En...
7	1ACC1C9E-B8D2...	CF5D046E-7D58...	NULL	C0737F04-B4E9-...	PL_FMD_LDZ_CO...	NULL	Manual	F26FF0CD-71A9-...	2025-03-17 18:1...	EndPipeline	2025-03-17 18:2...	{↵ "Action" : "En...
8	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	NULL	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndPipeline	2025-03-17 18:2...	{↵ "Action" : "En...
9	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	Invoices	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...
10	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	InvoiceLines	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...
11	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	OrderLines	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...
12	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	Orders	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...
13	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	BuyingGroups	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...
14	1ACC1C9E-B8D2...	D238165C-FCDF...	NULL	B8236D27-F8C2...	PL_FMD_LDZ_CO...	PurchaseOrderLi...	Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{↵ "Action" : "En...

Co pilot to summarize

- Explain activities
- Can be used to document

Import favorites | My managed favorites folder | EDK_NB_PROCESSI... | Microsoft Fabric | Power BI

PL_FMD_LOAD_BRONZE | No label

Search

Fabric Trial: 12 days left

Home | Activities | Run | View

Validate | Run | Schedule | Add trigger (preview) | View run history | Copy data | Dataflow | Notebook | Lookup

Home | Workspaces | OneLake | Monitor | Real-Time | Workloads | FMDT CODE (D) FMD | PL_FMD_LOAD_BRON... | PL_FMD_LOAD_ALL

Parameters | Variables | Settings | Output | Library variables

New | Delete

Name	Type	Default value
key_vault_name	String	Value
log_warehouse_endpoint	String	Value
log_warehouse_guid	String	Value
log_workspace_guid	String	Value
log_storedproc_name	String	Value

Limitation

- Fabric Database
  - Trial License max 3 databases
- Data Factory
  - Connection parameters, arrived last week
  - Fabric pipelines connection does not support SP or MI yet
  - Fabric Database connection does not SP or MI yet

Conclusion

	Out of the Box Framework	Custom Made Framework	Fabric Metadriven Framework
Ready to use	✓	✗	✓
Rapid Implementation	✓	✗	✓
Lower development effort	✓	✗	✓ ✗
Lower upfront cost	✓	✗	✓
Support and Updated	✓	✗	✓ ✗
Tailored to specific needs.	✗	✓	✗
Full control over design and features.	✗	✓	✓
Easy to extend.	✗	✓	✓

Key Learnings and Best Practices

Metadata -driven approach is a best practice for managing data pipelines

Medallion Lakehouse architecture is a proven framework for implementing Metadata -driven approach

Start small and gradually expand the Metadata -driven approach across the organization

Nitrogen Control Center

Fabric Metadriven Framework

Nitrogen Control Center

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