Microsoft Fabric in a Day Lab Manual – **Lab 1**

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Course Material: GitHub.com/Lucid-Will/FabCon-EU-Zero-To-Hero-with-Fabric

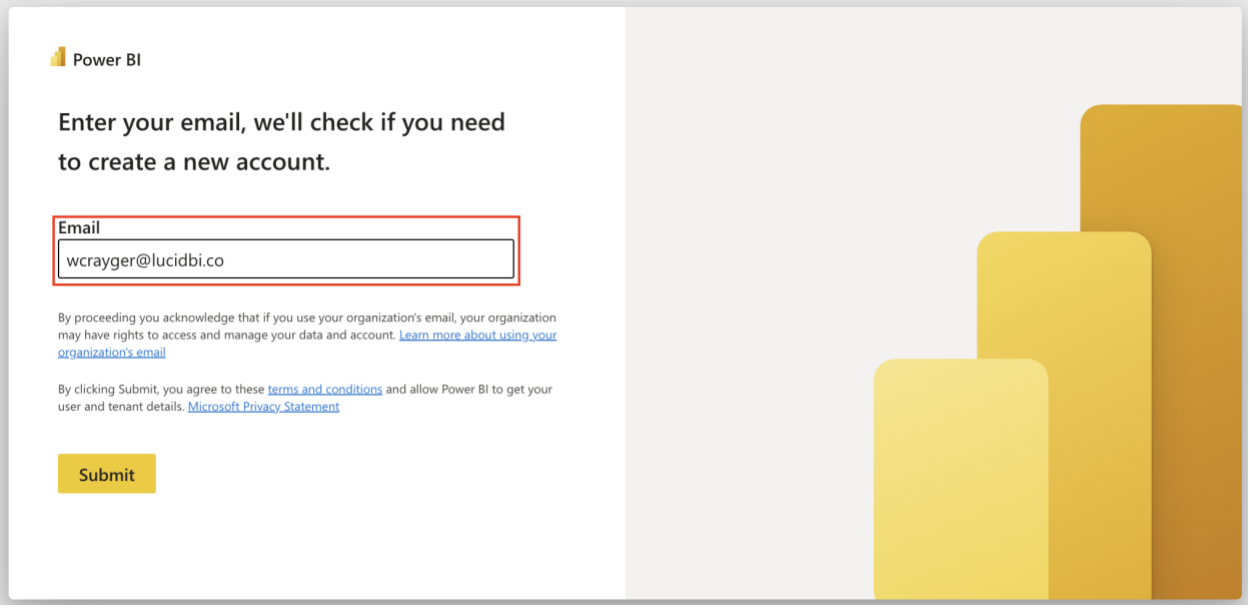
Working with Fabric Lakehouse – Creating your Lakehouse

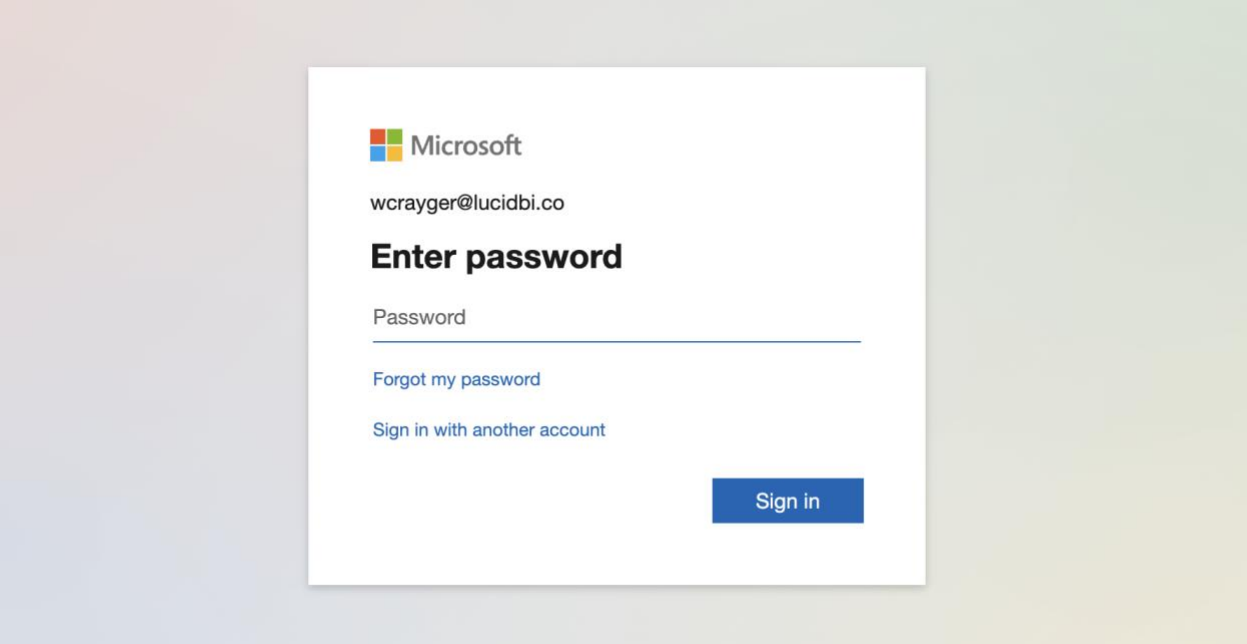
Introduction:

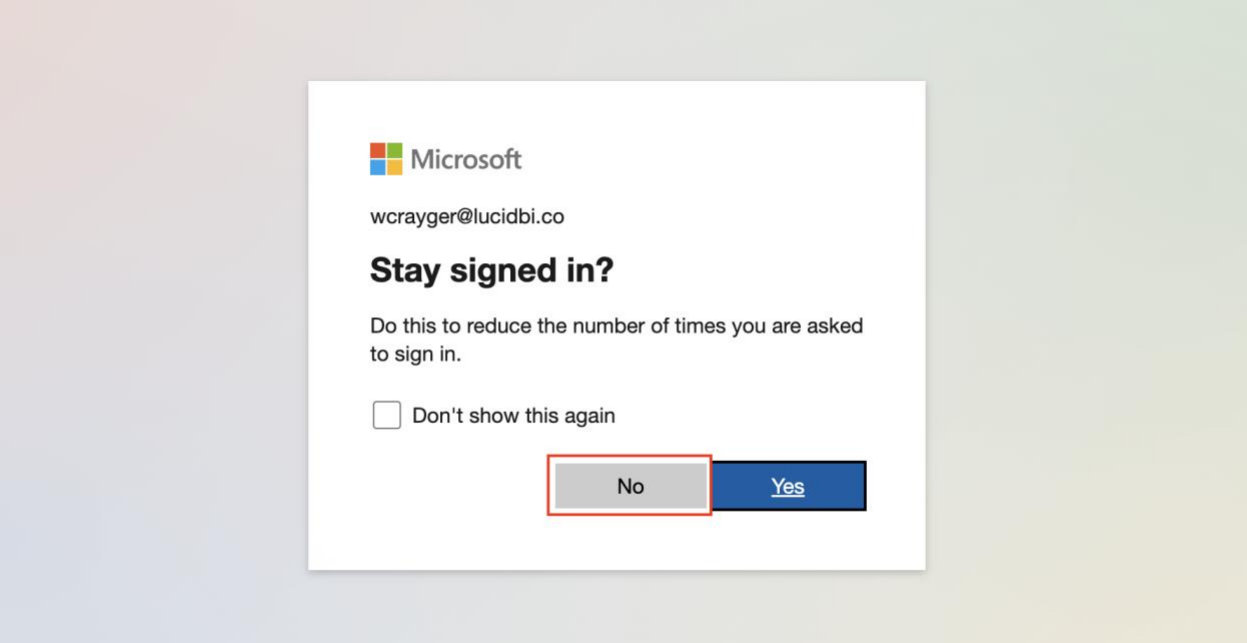
In this lab, you will create a Lakehouse in the Fabric workspace. A Lakehouse is essential because it serves as a centralized repository for all types of data, structured or unstructured. It enables efficient data management and analysis, forming the backbone of any data-driven operation. Go to home screen of your Fabric Workspace

Logging into Fabric/Power BI:

Authenticate into Fabric / Power BI: Navigate to app.powerbi.com and authenticate in with the credentials provided to you as part of the FIAD program.



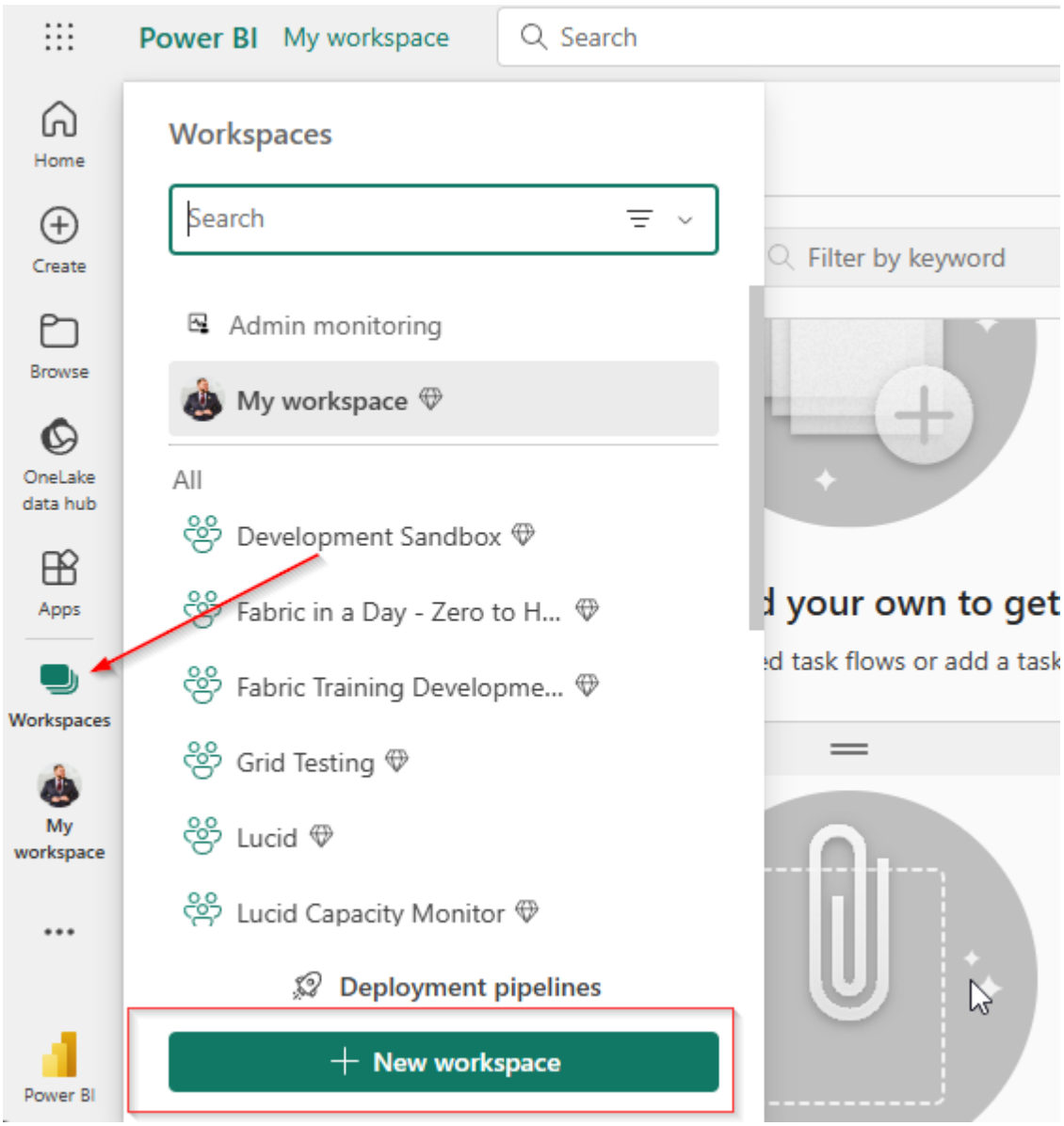


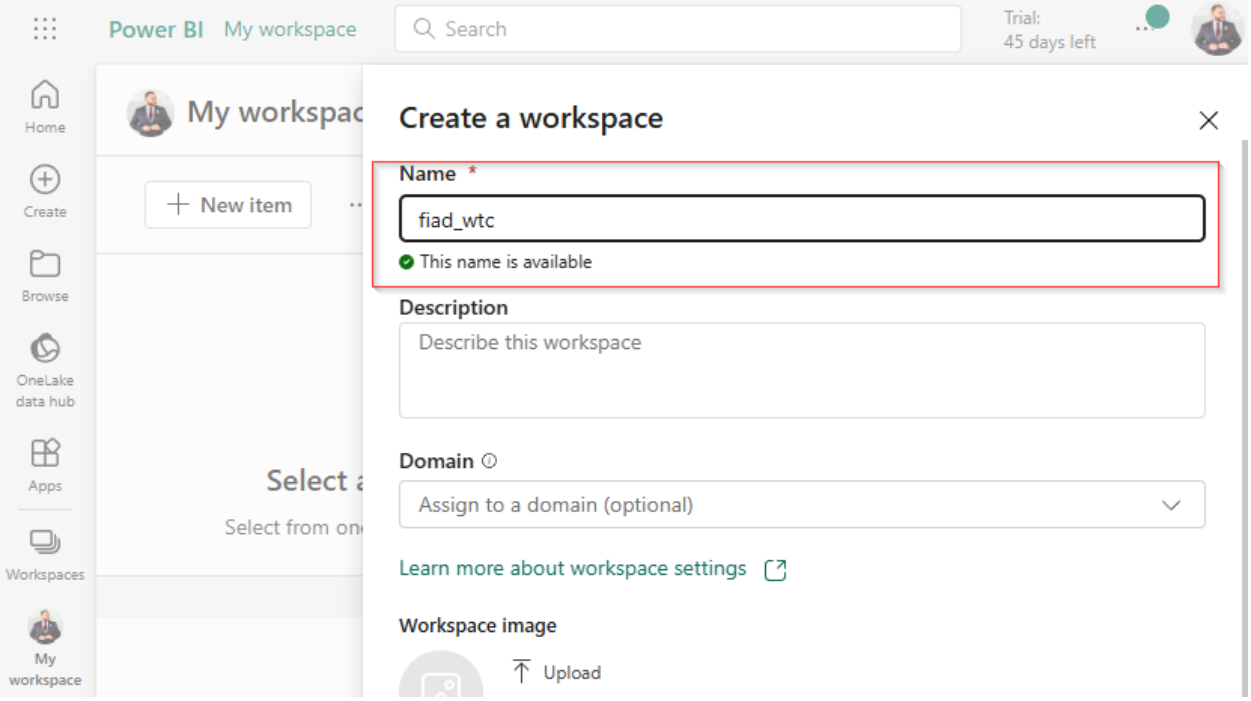


Access the Fabric Workspace Home Screen: This is your starting point for building the Lakehouse. The home screen is where you'll navigate through different aspects of your Fabric coursework.

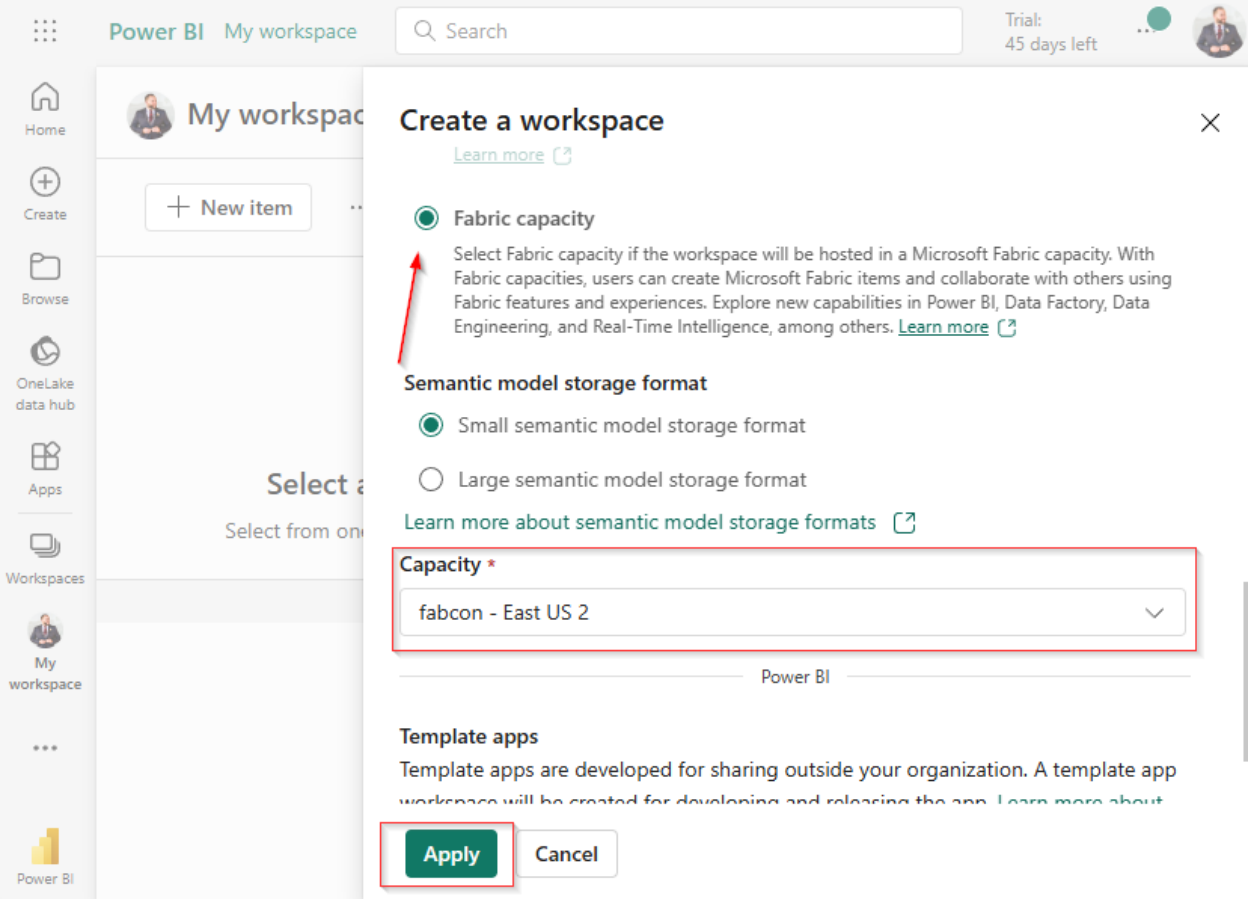
Creating Your Fabric Workspace:

Creating your training Workspace: Select **Workspaces** from the left-side navigation blade and choose **New Workspace**. Create a new Workspace using **fiad_<your_initials> (e.g. fiad_wtc)** as the naming pattern.

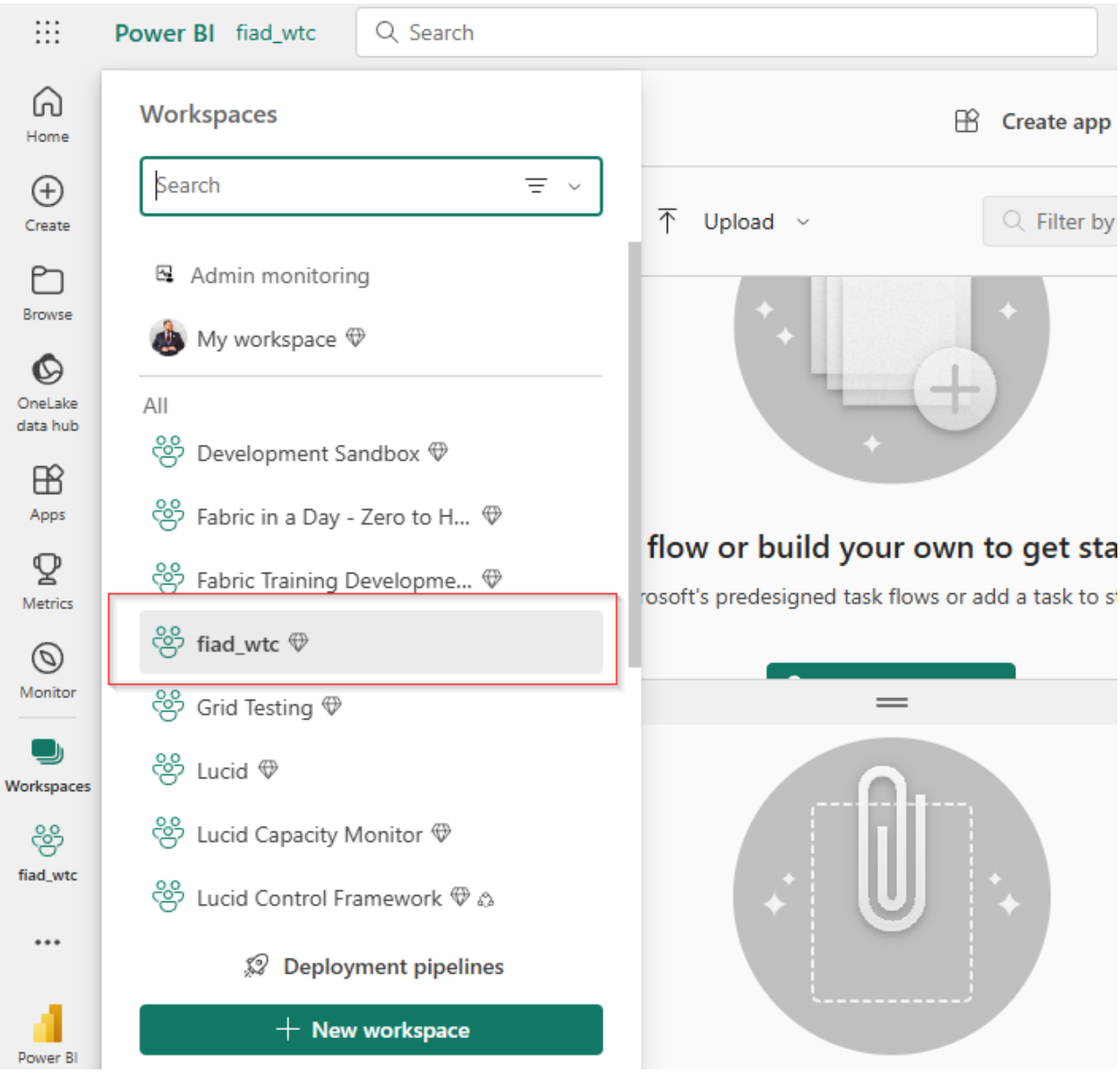

Power BI
My workspace
Search
Home
Create
Browse
OneLake data hub
Apps
Workspaces
My workspace
Power BI
Workspaces
Search
Admin monitoring
My workspace
All
Development Sandbox
Fabric in a Day - Zero to H...
Fabric Training Developme...
Grid Testing
Lucid
Lucid Capacity Monitor
Deployment pipelines
New workspace
Filter by keyword
your own to get
task flows or add a task



Assign your Workspace to Fabric Capacity: Expand the **Advanced settings** in the **Create a workspace** blade. Select the **Fabric capacity** radial button and choose the available capacity from the dropdown then click **Apply**.

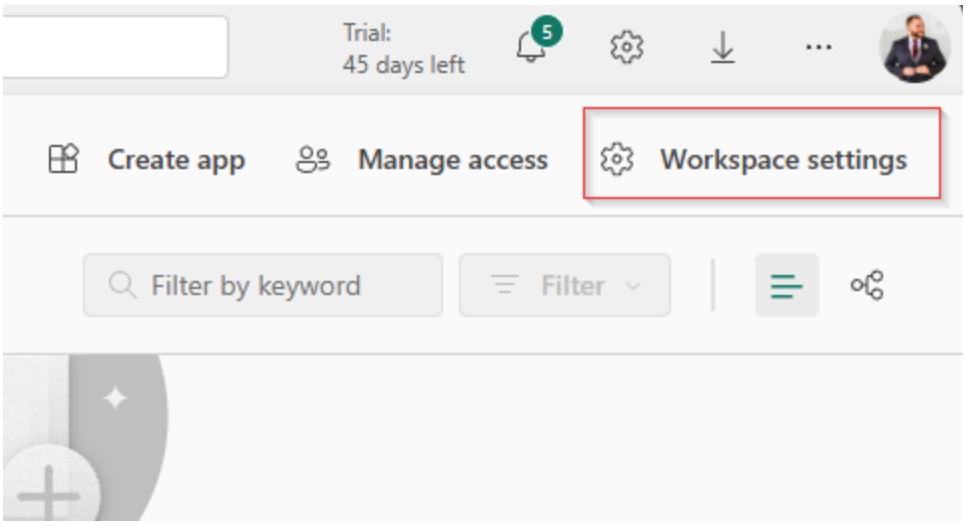


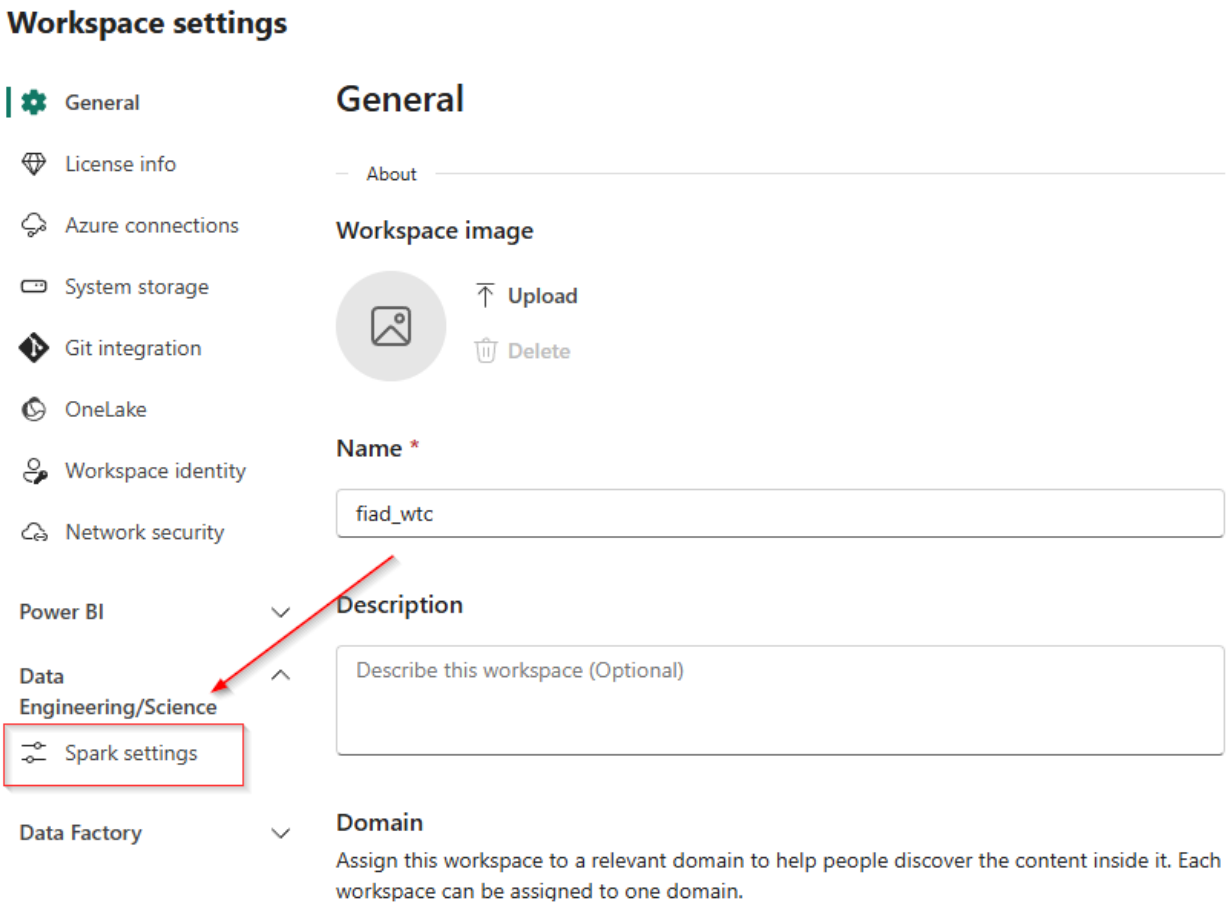
Selecting the Correct Workspace: Ensure that you're working in the correct Fabric Workspace. From the left navigate pane, click the **Workspaces** button and select the workspace created in the previous step. **Do not use the "My Workspace" environment.**



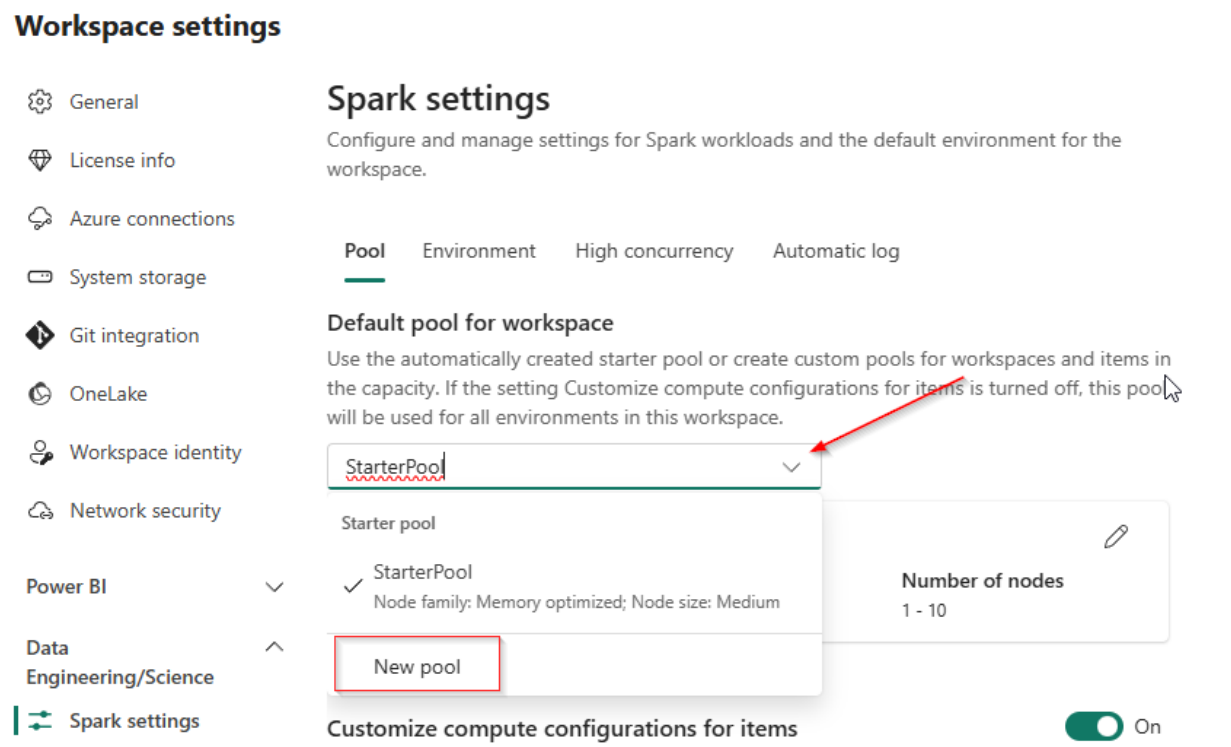
Configuring Workspace Settings:

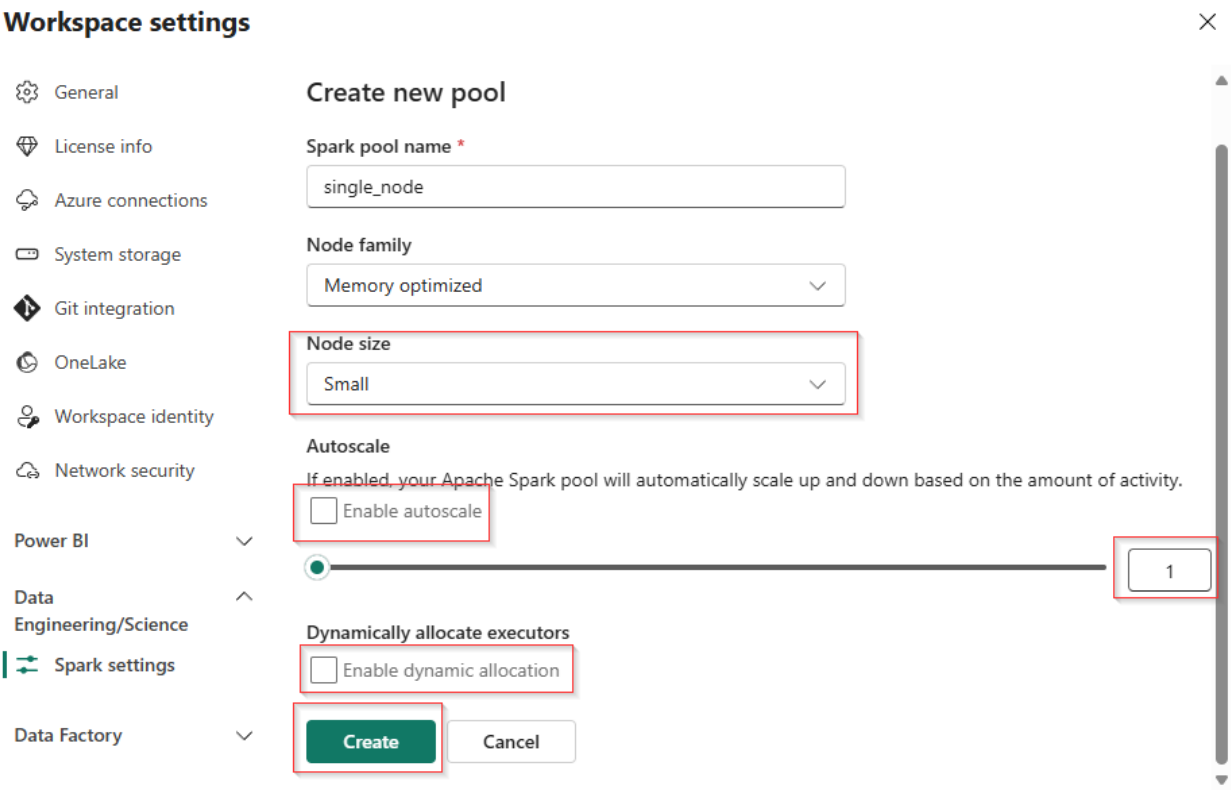
Create a new Spark pool: Enter the **Workspace settings** from the top-right and open the **Data Engineering/Science** menu.

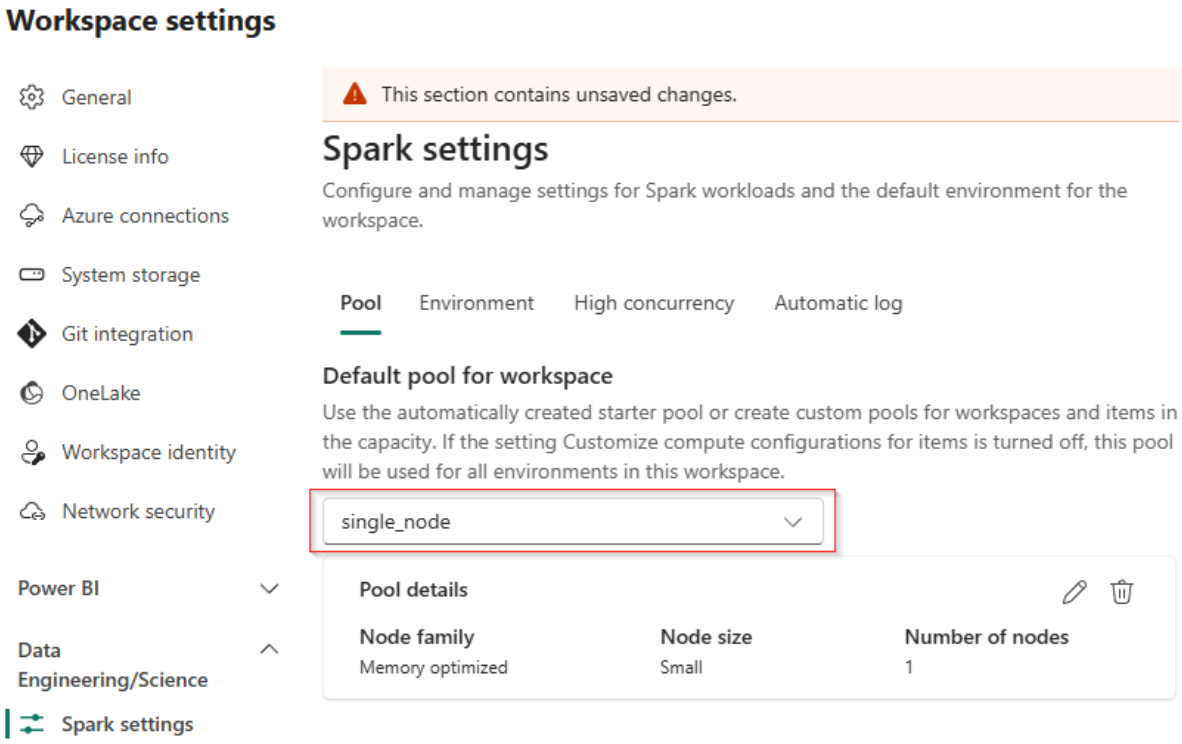




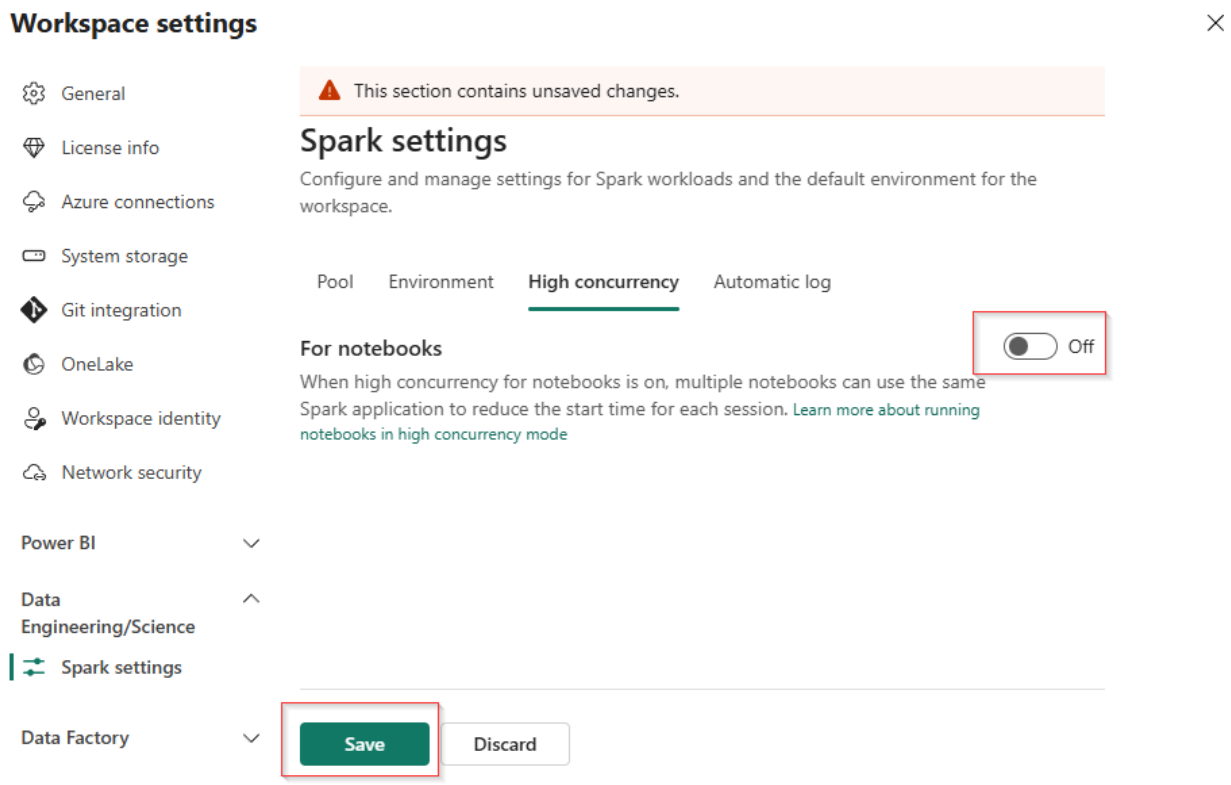
Configure default spark pool: Select the **Default pool for workspace** dropdown and select **New pool**. Name your new pool **single_node**. Set the **node size** to **small**, disable **autoscale** and **dynamically allocate executors**, and reduce the number of nodes to 1 then click **Create**. Ensure the single_node pool is selected as the **Default**.


Workspace settings
General
License info
Azure connections
System storage
Git integration
OneLake
Workspace identity
Network security
Power BI
Data Engineering/Science
Spark settings
Spark settings
Configure and manage settings for Spark workloads and the default environment for the workspace.
Pool
Environment
High concurrency
Automatic log
Default pool for workspace
Use the automatically created starter pool or create custom pools for workspaces and items in the capacity. If the setting Customize compute configurations for items is turned off, this pool will be used for all environments in this workspace.
StarterPool
Starter pool
StarterPool
Node family: Memory optimized; Node size: Medium
New pool
Number of nodes
1 - 10
Customize compute configurations for items
On


Workspace settings
General
License info
Azure connections
System storage
Git integration
OneLake
Workspace identity
Network security
Power BI
Data Engineering/Science
Spark settings
Data Factory
Create new pool
Spark pool name *
single_node
Node family
Memory optimized
Node size
Small
Autoscale
If enabled, your Apache Spark pool will automatically scale up and down based on the amount of activity.
Enable autoscale
1
Dynamically allocate executors
Enable dynamic allocation
Create
Cancel

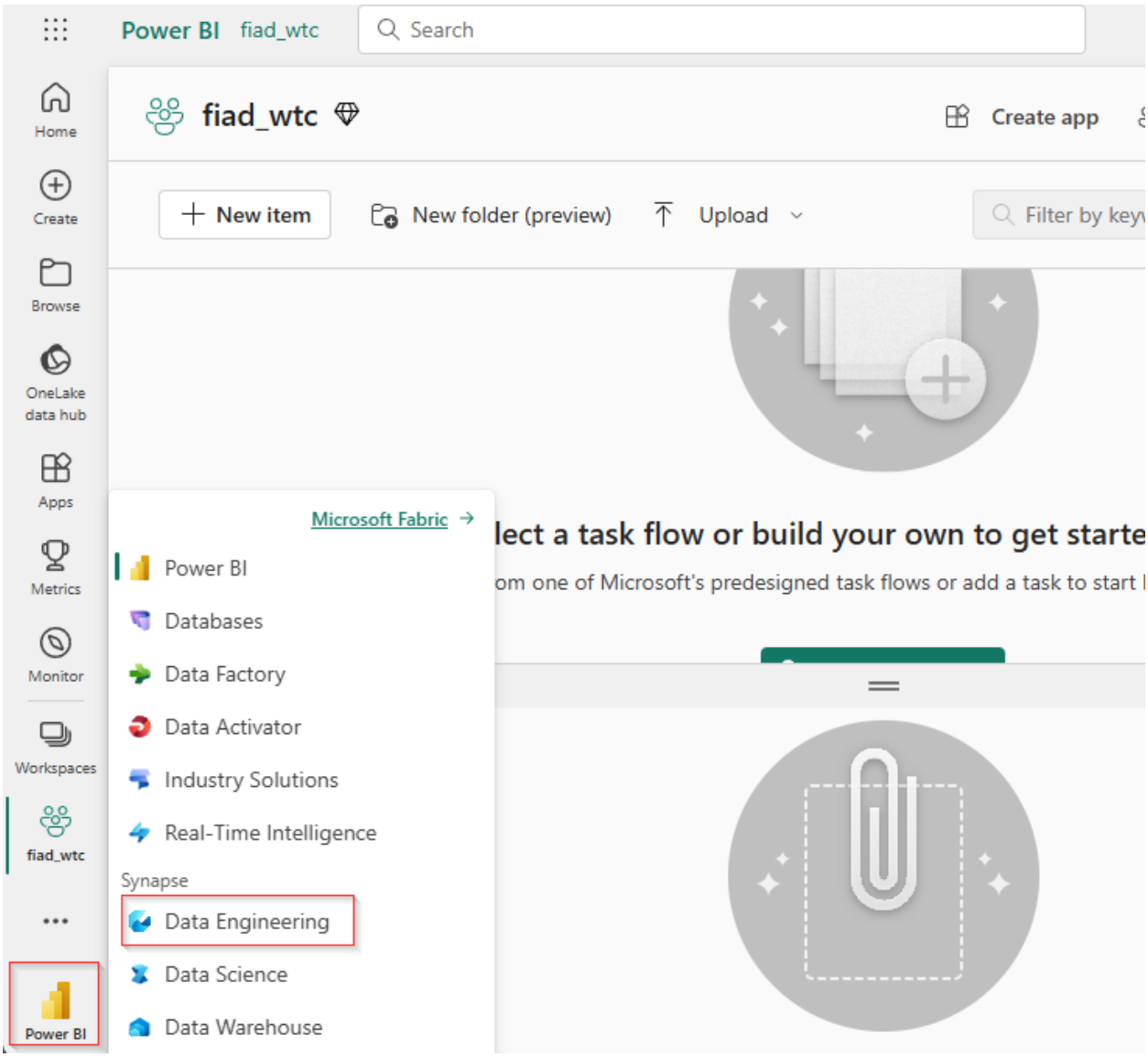


Disable High Concurrency mode: Under the **High Concurrency** tab, toggle off **For notebooks** and click **Save**.

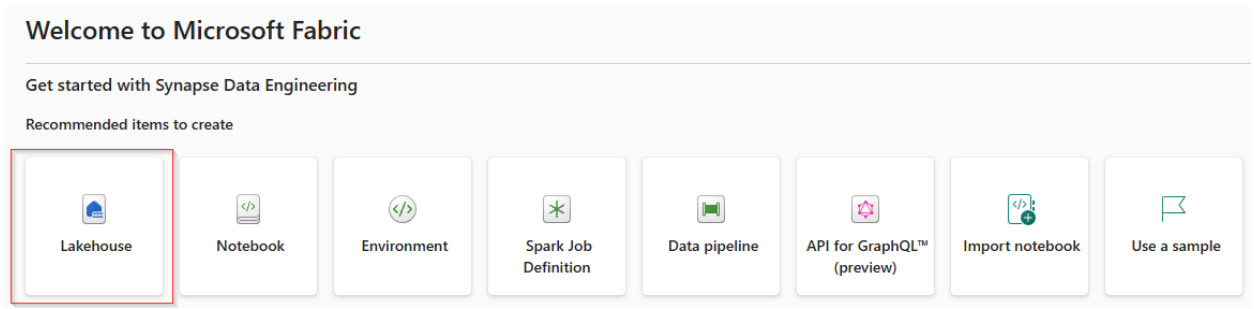


Create Bronze Lakehouse:

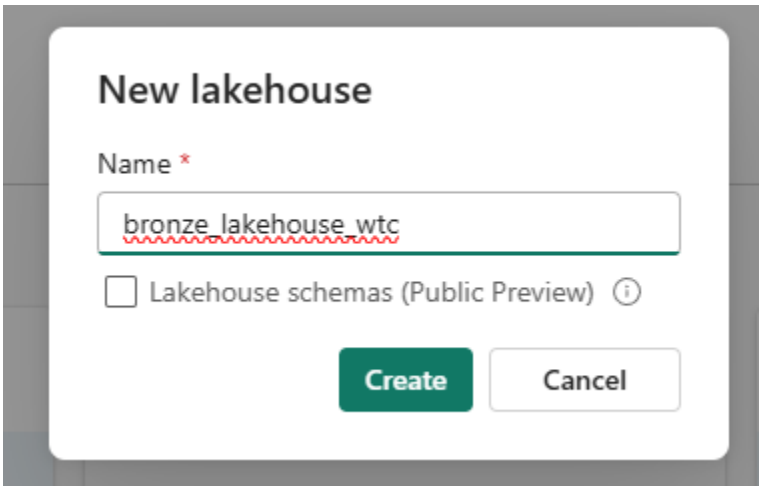
Navigate to the Data Engineering Experience: Use the experience toggle in the bottom left corner to access the data engineering tools. The experience toggle can be used to access persona specific menus.



Select Lakehouse: By choosing **Lakehouse**, you initiate the process of setting up your data repository. This is an important step in establishing a central location for data storage and analysis.



Name Your Lakehouse: Personalize your workspace by naming your Lakehouse **bronze_lakehouse_{your initials}**. Leave Lakehouse schemas disabled and click **Create**.



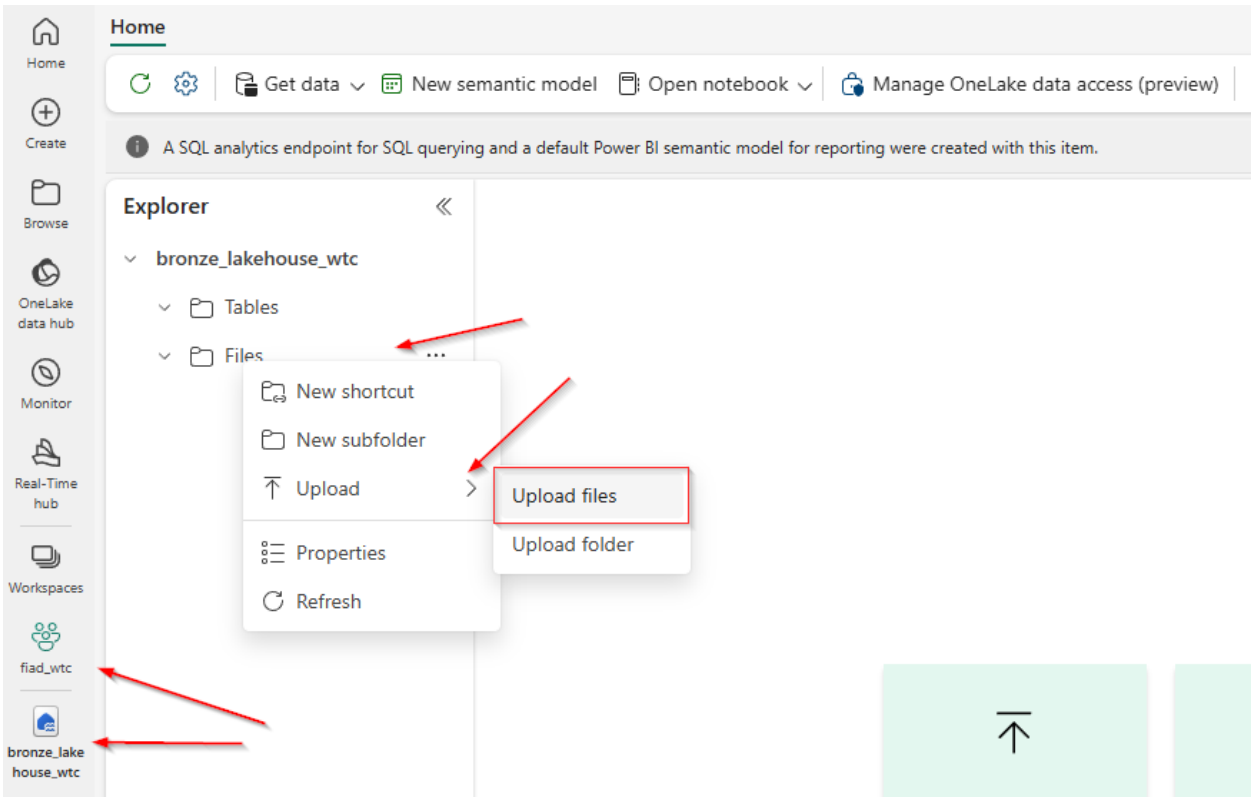
Uploading a CSV File – Creating Your First Delta Table

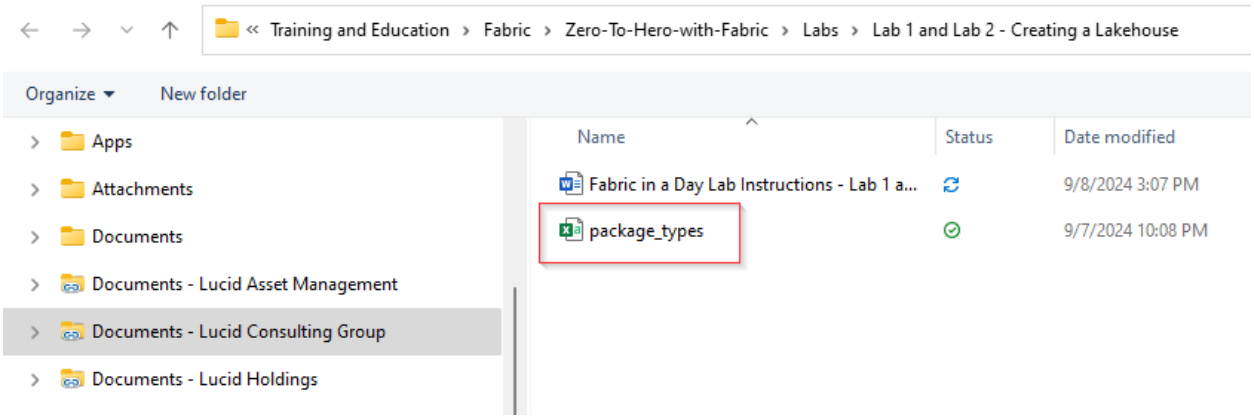
Introduction:

Now that our Lakehouse has been created, we will hydrate the lake with our first batch of data. To do so, we will be using Fabric's Lakehouse ability of uploading a CSV file and converting it to a delta table in the lake.

Load CSV and Create Delta Table:

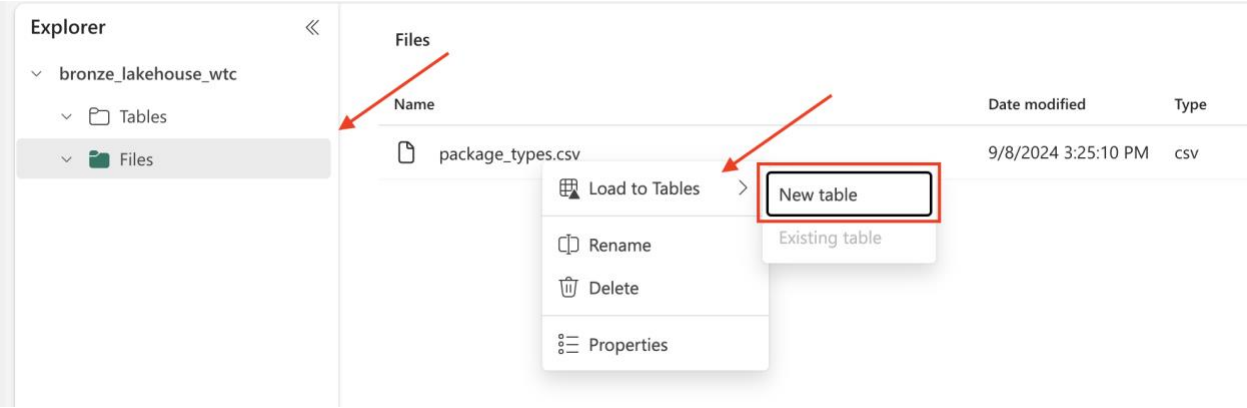
Load the sample file to Lakehouse File Container: Navigate to your Lakehouse and right-click the **Files** section. Hover over **Upload** and select **Upload files**. Click the folder icon in the **Upload files** blade that opens on the right side of the window. Navigate to the location of the saved **package_types.csv** file from the course material, select the file, and click **Open**. Click **Upload** and wait for the file to be uploaded to the Lakehouse.

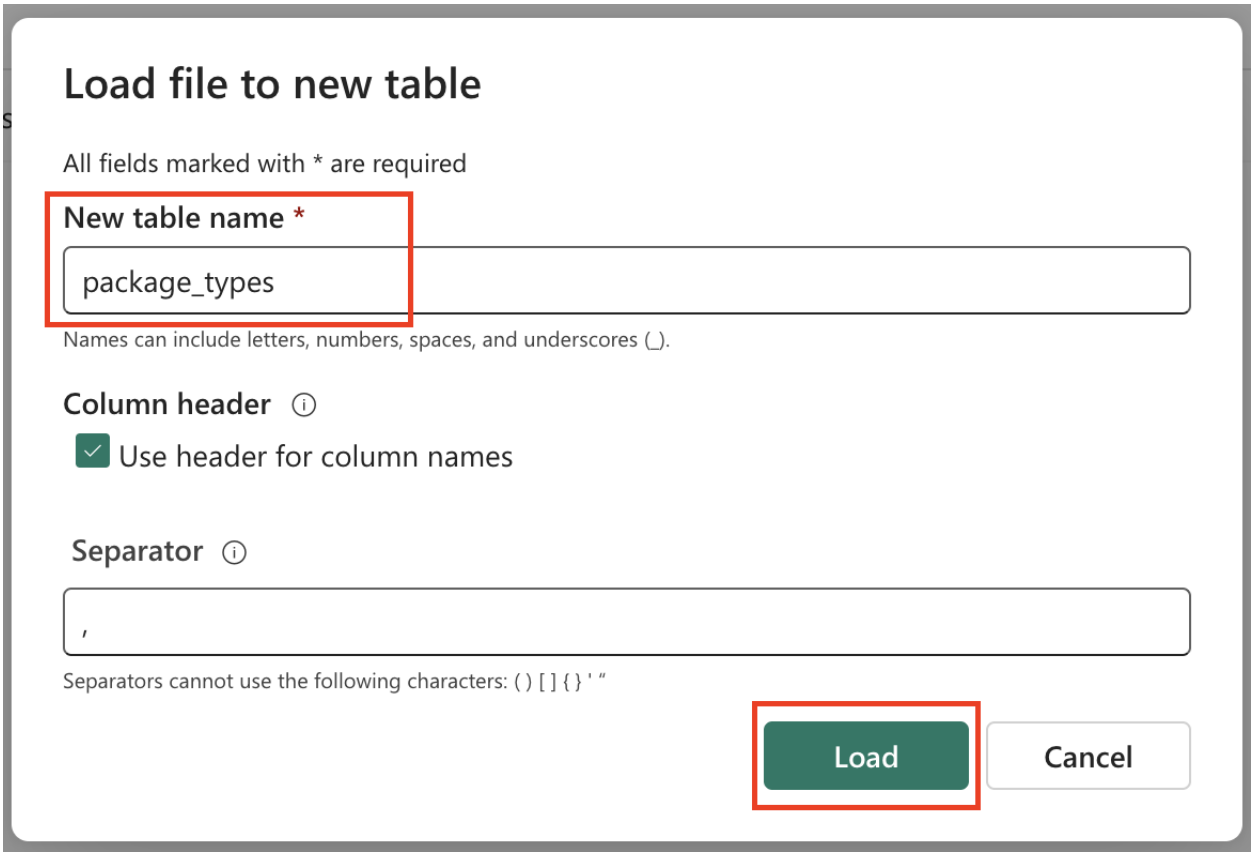

Home
Get data
New semantic model
Open notebook
Manage OneLake data access (preview)
A SQL analytics endpoint for SQL querying and a default Power BI semantic model for reporting were created with this item.
Explorer
bronze_lakehouse_wtc
Tables
Files
New shortcut
New subfolder
Upload
Upload files
Upload folder
Properties
Refresh
Home
Create
Browse
OneLake data hub
Monitor
Real-Time hub
Workspaces
fiad_wtc
bronze_lake house_wtc


Training and Education
Fabric
Zero-To-Hero-with-Fabric
Labs
Lab 1 and Lab 2 - Creating a Lakehouse
Organize
New folder
Apps
Attachments
Documents
Documents - Lucid Asset Management
Documents - Lucid Consulting Group
Documents - Lucid Holdings
Name
Status
Date modified
Fabric in a Day Lab Instructions - Lab 1 a...
9/8/2024 3:07 PM
package_types
9/7/2024 10:08 PM

Create a Delta Table:

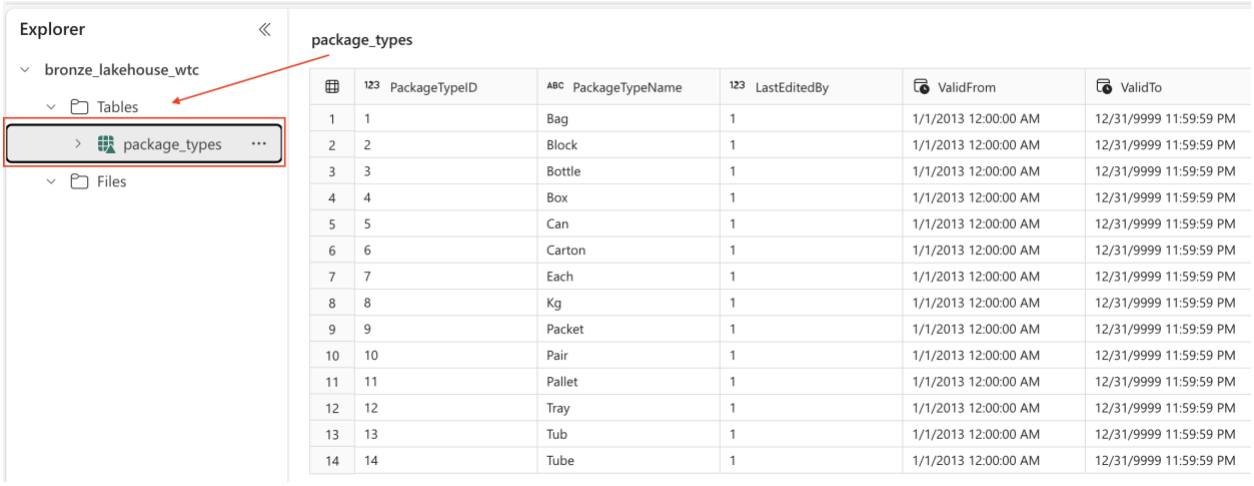
Load CSV to Lakehouse Delta Table: Navigate back to the **Files** section of the Lakehouse explorer. Right-click the **package_types.csv** file, select **Load to Tables**, then **New Table**. Name the new table package_types, specify file has column headers, and it's a "," separated file, and click **Load**.





Verify Table Creation: Navigate back to the Table section of the Lakehouse and confirm the table was created. It may take a few minutes for the table to create as a spark session is being created to perform the operation.

Note: It may take 60-90 seconds for the table to load due to background processes. Please be patient and do not try to create the table multiple times.



	PackageTypeID	PackageTypeName	LastEditedBy	ValidFrom	ValidTo
1	1	Bag	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
2	2	Block	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
3	3	Bottle	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
4	4	Box	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
5	5	Can	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
6	6	Carton	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
7	7	Each	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
8	8	Kg	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
9	9	Packet	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
10	10	Pair	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
11	11	Pallet	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
12	12	Tray	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
13	13	Tub	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM
14	14	Tube	1	1/1/2013 12:00:00 AM	12/31/9999 11:59:59 PM

Note: If at any point you see “Undefined” instead of a table name in your Lakehouse please refresh your browser. The Fabric UI has not registered the Delta table being created yet and a refresh should resolve the issue.

This lab is now complete.