



# From Manual to Automated: Master Metadata-Driven Design in Fabric

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Let's connect



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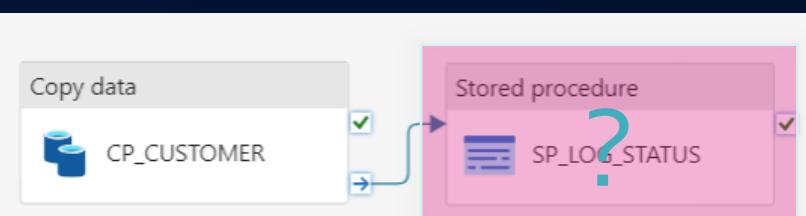


# Problem statement

The screenshot shows the Power BI FabricDemo interface. On the left, there's a sidebar with various navigation options: Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitor, Learn, Real-Time hub, Workspaces, and FabricDemo. The main area displays a list of data pipelines under the 'FabricDemo > Chaos' folder. The pipelines are listed in a table with columns for Name and Type. Most pipelines are named 'PL\_EXTRACT\_AW...' followed by a specific entity name like 'CUSTOMER', 'PRODUCT\_CATEGORY', etc. There are also pipelines for 'AW\_PRODUCTS' and 'WWI...' entities.

Name	Type
PL_EXTRACT_AW_CUSTOMER	Data pipeline
PL_EXTRACT_AW_PRODUCT_CATEGORY	Data pipeline
PL_EXTRACT_AW_PRODUCT_DESCRIPTION	Data pipeline
PL_EXTRACT_AW_PRODUCT_DESCRIPTION_LINEAGE	Data pipeline
PL_EXTRACT_AW_PRODUCT_MODEL	Data pipeline
PL_EXTRACT_AW_PRODUCT_MODEL_PRODUCT_DESCRIPTION	Data pipeline
PL_EXTRACT_AW_PRODUCTS	Data pipeline
PL_EXTRACT_AW_SALES_ORDER_DETAIL	Data pipeline
PL_EXTRACT_AW_SALES_ORDER_HEADER	Data pipeline
PL_EXTRACT_AW_SALES_ORDER_LINE	Data pipeline
PL_EXTRACT_WWI_ADDRESS	Data pipeline
PL_EXTRACT_WWI_CITIES	Data pipeline
PL_EXTRACT_WWI_COUNTRIES	Data pipeline
PL_EXTRACT_WWI_DELIVERY_METHODS	Data pipeline
PL_EXTRACT_WWI_PAYMENT_METHODS	Data pipeline
PL_EXTRACT_WWI_PEOPLE	Data pipeline
PL_EXTRACT_WWI_STATE_PROVINCES	Data pipeline
PL_EXTRACT_WWI_TRANSACTION_TYPES	Data pipeline

Content of each pipeline



I will not repeat myself  
I will not repeat myself



**DON'T REPEAT YOURSELF**

Repetition is the root of all software evil.

# Agenda



- Metadata Driven Framework
- Data Platform Engineering
- Data Integration
- Data Processing
- Data Monitoring
- Q & A

# 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



What about the Third option

- Fabric Native Solution





# 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



# The unified data platform for AI transformation



Data  
Factory



Analytics



Databases



Real-Time  
Intelligence



Power BI



Industry  
Solutions



Partner  
workloads



AI

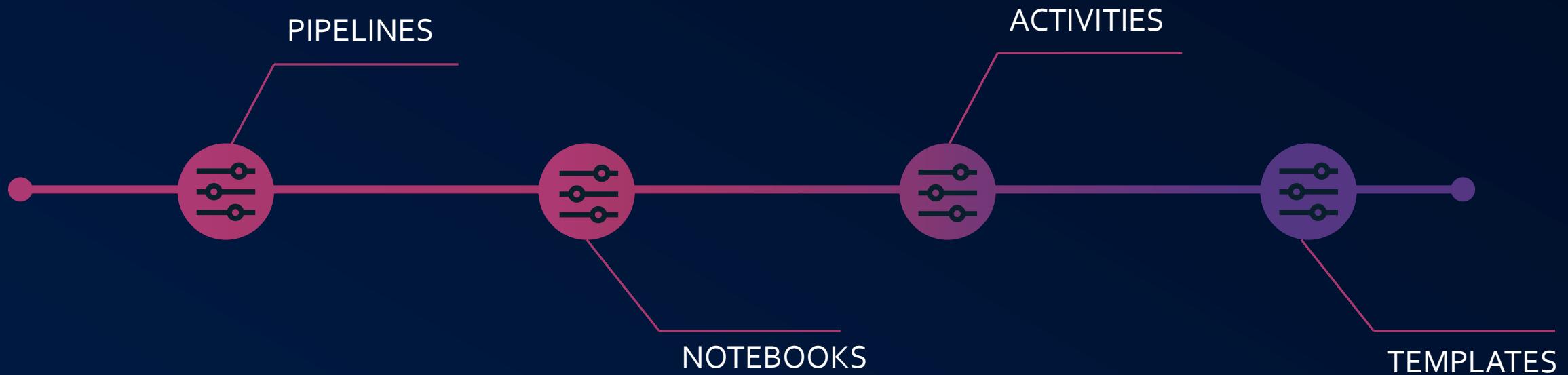


OneLake



Microsoft Purview

# Parameters



# Fabric Metadata Driven Framework

- Meets most of your needs
- Full control over design and features.
- Less development effort.
- Flexibility and extensibility.
- Lower upfront costs.
- 100 % Fabric Native Solution

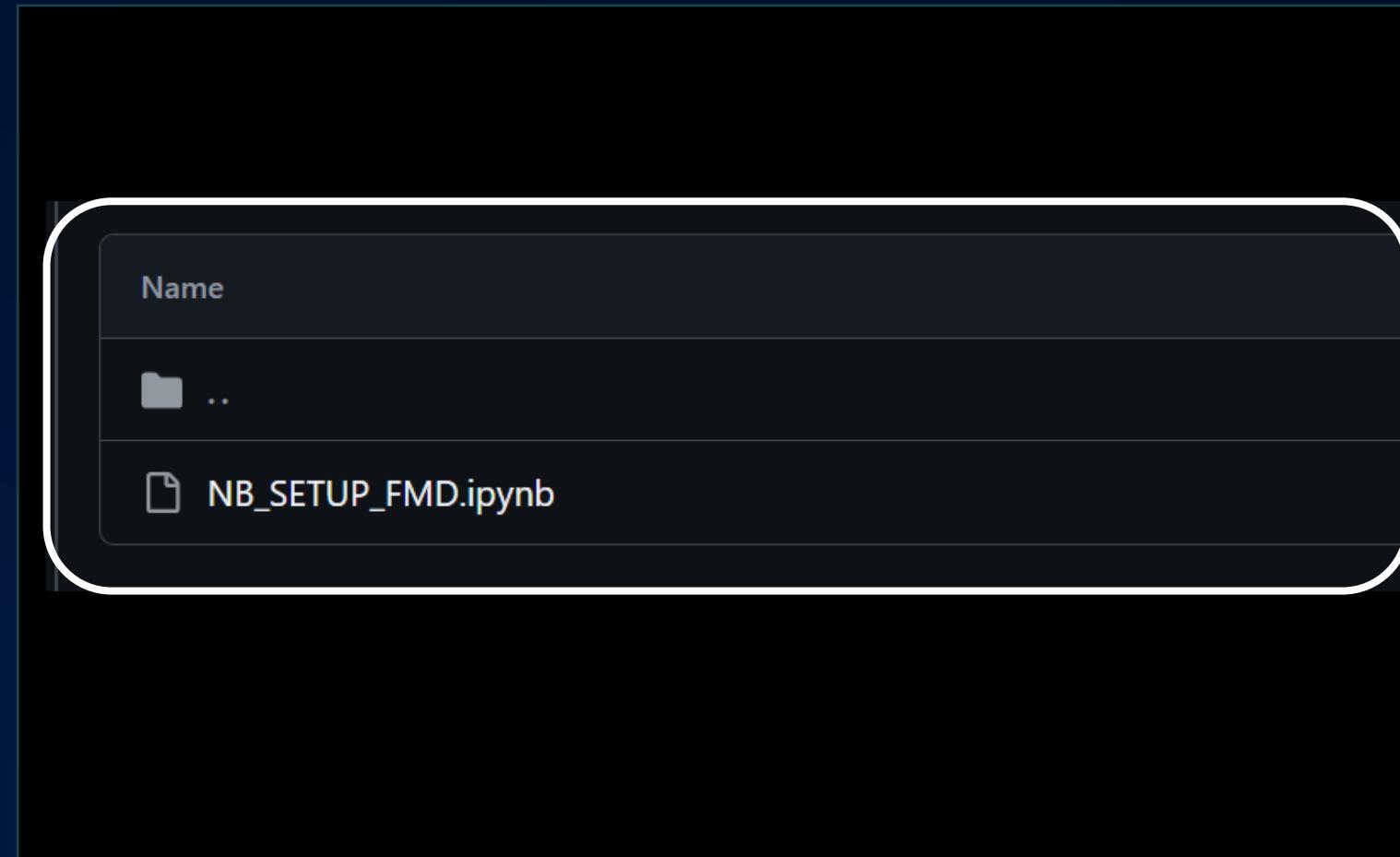
# Fabric Metadata Driven Framework

Modern data platforms demand agility, scalability, and consistency. FMD simplifies these challenges by enabling:

- Dynamic, metadata-driven pipelines
- Consistent orchestration across ingestion, processing, and publishing
- Centralized configuration for all data entities
- Alignment with Microsoft Fabric Lakehouse & Medallion Architecture
- Reduced engineering effort through reusable patterns
- Faster delivery with standardized, tested components

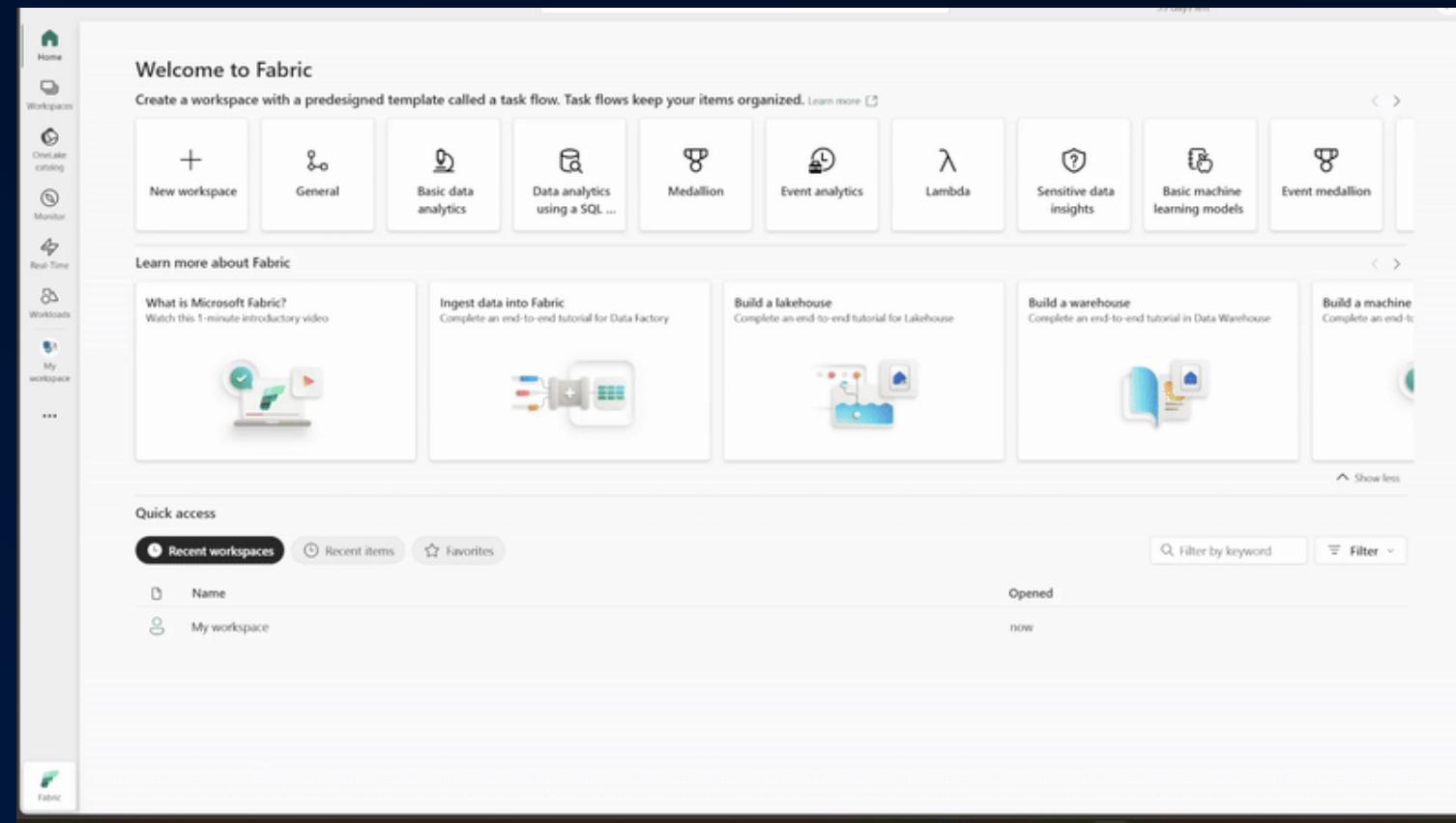
# Fabric Metadata Driven Framework

- Download Notebook from Github



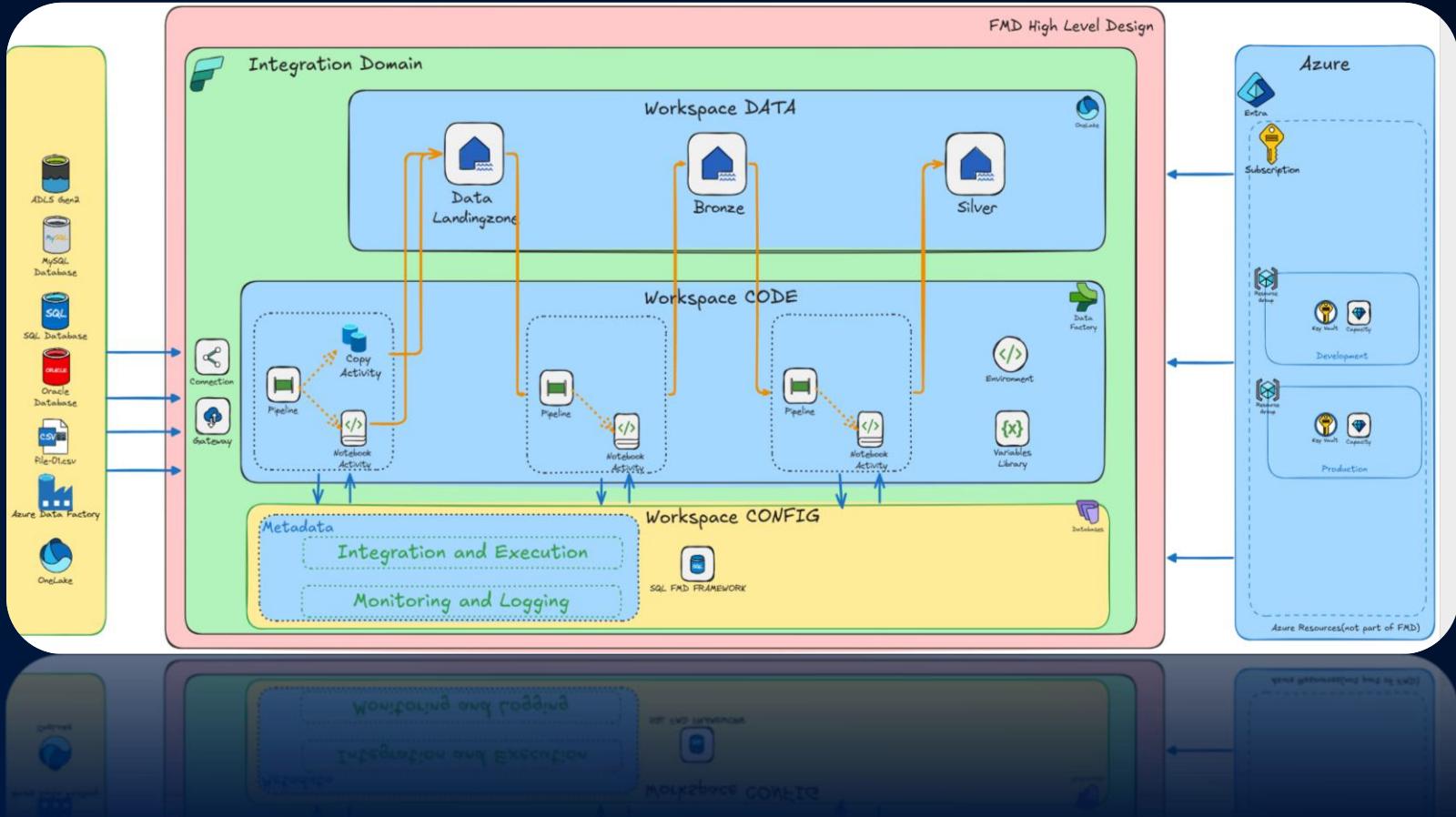
# Fabric Metadata Driven Framework

- Download Notebook from Github
- Create Workspace Name is up to you:
  - FMD\_XXX\_CONFIGURATION
- Assign a capacity
- Import Notebook to this Workspace



# Fabric Metadata Driven Framework

- Open Notebook
- NB\_SETUP



# Data Platform Engineering

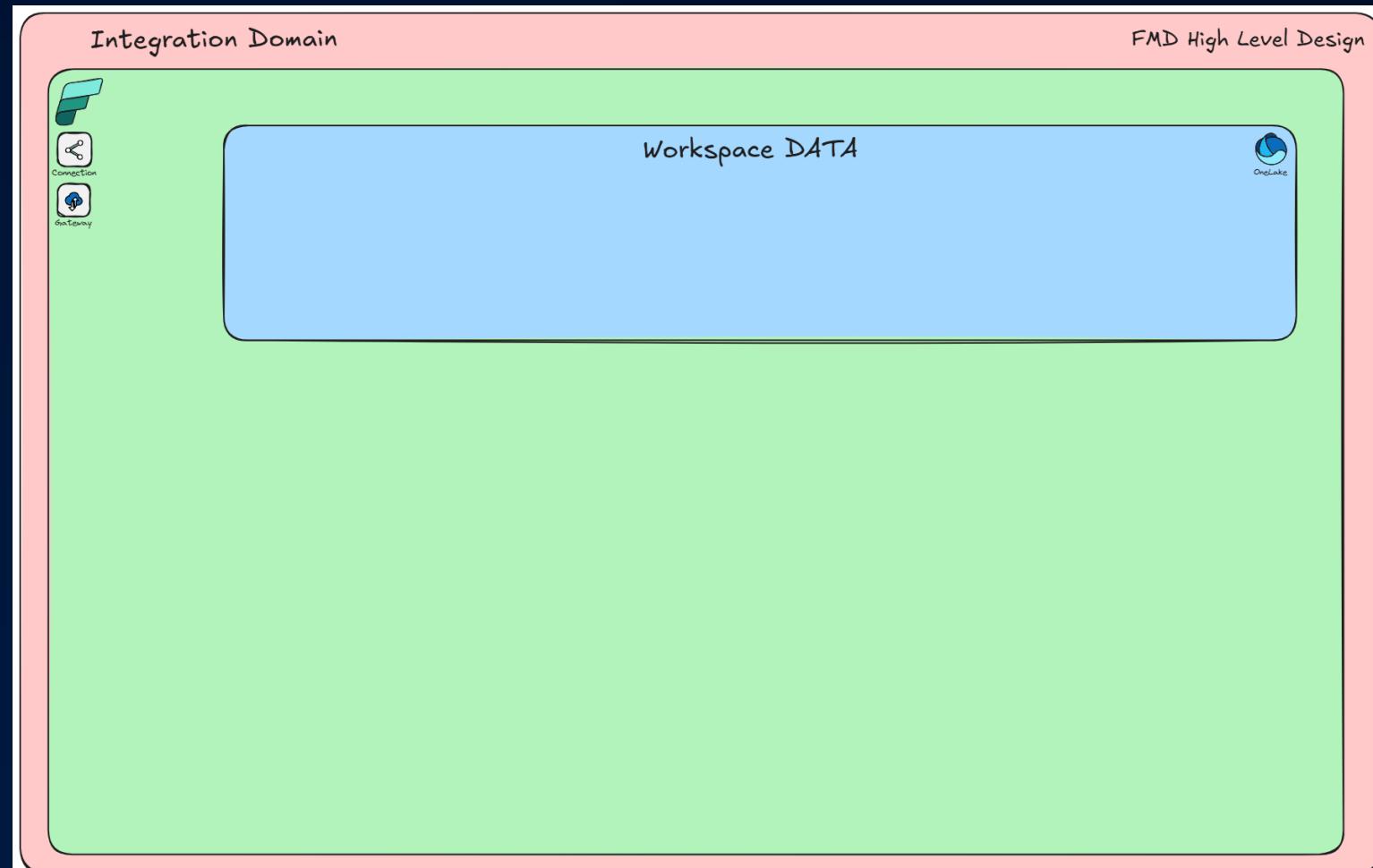
# Data Platform Engineering

- Azure subscription
- Fabric Capacity (Trial)
- Key Vault optional
- Fabric Administrator role



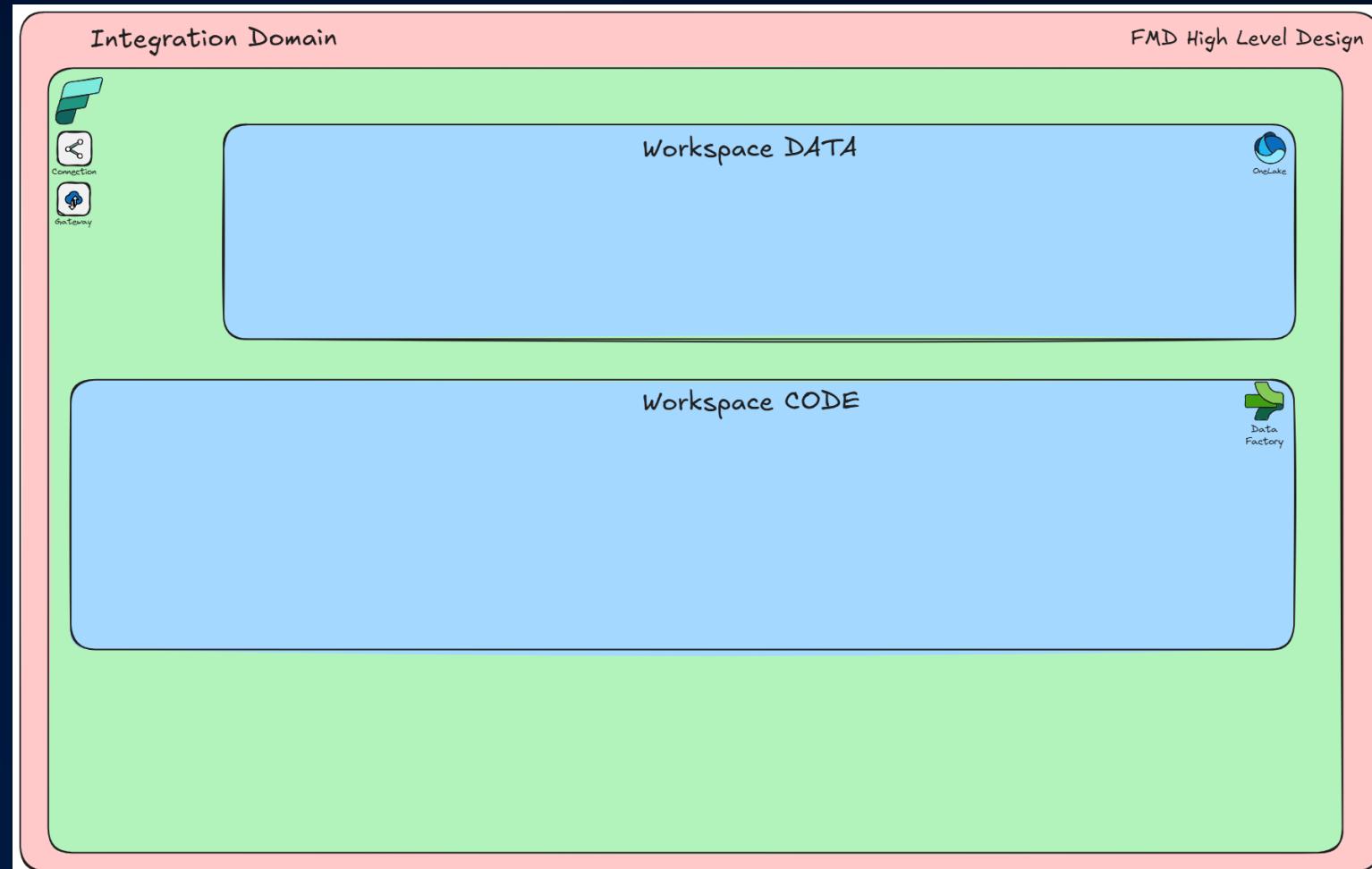
# Data Platform Engineering

- Workspace DATA:
- Lakehouses



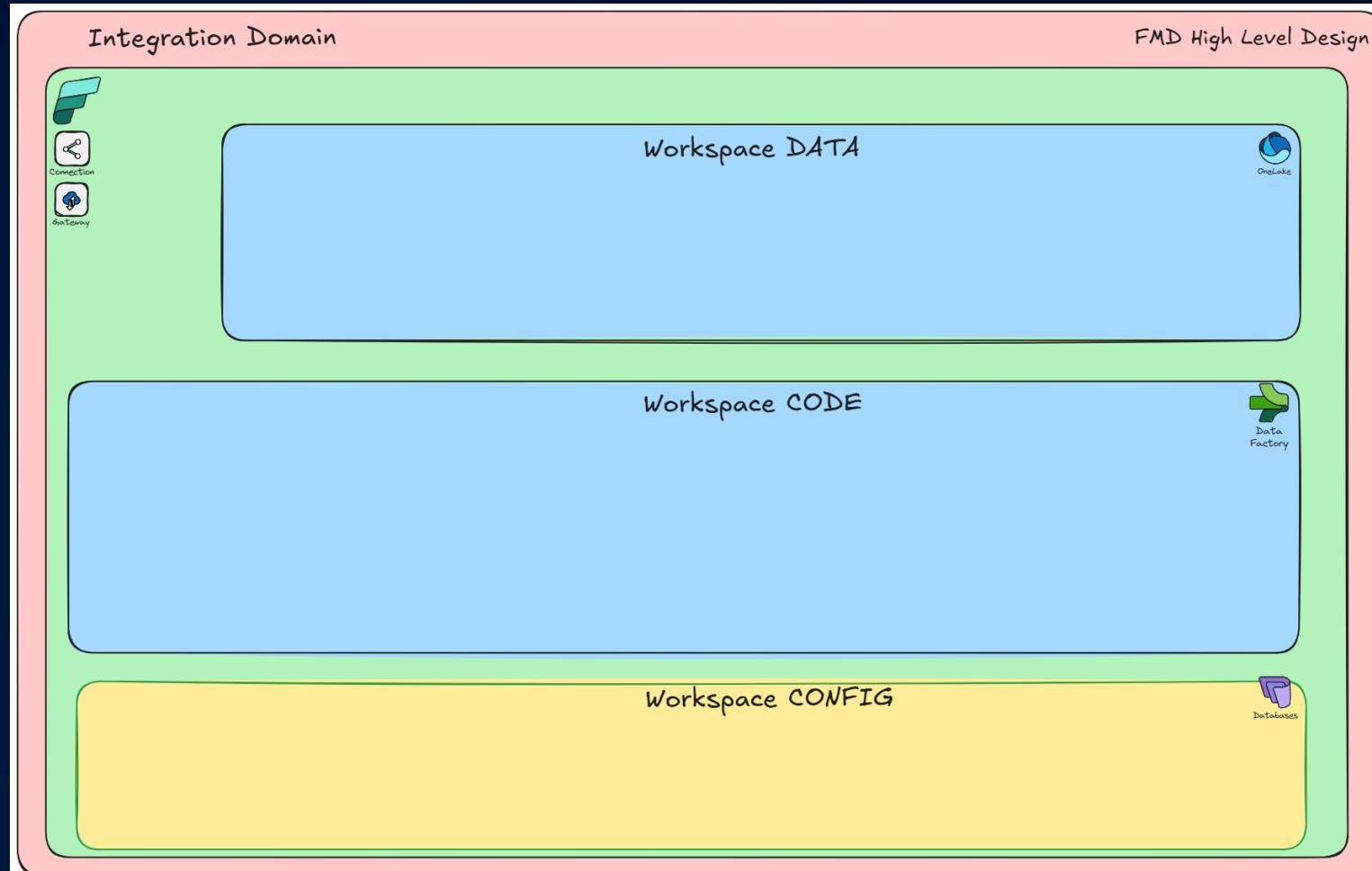
# Data Platform Engineering

- Workspace CODE
- Data Pipelines
- Notebooks
- Environments
- Variable Libraries



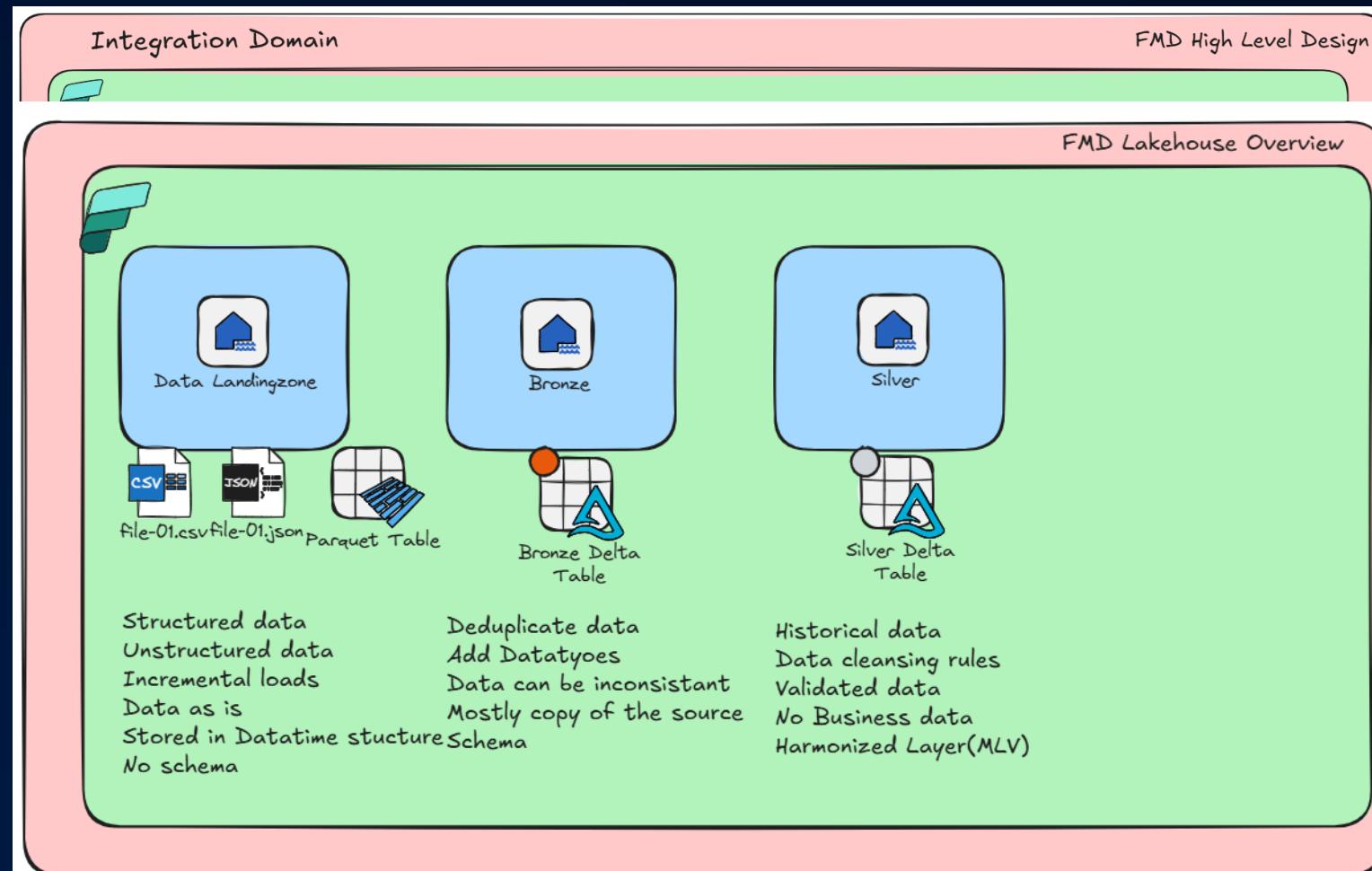
# Data Platform Engineering

- Workspace CONFIG
- Fabric database
  - Metadata database



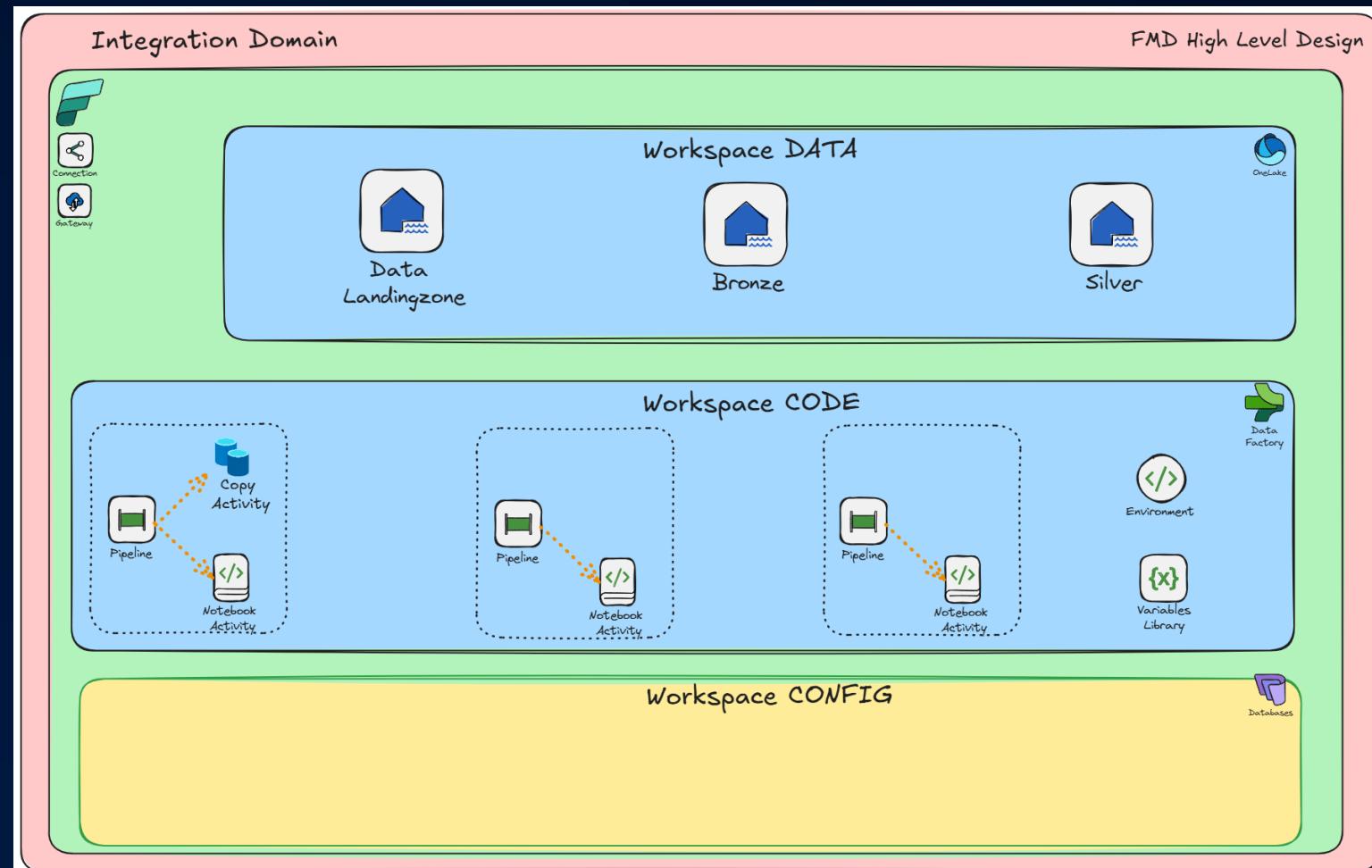
# Item deployment

- Lakehouse
- Medallion Architecture
  - Data Landingzone
  - Bronze
  - Silver



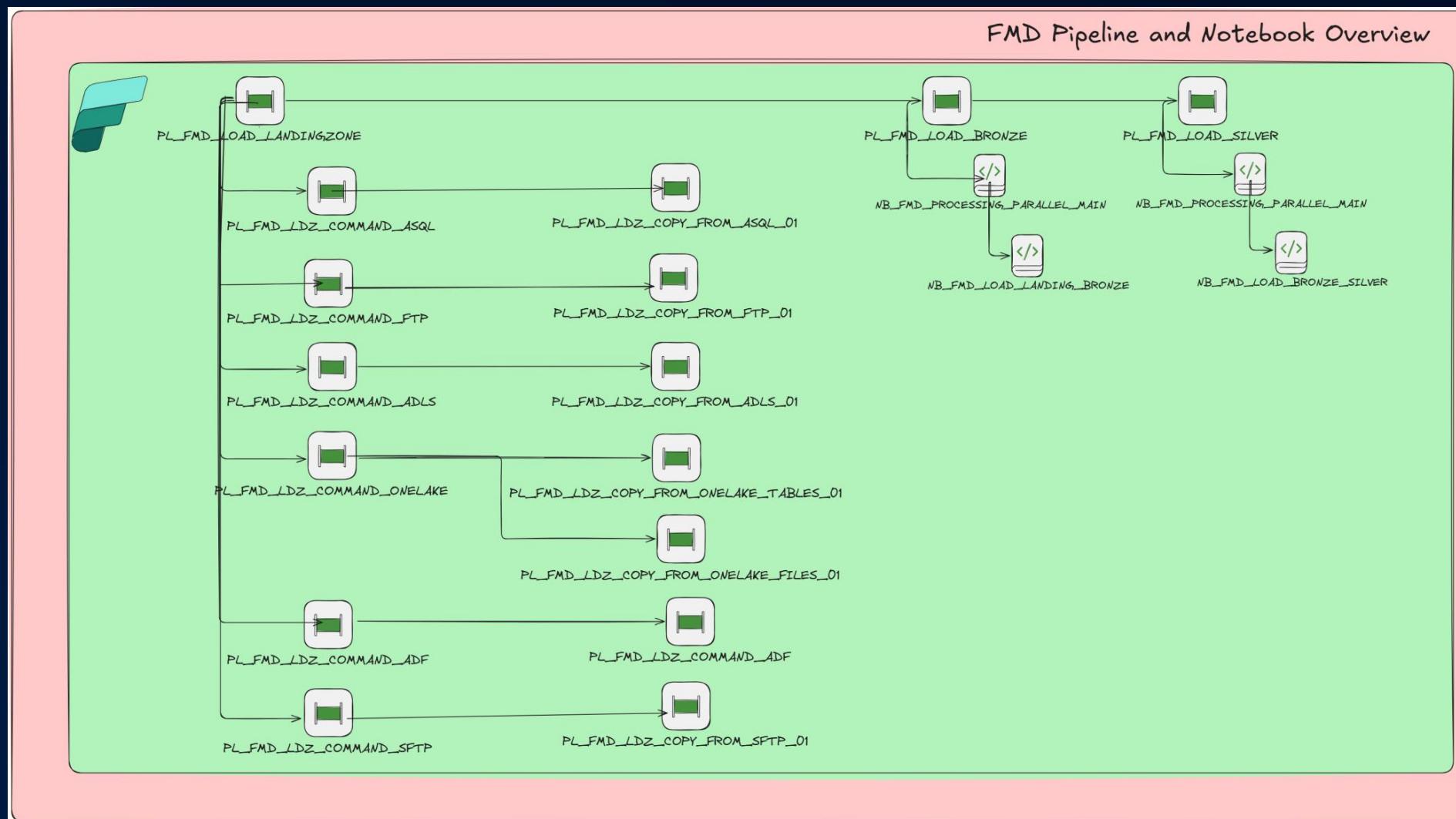
# Item deployment

- Variable Library
- Environment



# Item deployment

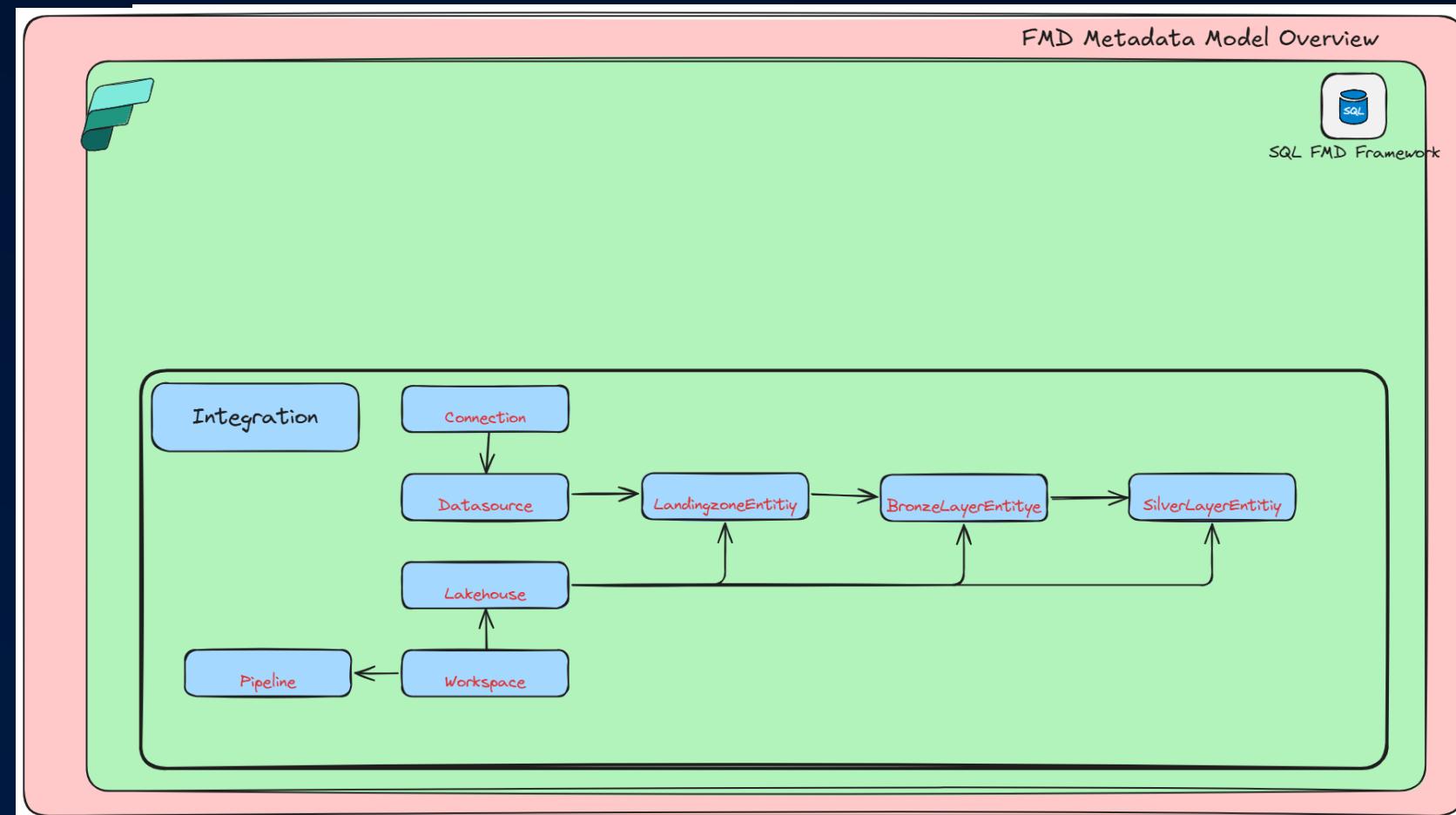
- Variable Library
- Environment
- Data Pipelines
- Notebooks



# Data Integration

# Data Integration

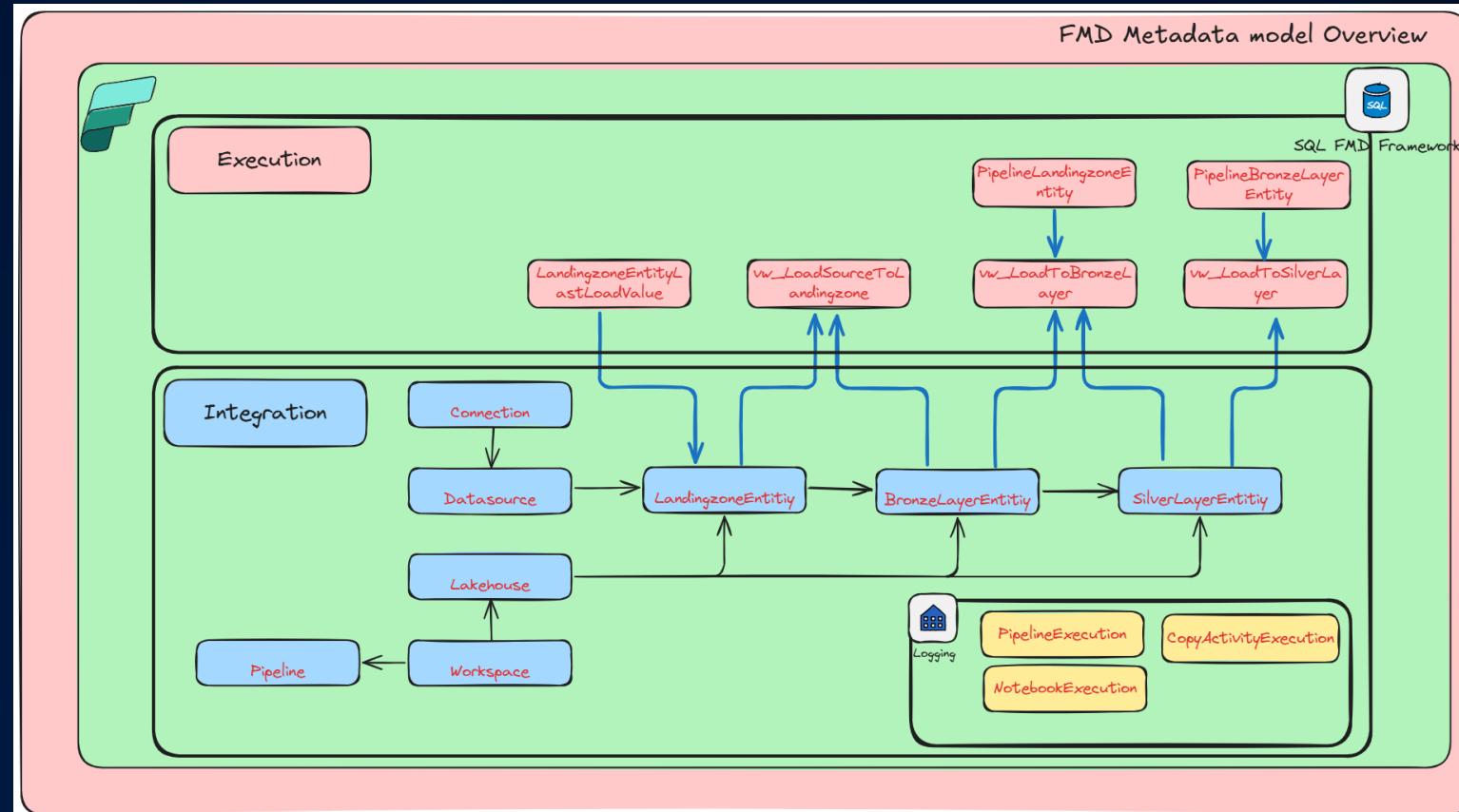
- Fabric database for metadata
- Integration
  - Tables
  - Views
  - Stored Procedures



# Data Integration



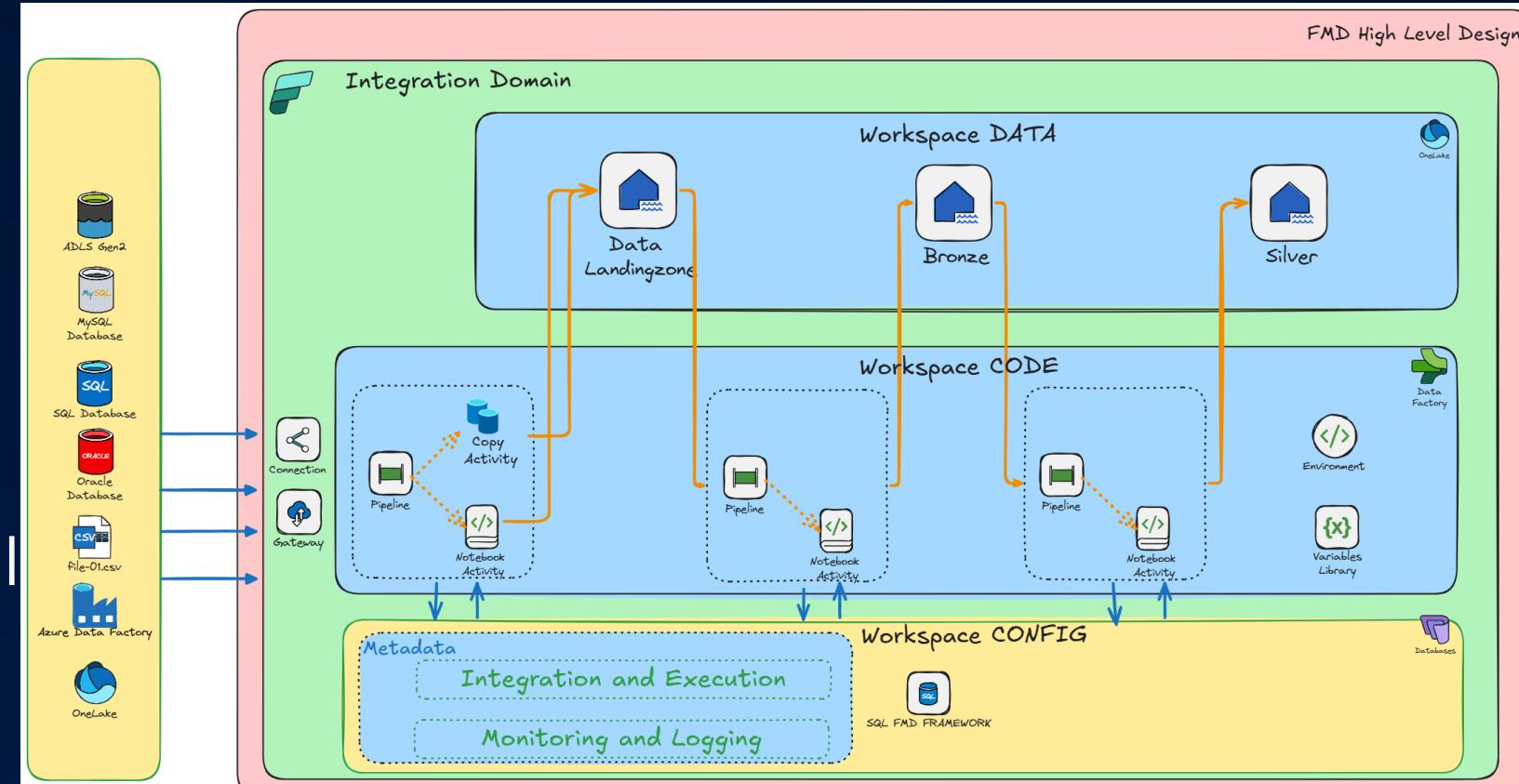
- Execution
    - Tables
    - Views
    - Stored Procedures
  - Logging
    - Tables
    - Views
    - Stored Procedures



# Data Sources

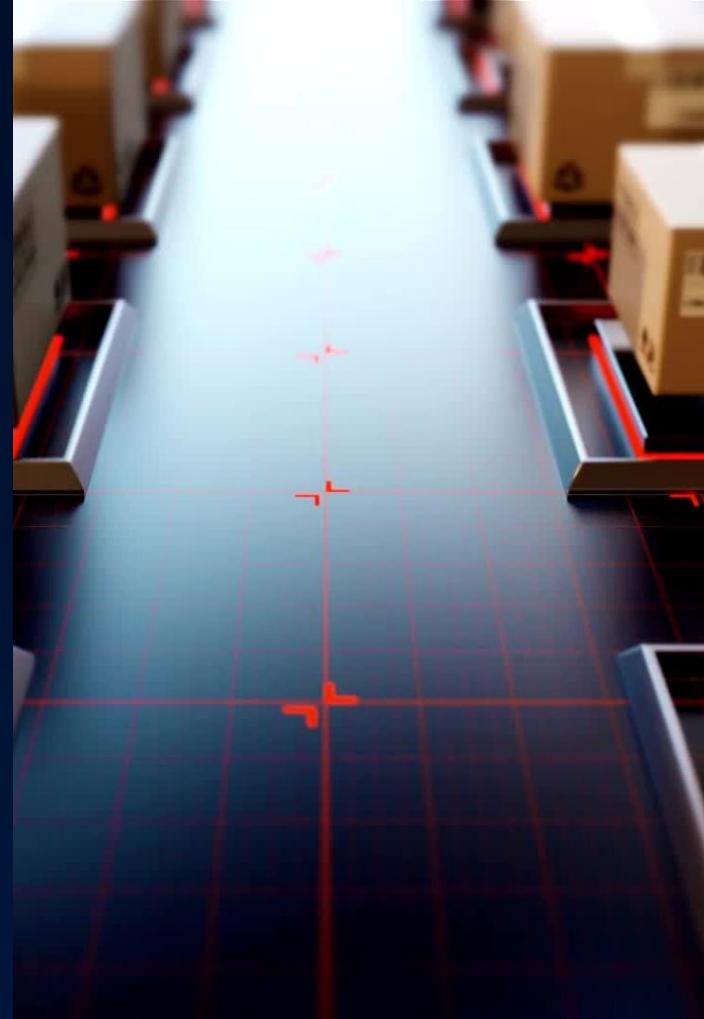
- SQL Server
- Data Lake Gen 2
- Onelake Tables
- Onelake Files
- FTP / SFTP
- Oracle
- Custom Notebooks(API)
- ADF (Connect to ADF pipeline)

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



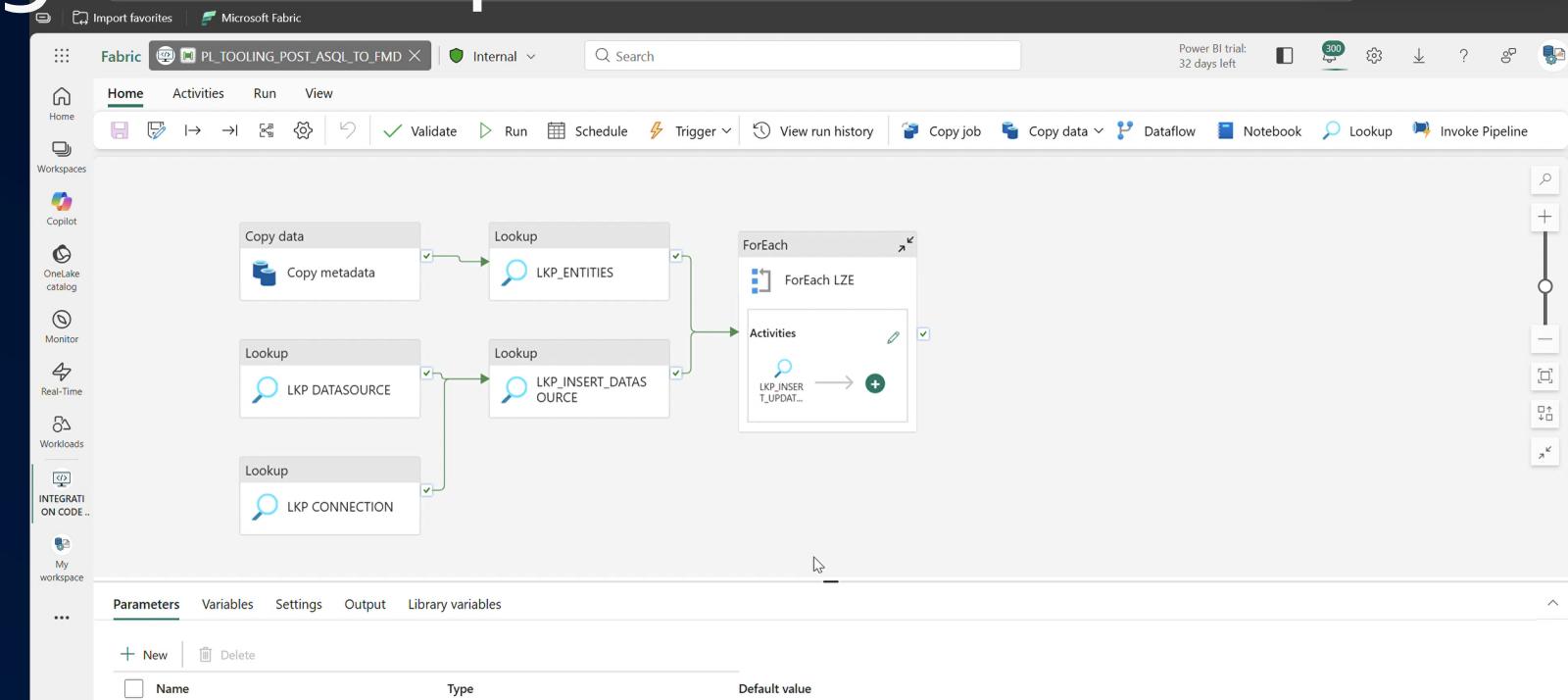
## How to get data easily into Fabric Metadata Driven data model

- Metadata driven ingestion Pipeline
- Manual



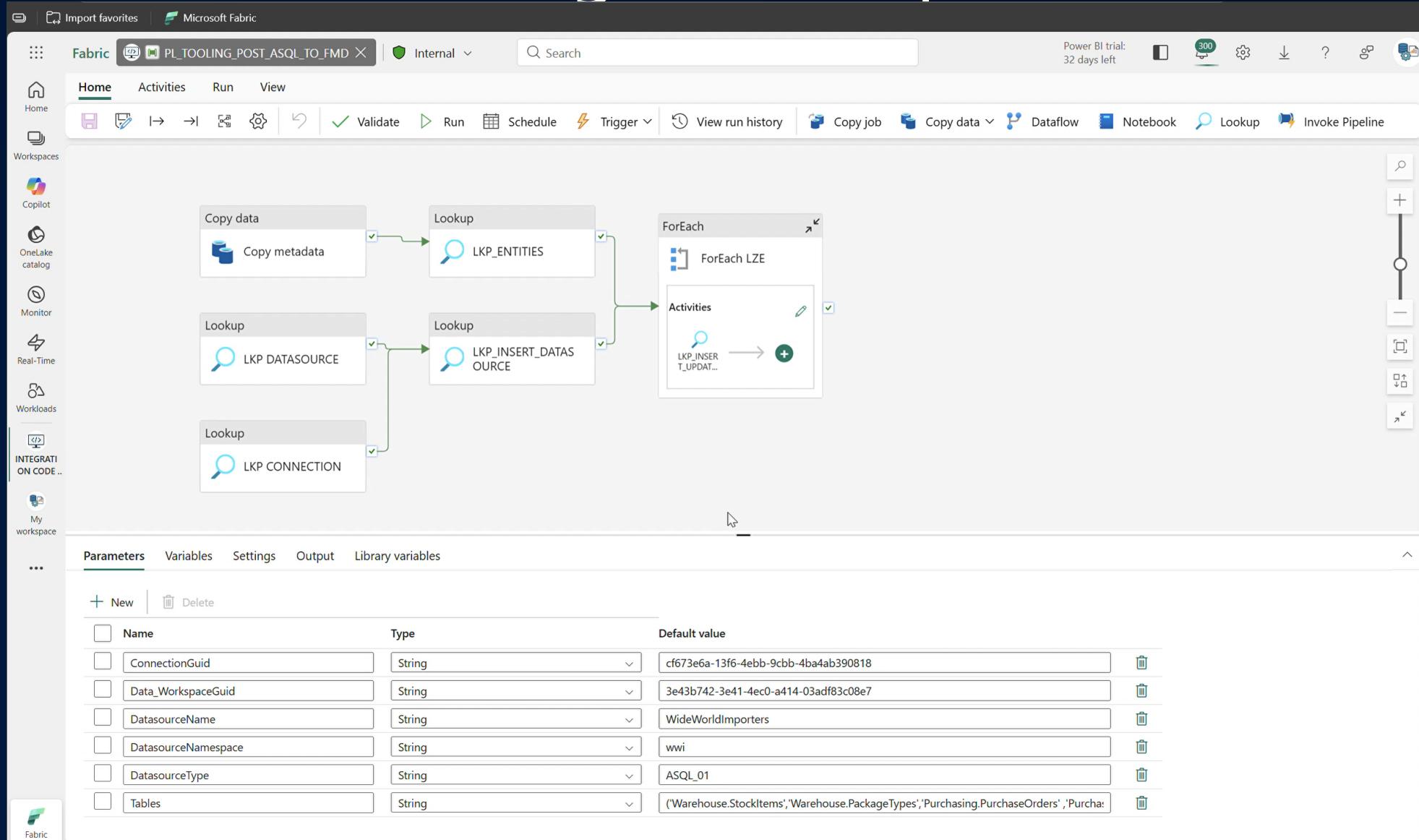
# Metadata driven ingestion Pipeline

- ConnectionGuid
- DatasourceName
- Namespace
- DatasourceType
- Tables(schema+table)



	Name	Type	Default value
<input type="checkbox"/>	ConnectionGuid	S...	cf673e6a-13f6-4ebb-9ccb-4ba4ab390818
<input type="checkbox"/>	Data_WorkspaceGuid	S...	3e43b742-3e41-4ec0-a414-03adf83c08e7
<input type="checkbox"/>	DatasourceName	S...	WideWorldImporters
<input type="checkbox"/>	DatasourceNamespace	S...	wwi
<input type="checkbox"/>	DatasourceType	S...	ASQL_01
<input type="checkbox"/>	Tables	S...	('Warehouse.StockItems','Warehouse.PackageTypes','Purchasing.PurchaseOrders','Purchasing.PurchaseOrderLines','Sales.vCustomers','Sales.CustomerCategories','Sales.Orc')

# Metadata driven ingestion Pipeline



# How to add a new connection and entity

```
set @ConnectionGuid='11a8e5fe-fbca-4822-9ba4-9162cf56e6dd'  
set @Name='CON_FMD_CONTOSO'  
set @Type='ASQL_01'  
  
EXECUTE @RC = [integration].[sp_UpsertConnection]  
    @ConnectionGuid  
    ,@Name  
    ,@Type
```

Add Connection

```
set @ConnectionId='Id of connection you want to connect to'  
set @DataSourceId=0  
set @Name='Databasename'  
set @Namespace='location in Landingzone'  
set @Type='SQL'  
set @Description=''  
  
EXECUTE @RC = [integration].[sp_UpsertDataSource]  
    @ConnectionId  
    ,@DataSourceId  
    ,@Name  
    ,@Namespace  
    ,@Type  
    ,@Description
```

Add Datasource

```
SET @DataSourceId=''  
SET @WorkspaceGuid='3e43b742-3e41-4ec0-a414-03adf83c08e7'  
SET @SourceSchema='dbo'  
SET @SourceName='Employees'  
SET @SourceCustomSelect=''  
SET @FileName='dbo_Employees'  
SET @FilePath='FMD'  
SET @FileType='parquet'  
SET @IsIncremental=''  
SET @IsIncrementalColumn=''  
SET @CustomNotebookName=''  
SET @PrimaryKeys='EmployeeID'  
  
EXECUTE @RC = [integration].[sp_UpsertLandingzoneBronzeSilver]  
    @DataSourceId  
    ,@WorkspaceGuid  
    ,@SourceSchema  
    ,@SourceName  
    ,@SourceCustomSelect  
    ,@FileName  
    ,@FilePath  
    ,@FileType  
    ,@IsIncremental  
    ,@IsIncrementalColumn  
    ,@CustomNotebookName  
    ,@PrimaryKeys
```

Add Entity

# Landingzone Entity Table

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

123	DataSourceId	123	LakehouseId	ABC	SourceSchema	ABC	SourceName	ABC	FileName	ABC	FileType	ABC	FilePath	0/1	IsIncremental	ABC	IsIncrementalColumn
1		2		SalesLT		Product		SalesLT_Product		parquet		fmd		False			
1		2		SalesLT		Customer		SalesLT_Customer		parquet		fmd		True		ModifiedDate	
2		2		Sales		Invoices		Sales_Invoices		parquet		fmd		False		NULL	
3		2		dbo		Employees		dbo_Employees		parquet		fmd		False			
4		2		demo1		customers.csv		customers		csv		fmd		False		NULL	
8		2		dl		people		people		parquet		fmd		False		NULL	
2		2		Purchasing		PurchaseOrders		Purchasing_PurchaseOrders		parquet		fmd		False		NULL	
2		2		Purchasing		PurchaseOrderLines		Purchasing_PurchaseOrderLines		parquet		fmd		False		NULL	
2		2		Sales		CustomerCategories		Sales_CustomerCategories		parquet		fmd		False		NULL	
2		2		Sales		OrderLines		Sales_OrderLines		parquet		fmd		False		NULL	
2		2		Sales		Orders		Sales_Orders		parquet		fmd		False		NULL	
2		2		Sales		BuyingGroups		Sales_BuyingGroups		parquet		fmd		False		NULL	
2		2		Sales		InvoiceLines		Sales_InvoiceLines		parquet		fmd		False		NULL	

# BronzeLayer Entity Table

- Schema
- Name
- Primarykeys
- CleansingRules

ABC	LandingzoneEntityId	123	LakehouseId	ABC	Schema	ABC	Name	ABC	PrimaryKeys	ABC	FileType	ABC	CleansingRules
1		3		SalesLT		Product		ProductID		Delta		NULL	
2		3		SalesLT		Customer		CustomerID		Delta		NULL	
3		3		Sales		Invoices		InvoiceID		Delta		NULL	
4		3		dbo		Employees		EmployeeID		Delta		NULL	
5		3		demo1		customers		Customerid		Delta		NULL	
10		3		d1		people		Userid		Delta		NULL	
19		3		Purchasing		PurchaseOrders		PurchaseOrderID		Delta		NULL	
20		3		Purchasing		PurchaseOrderLines		PurchaseOrderLineID		Delta		NULL	
21		3		Sales		CustomerCategories		CustomerCategoryID		Delta		NULL	
22		3		Sales		OrderLines		OrderLineID		Delta		NULL	
23		3		Sales		Orders		OrderID		Delta		NULL	
25		3		Sales		InvoiceLines		InvoiceLineID		Delta		NULL	
24		3		Sales		BuyingGroups		BuyingGroupID		Delta		NULL	

# Silver Layer Entity Table

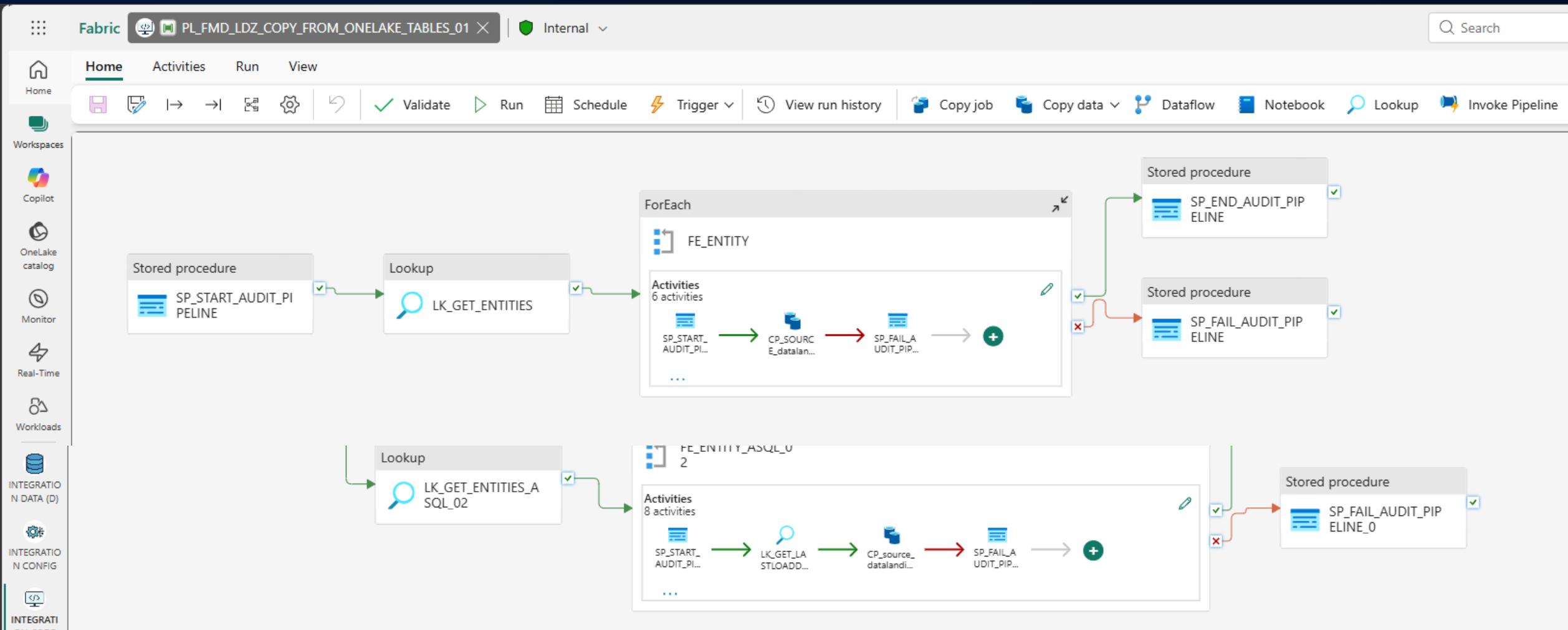
- Schema
- Name
- CleansingRules

ABC Schema	ABC Name	ABC FileType	ABC 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

# Demo

# Data Processing

# Data Processing ( source to Data Landingzone )



# Data Processing (Data LDZ to Bronze/Silver )

The screenshot shows a data processing interface with the following components:

- Toolbar:** Fabric, PL\_FMD\_LOAD\_BRONZE, Internal. Includes Home, Activities, Run, View, and several icons for file operations.
- Pipeline Diagram:** A flow from a "Stored procedure" node (SP\_START\_AUDIT\_PI PELINE) to a "Lookup" node (LK\_GET\_EN RZ).
- Parameters:** A section displaying Python code snippets for PySpark:

  - Top snippet:

```
1 from json import loads, dumps
2 import uuid
3 from datetime import datetime
4 NotebookExecutionId = str(uuid.uuid4())
5
```

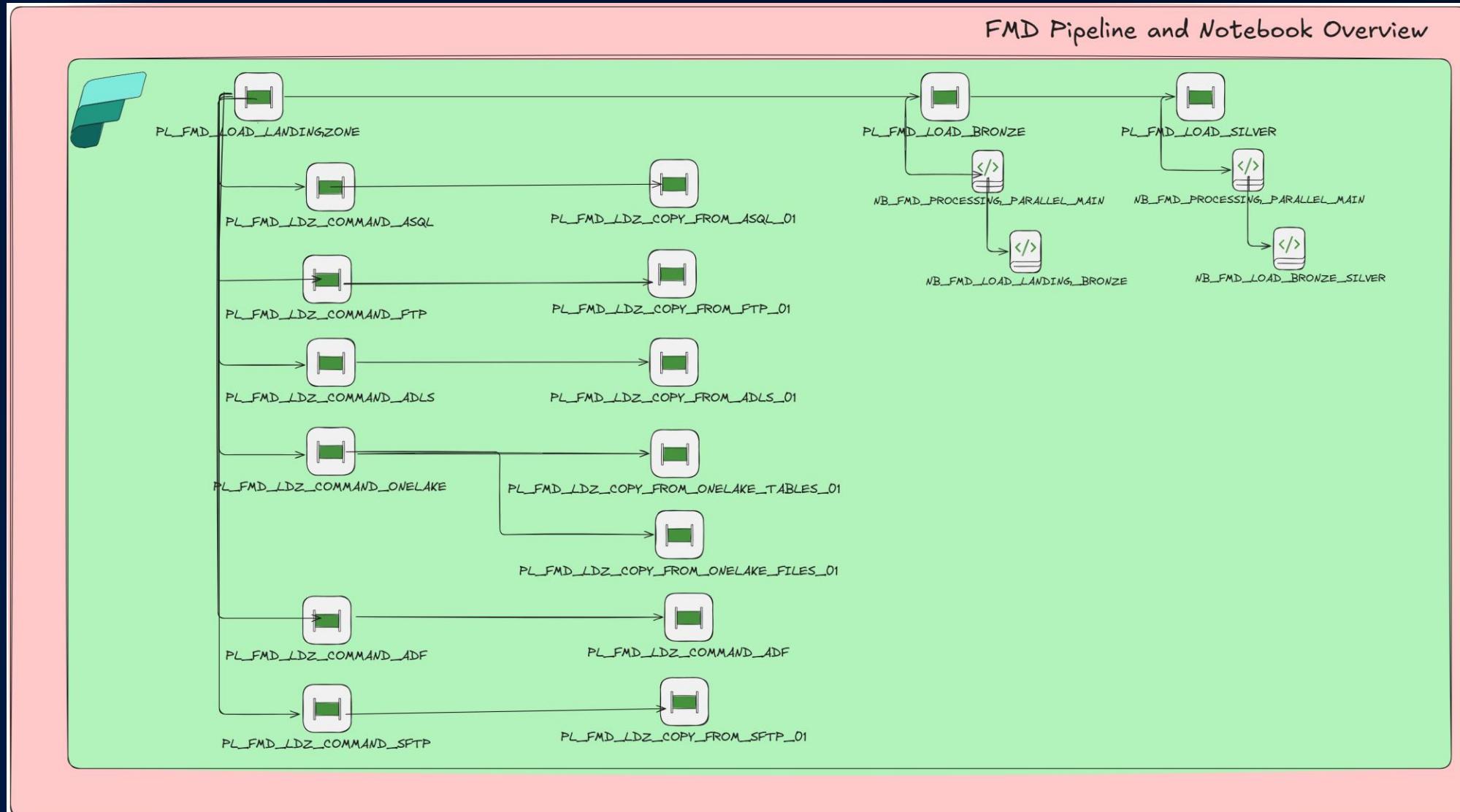
  - Middle snippet:

```
1 variable_settings=notebookutils.variableLibrary.getLibrary("VAR_FMD")
```

  - Bottom snippet:

```
1 Path = ""
2 useRootDefaultLakehouse= True
3 PipelineRunGuid = ""
4 PipelineGuid = ""
5 TriggerGuid = ""
6 TriggerTime = ""
```

# Data Processing



# Data Processing Cleansing rules (BRZ/SLV)

- NB\_FMD\_DQ\_CLEANSING
  - Built in Rules
    - normalize\_text
    - split
    - fill\_nulls
    - parse\_datetime

```

DECLARE @RC int
DECLARE @SilverLayerEntityId int
DECLARE @CleansingRules nvarchar(max)

-- TODO: Set parameter values here.

EXECUTE @RC = [integration].[sp_UpsertSilverCleansingRule]
    24
    ,[{"function": "normalize_text","columns": "CustomerName","parameters": {"case": "upper"}}]
GO
  
```

Messages	Results	↓	{} {}}	ABC	Search
	123 SilverLayerEntityId			CleansingRules	

123 SilverLayerEntityId

124 {"function": "normalize\_text","columns": "CustomerName","parameters": {"case": "upper"}}

```

df_norm = normalize_text(
    df,
    columns=["title"],
    args={"case": "lower", "empty_as_null": False}
)
  
```

```

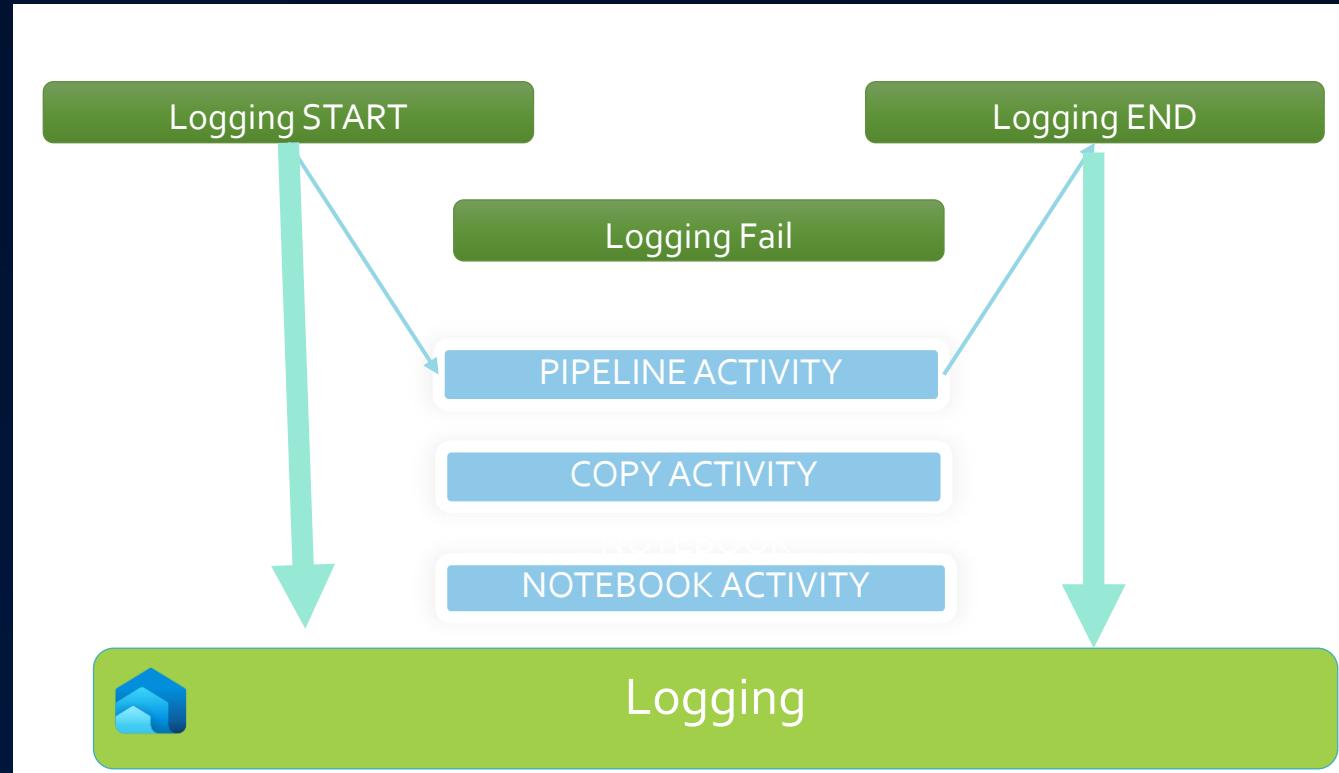
df_norm = normalize_text(
    df,
    columns=["name"],
    args={"case": "title", "collapse_spaces": False}
)
  
```

# Demo

# Data Monitoring

# Data Monitoring

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



# Data Monitoring

- Add Information about pipelines
- Adding System Variables

**Pipeline expression builder**

Add dynamic content below using any combination of expressions, functions and system variables.

```
@pipeline().Pipeline
```

**General Settings**

Data store type  Workspace  External  
Warehouse  WH\_Logging  
Stored procedure name \*  [logging].[sp\_AuditPipeline]

Stored procedure parameters

[Import](#) [New](#) [Delete](#)

<input type="checkbox"/>	Name	Type
<input type="checkbox"/>	LogData	String
<input type="checkbox"/>	LogType	String
<input type="checkbox"/>	PipelineGuid	Guid
<input type="checkbox"/>	PipelineName	String
<input type="checkbox"/>	PipelineParameters	String
<input type="checkbox"/>	PipelineParentRunGuid	Guid
<input type="checkbox"/>	PipelineRunGuid	Guid
<input type="checkbox"/>	TriggerGuid	Guid
<input type="checkbox"/>	TriggerTime	DateTime
<input type="checkbox"/>	TriggerType	String
<input type="checkbox"/>	WorkspaceGuid	Guid

**System variables**

Search

Pipeline ID  
ID of the pipeline

Pipeline Name  
Name of the pipeline

Pipeline group ID  
ID of the group to which the pipeline run belongs

Pipeline run ID  
ID of the specific pipeline run

Pipeline trigger ID  
ID of the trigger that invokes the pipeline

Pipeline trigger time  
Time when the trigger that invoked the pipeline. The trigger time is the actual fired time, not the sched...

Pipeline trigger type  
Type of the trigger that invoked the pipeline (Manual, Scheduler)

Pipeline triggered by pipeline ID  
ID of the pipeline that triggered this pipeline. Applicable when a pipeline run is triggered by an Execut...

Pipeline triggered by pipeline name  
Name of the pipeline that triggered this pipeline. Applicable when a pipeline run is triggered by an Ex...

Pipeline triggered by pipeline run ID  
Run ID of the pipeline that triggered this pipeline. Applicable when a pipeline run is triggered by an Ex...

Workspace ID  
ID of the workspace the pipeline run is running within

# Data Monitoring

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

Pipeline expression builder

Add dynamic content below using any combination of expressions, functions and system variables.

```
{
  "Action": "End",
  @activity('NB_Landing_to_Bronze').output.result.exitValue
}
```



The screenshot shows a JSON object representing a pipeline run status. Two arrows point from the Pipeline expression builder code to specific fields in the JSON:

- The first arrow points to the field `@activity('NB_Landing_to_Bronze').output.result.exitValue`, which corresponds to the `exitValue` field in the JSON.
- The second arrow points to the field `highConcurrencyModeStatus`, which corresponds to the `highConcurrencyModeStatus` field in the JSON.

```

{
  "status": "Succeeded",
  "result": {
    "runId": "10883eal-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': 'true'}\"}]",
    "message": "Notebook execution is in Succeeded state, runId: 10883eal-cac8-4d1b-92d3-03f8ca451054",
    "SparkMonitoringURL": "https://app.powerbi.com/workloads/de-ds/sparkmonitor/fcd42644-4a20-4a20-8a20-4a204a204a20",
    "executionDuration": 266
  }
}

```

# Data Monitoring

PipelineExecution X

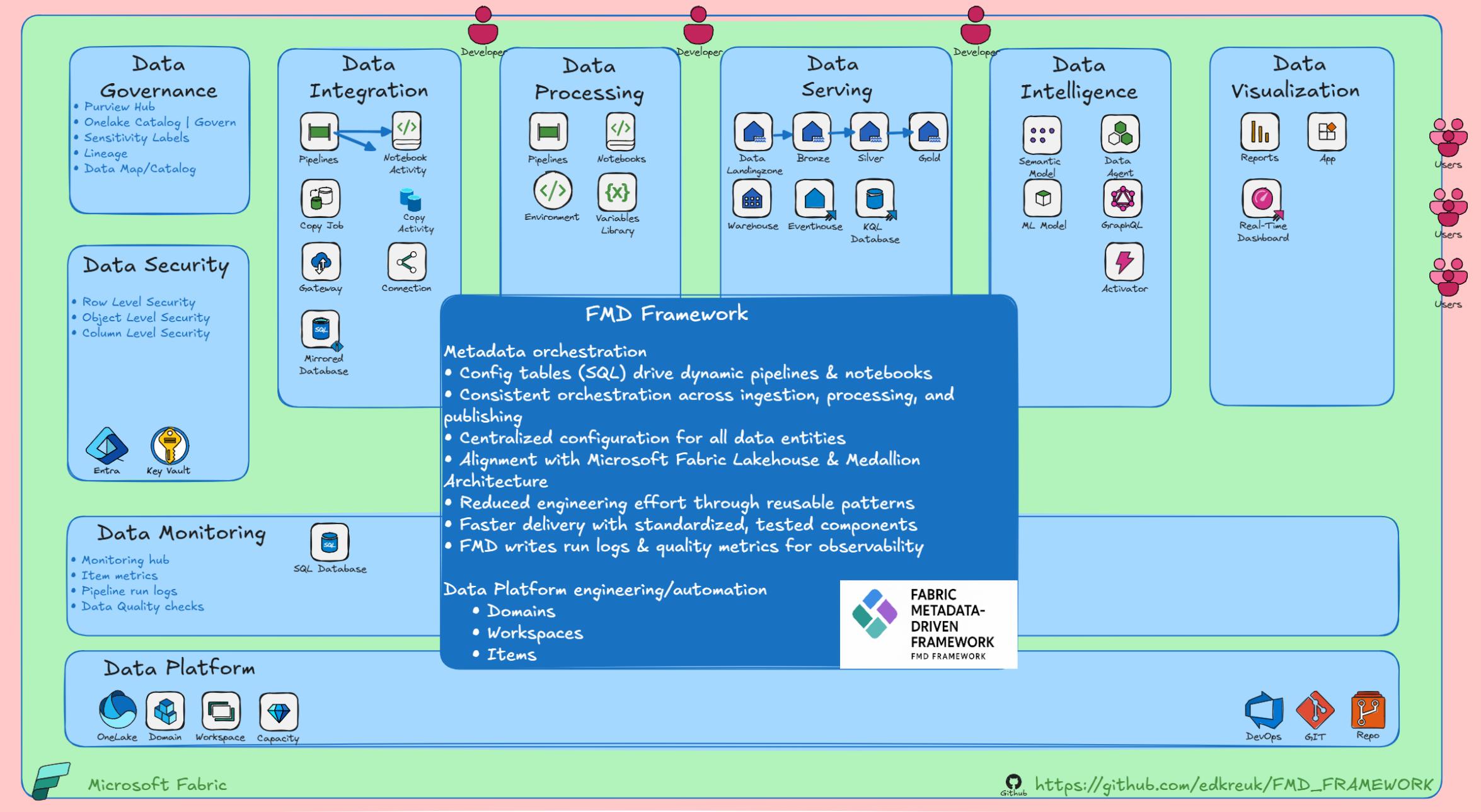
Data preview - PipelineExecution Showing 1000 rows Search

	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...								
J1	1ACC1C9E-B8DS...	DS38165C-FCDE...	NULL		B8530D51-F8CS...	PL_FMD_LDZ_CO...	InvoiceLines		Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{ "Action" : "En...								
J3	1ACC1C9E-B8DS...	DS38165C-FCDE...	NULL		B8530D51-F8CS...	PL_FMD_LDZ_CO...	OrderLines		Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{ "Action" : "En...								
J5	1ACC1C9E-B8DS...	DS38165C-FCDE...	NULL		B8530D51-F8CS...	PL_FMD_LDZ_CO...	Orders		Manual	800DB4CE-CA74...	2025-03-17 18:1...	EndCopyActivity	2025-03-17 18:2...	{ "Action" : "En...								
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# Conclusion

	Out of the Box Framework	Custom Made Framework	Fabric Metadata-driven 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.	✗	✓	✓

# Fabric Metadata-Driven Framework



# 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



The screenshot shows a web browser window for the InSpark Cloud Management Portal at <https://cmp.inspark.nl/Nitrogen/Information>. The page title is "Cloud Management Portal" and the sub-page title is "Nitrogen > Information". The navigation bar includes "Import favorites", "EDK\_NB\_PROCESSL...", "Microsoft Fabric", and "Power BI". The user "Erwin De Kreuk(Labs)" is logged in. On the left, a sidebar lists "Overview", "Tenant settings", "Domain wizard" (selected), "Domain" (set to "DM\_WWL\_DEMO"), and various entities like "Insights", "Landing zone entities", "Bronze entities", "Silver entities", "Gold entities", "Promotions", "Load Planner Groups", and "Entity wizard". The main content area has tabs for "Overview", "Product Information" (selected), "Enrollment", and "Deployment". The "Nitrogen Explained" section describes Nitrogen as a cutting-edge software solution using Medallion architecture for Microsoft Fabric. The "Key Features" section lists five numbered points: 1. Medallion Architecture, 2. Microsoft Fabric Compatibility, 3. Next-Generation Data Management, 4. Streamlined Operations, and 5. Scalability and Performance. A "Contact" sidebar on the right encourages users to reach out for more information via a "Contact me" button.

Cloud Management Portal

INSPARK

Home > Nitrogen > Information

Overview Product Information Enrollment Deployment

Nitrogen Explained

Nitrogen is a cutting-edge software solution that harnesses the power of the Medallion architecture to revolutionize the way you manage and leverage data. Designed specifically for the new Microsoft Fabric service, a groundbreaking addition to the Microsoft Azure platform, Nitrogen positions itself at the forefront of the data world's most exciting innovations. With the promise of a SaaS-managed data solution from Microsoft, Nitrogen is poised to elevate your data management to new heights.

Key Features:

1. Medallion Architecture: Nitrogen leverages the robust and proven Medallion architecture to provide a rock-solid foundation for all your data management needs. This architecture is renowned for its reliability, scalability, and efficiency, making Nitrogen a trusted choice for businesses of all sizes.
2. Microsoft Fabric Compatibility: Nitrogen is tailor-made for the new Microsoft Fabric service, making it seamlessly integrated with this groundbreaking platform. With Nitrogen, you can effortlessly harness the capabilities of Microsoft Fabric to optimize your data infrastructure.
3. Next-Generation Data Management: As Microsoft Fabric takes center stage in the data world, Nitrogen enables you to stay ahead of the curve. This SaaS-managed data solution from Microsoft offers unparalleled performance, security, and scalability, ensuring your data is always accessible and protected.
4. Streamlined Operations: Nitrogen simplifies data management by providing a user-friendly interface and a range of powerful tools. It enables your team to focus on extracting insights from your data rather than wrestling with complex data management tasks.
5. Scalability and Performance: Whether you're a small startup or a large enterprise, Nitrogen grows with your business. It offers the scalability and performance required to handle increasing data volumes and

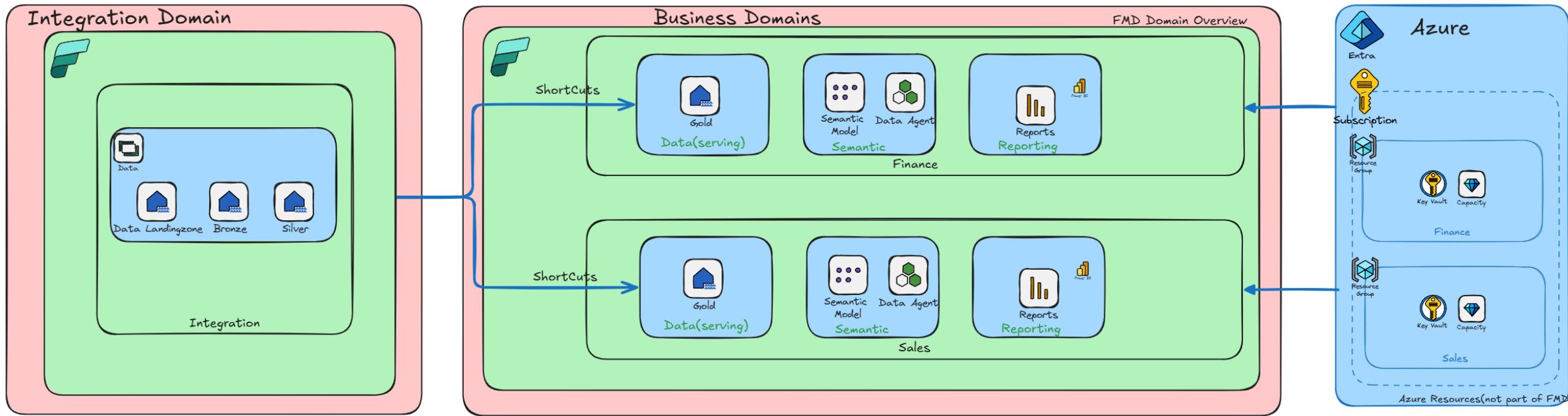
Contact

Would you like to know more?

Feel free to reach out to learn more about this service. Simply complete the "contact me" form, and we'll get back to you as soon as possible.

Contact me

# FMD Business Domain Framework



## FMD Business Domain Framework

# Feedback / Ideas

FMD Framework



Nitrogen Control  
Center



Let's connect  
LinkedIn

