

# Microsoft Fabric get started documentation

Microsoft Fabric is a unified platform that can meet your organization's data and analytics needs. Discover the Fabric shared and platform documentation from this page.

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# What is Microsoft Fabric?

Article • 05/23/2023

Microsoft Fabric is an all-in-one analytics solution for enterprises that covers everything from data movement to data science, Real-Time Analytics, and business intelligence. It offers a comprehensive suite of services, including data lake, data engineering, and data integration, all in one place.

With Fabric, you don't need to piece together different services from multiple vendors. Instead, you can enjoy a highly integrated, end-to-end, and easy-to-use product that is designed to simplify your analytics needs.

The platform is built on a foundation of Software as a Service (SaaS), which takes simplicity and integration to a whole new level.

## ⓘ Important

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## SaaS foundation

Microsoft Fabric brings together new and existing components from Power BI, Azure Synapse, and Azure Data Explorer into a single integrated environment. These components are then presented in various customized user experiences.



Fabric brings together experiences such as Data Engineering, Data Factory, Data Science, Data Warehouse, Real-Time Analytics, and Power BI onto a shared SaaS foundation. This integration provides the following advantages:

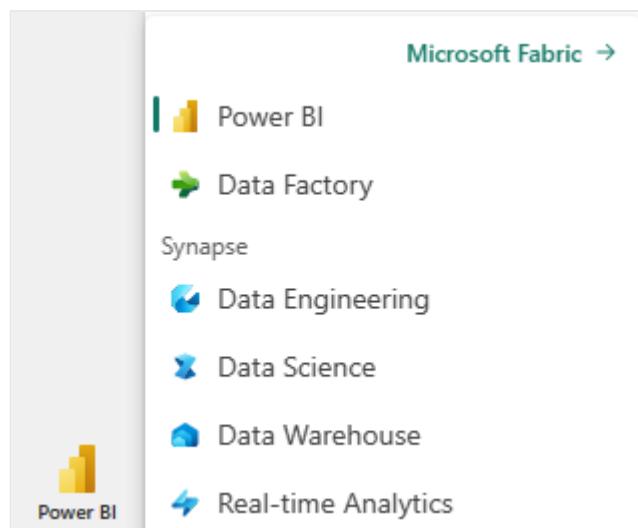
- An extensive range of deeply integrated analytics in the industry.
- Shared experiences across experiences that are familiar and easy to learn.
- Developers can easily access and reuse all assets.
- A unified data lake that allows you to retain the data where it is while using your preferred analytics tools.
- Centralized administration and governance across all experiences.

With the Microsoft Fabric SaaS experience, all the data and the services are seamlessly integrated. IT teams can centrally configure core enterprise capabilities and permissions are automatically applied across all the underlying services. Additionally, data sensitivity labels are inherited automatically across the items in the suite.

Fabric allows creators to concentrate on producing their best work, freeing them from the need to integrate, manage, or understand the underlying infrastructure that supports the experience.

## Components of Microsoft Fabric

Microsoft Fabric offers the comprehensive set of analytics experiences designed to work together seamlessly. Each experience is tailored to a specific persona and a specific task. Fabric includes industry-leading experiences in the following categories for an end-to-end analytical need.



- **Data Engineering** - Data Engineering experience provides a world class Spark platform with great authoring experiences, enabling data engineers to perform large scale data transformation and democratize data through the lakehouse. Microsoft Fabric Spark's integration with Data Factory enables notebooks and spark jobs to be scheduled and orchestrated. For more information, see [What is Data engineering in Microsoft Fabric?](#)

- **Data Factory** - Azure Data Factory combines the simplicity of Power Query with the scale and power of Azure Data Factory. You can use more than 200 native connectors to connect to data sources on-premises and in the cloud. For more information, see [What is Data Factory in Microsoft Fabric?](#)
- **Data Science** - Data Science experience enables you to build, deploy, and operationalize machine learning models seamlessly within your Fabric experience. It integrates with Azure Machine Learning to provide built-in experiment tracking and model registry. Data scientists are empowered to enrich organizational data with predictions and allow business analysts to integrate those predictions into their BI reports. This way it shifts from descriptive to predictive insights. For more information, see [What is Data science in Microsoft Fabric?](#)
- **Data Warehouse** - Data Warehouse experience provides industry leading SQL performance and scale. It fully separates compute from storage, enabling independent scaling of both the components. Additionally, it natively stores data in the open Delta Lake format. For more information, see [What is data warehousing in Microsoft Fabric?](#)
- **Real-Time Analytics** - Observational data, which is collected from various sources such as apps, IoT devices, human interactions, and so many more. It's currently the fastest growing data category. This data is often semi-structured in formats like JSON or Text. It comes in at high volume, with shifting schemas. These characteristics make it hard for traditional data warehousing platforms to work with. Real-Time Analytics is best in class engine for observational data analytics. For more information, see [What is Real-Time Analytics in Fabric?](#)
- **Power BI** - Power BI is the world's leading Business Intelligence platform. It ensures that business owners can access all the data in Fabric quickly and intuitively to make better decisions with data. For more information, see [What is Power BI?](#)

Fabric brings together all these experiences into a unified platform to offer the most comprehensive big data analytics platform in the industry.

Microsoft Fabric enables organizations, and individuals, to turn large and complex data repositories into actionable workloads and analytics, and is an implementation of data mesh architecture. To learn more about data mesh, visit the article that explains [data mesh architecture](#).

## OneLake and lakehouse - the unification of lakehouses

The Microsoft Fabric platform unifies the OneLake and lakehouse architecture across the enterprises.

## OneLake

The data lake is the foundation on which all the Fabric services are built. Microsoft Fabric Lake is also known as [OneLake](#). It's built into the Fabric service and provides a unified location to store all organizational data where the experiences operate.

OneLake is built on top of ADLS (Azure Data Lake Storage) Gen2. It provides a single SaaS experience and a tenant-wide store for data that serves both professional and citizen developers. The OneLake SaaS experience simplifies the experiences, eliminating the need for users to understand any infrastructure concepts such as resource groups, RBAC (Role-Based Access Control), Azure Resource Manager, redundancy, or regions. Additionally it doesn't require the user to even have an Azure account.

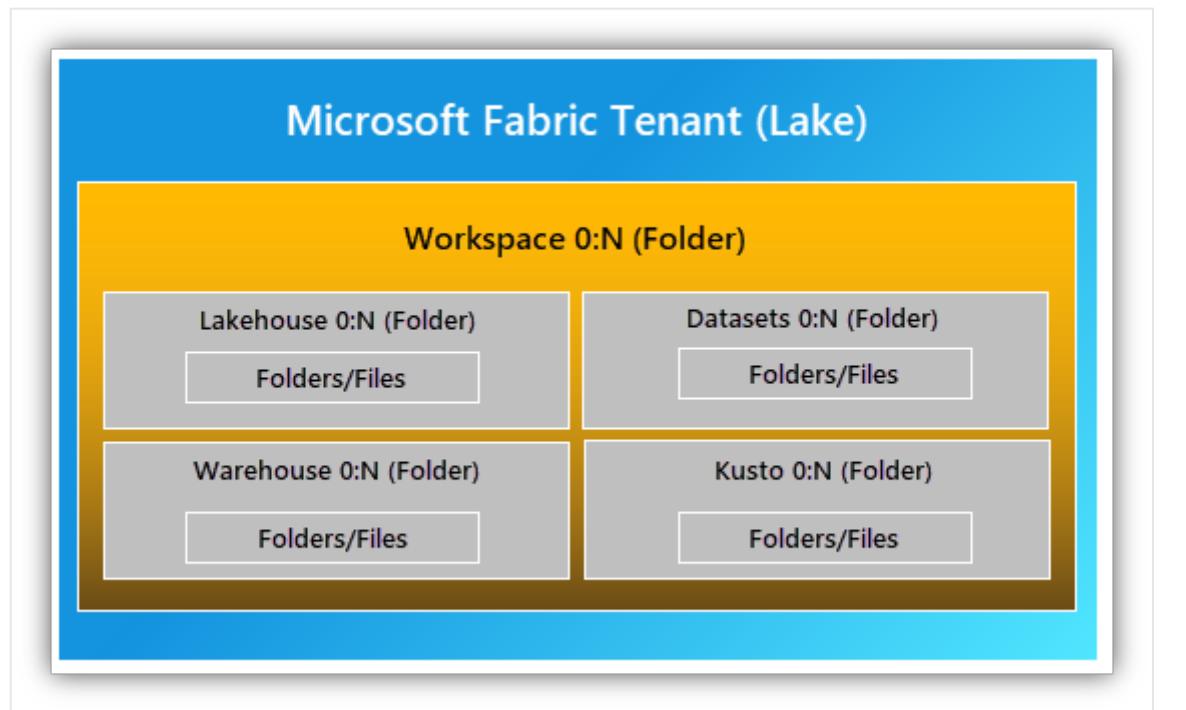
OneLake eliminates today's pervasive and chaotic data silos, which individual developers create when they provision and configure their own isolated storage accounts. Instead, OneLake provides a single, unified storage system for all developers, where discovery and data sharing is trivial and compliance with policy and security settings are enforced centrally and uniformly. For more information, see [What is OneLake?](#)

## Organizational structure of OneLake and lakehouse

OneLake is hierarchical in nature to simplify management across your organization. It's built into Microsoft Fabric and there's no requirement for any up-front provisioning. There's only one OneLake per tenant and it provides a single-pane-of-glass file-system namespace that spans across users, regions and even clouds. The data in OneLake is divided into manageable containers for easy handling.

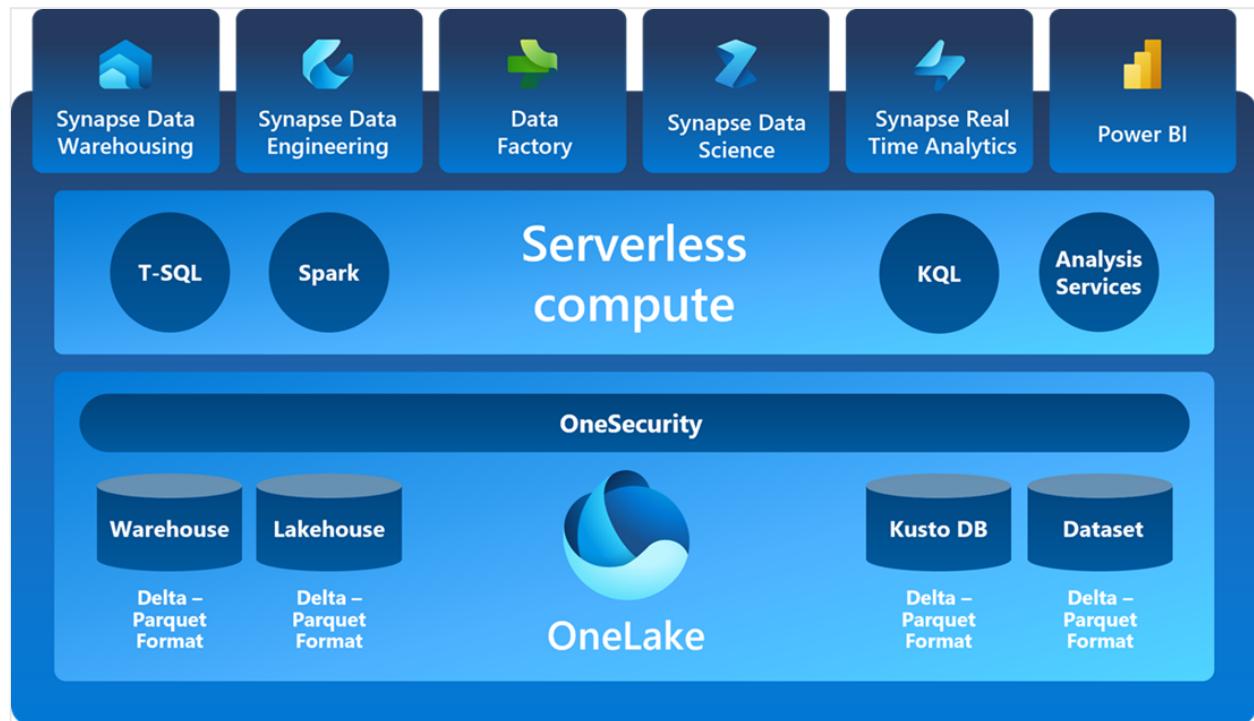
The tenant maps to the root of OneLake and is at the top level of the hierarchy. You can create any number of workspaces within a tenant, which can be thought of as folders.

The following image shows the various Fabric items where data is stored. It's an example of how various items within Fabric would store data inside OneLake. As displayed, you can create multiple workspaces within a tenant, create multiple lakehouses within each workspace. A lakehouse is a collection of files, folders, and tables that represents a database over a data lake. To learn more, see [What is a lakehouse?](#).



Every developer and business unit in the tenant can instantly create their own workspaces in OneLake. They can ingest data into their own lakehouses, start processing, analyzing, and collaborating on the data, just like OneDrive in Office.

All the Microsoft Fabric compute experiences are prewired to OneLake, just like the Office applications are prewired to use the organizational OneDrive. The experiences such as Data Engineering, Data Warehouse, Data Factory, Power BI, and Real-Time Analytics use OneLake as their native store. They don't need any extra configuration.



OneLake is designed to allow instant mounting of existing PaaS storage accounts into OneLake with the [Shortcut](#) feature. There's no need to migrate or move any of the

existing data. Using shortcuts, you can access the data stored in Azure Data Lake Storage.

Additionally, shortcuts allow you to easily share data between users and applications without moving or duplicating information. The shortcut capability extends to other storage systems, allowing you to compose and analyze data across clouds with transparent, intelligent caching that reduces egress costs and brings data closer to compute.

## Next steps

- [Microsoft Fabric terminology](#)
- [Create a workspace](#)
- [Navigate to your items from Microsoft Fabric Home page](#)
- [End-to-end tutorials in Microsoft Fabric](#)

# Microsoft Fabric (Preview) trial

Article • 05/23/2023

The Microsoft Fabric (Preview) trial includes access to the Fabric product experiences and the resources to create and host Fabric items. The Fabric (Preview) trial lasts until Fabric General Availability (GA), unless canceled. After GA, the Fabric (Preview) trial converts to the GA version and is extended for 60 days.

This document helps you understand and start a Fabric (Preview) trial.

## Important

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## Existing Power BI users

If you're an existing Power BI user, you can skip to [Start the Fabric \(Preview\) trial](#).

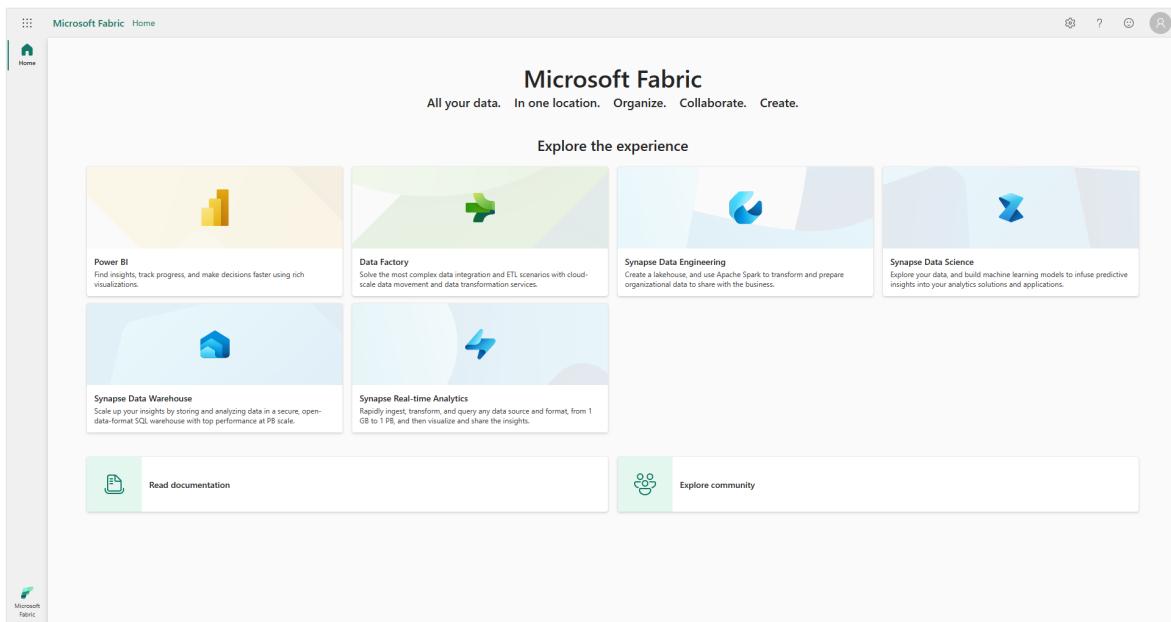
## Users who are new to Power BI

For public preview, the Fabric (Preview) trial requires a Power BI license. Navigate to <https://app.fabric.microsoft.com> to sign up for a Power BI *free* license. Once you have a Power BI license, you can start the Fabric (Preview) trial.

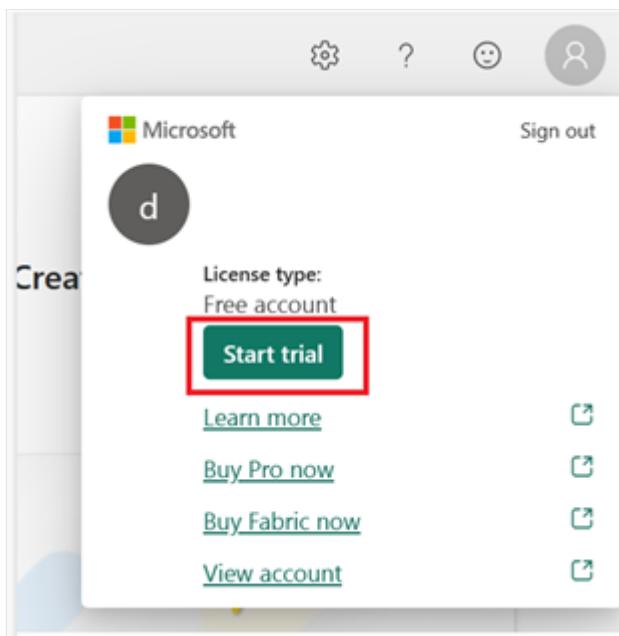
## Start the Fabric (Preview) trial

Follow these steps to start your Fabric (Preview) trial.

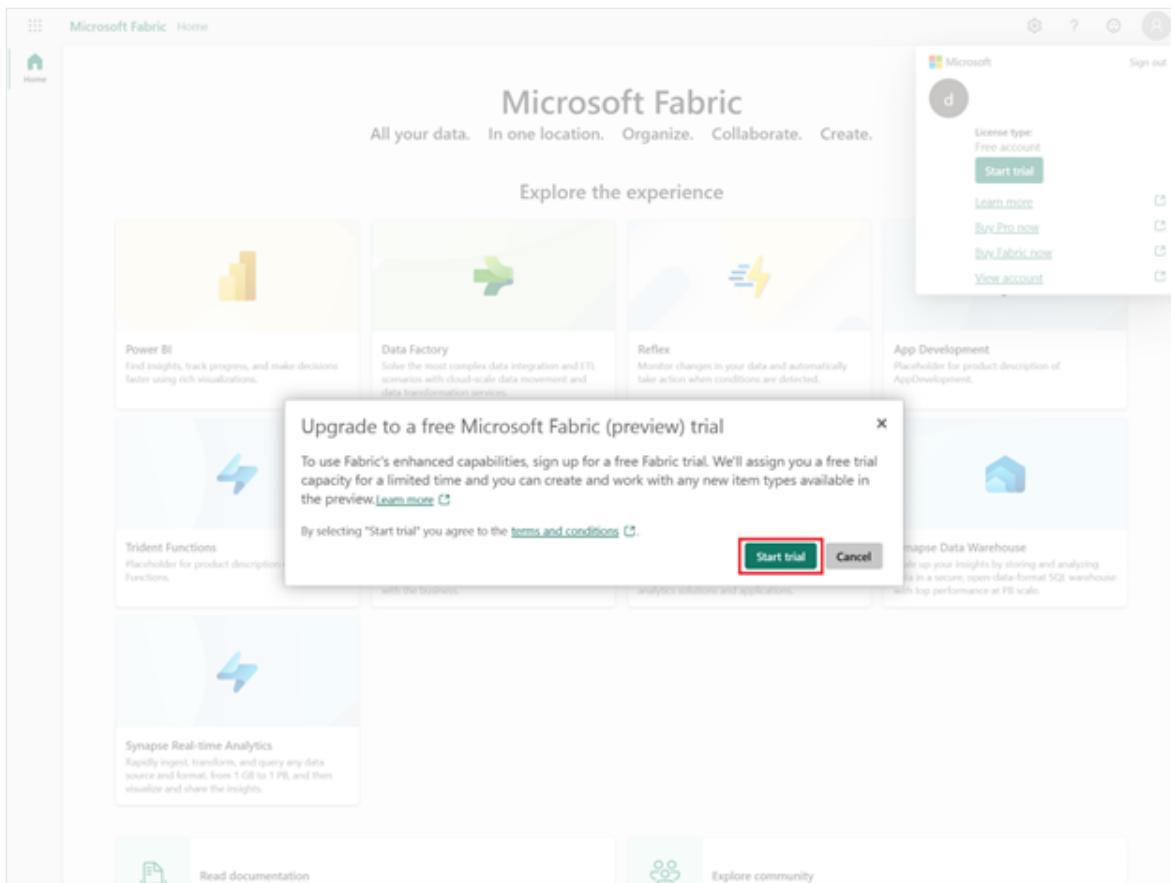
1. Open the [Fabric homepage](#) and select the Account manager.



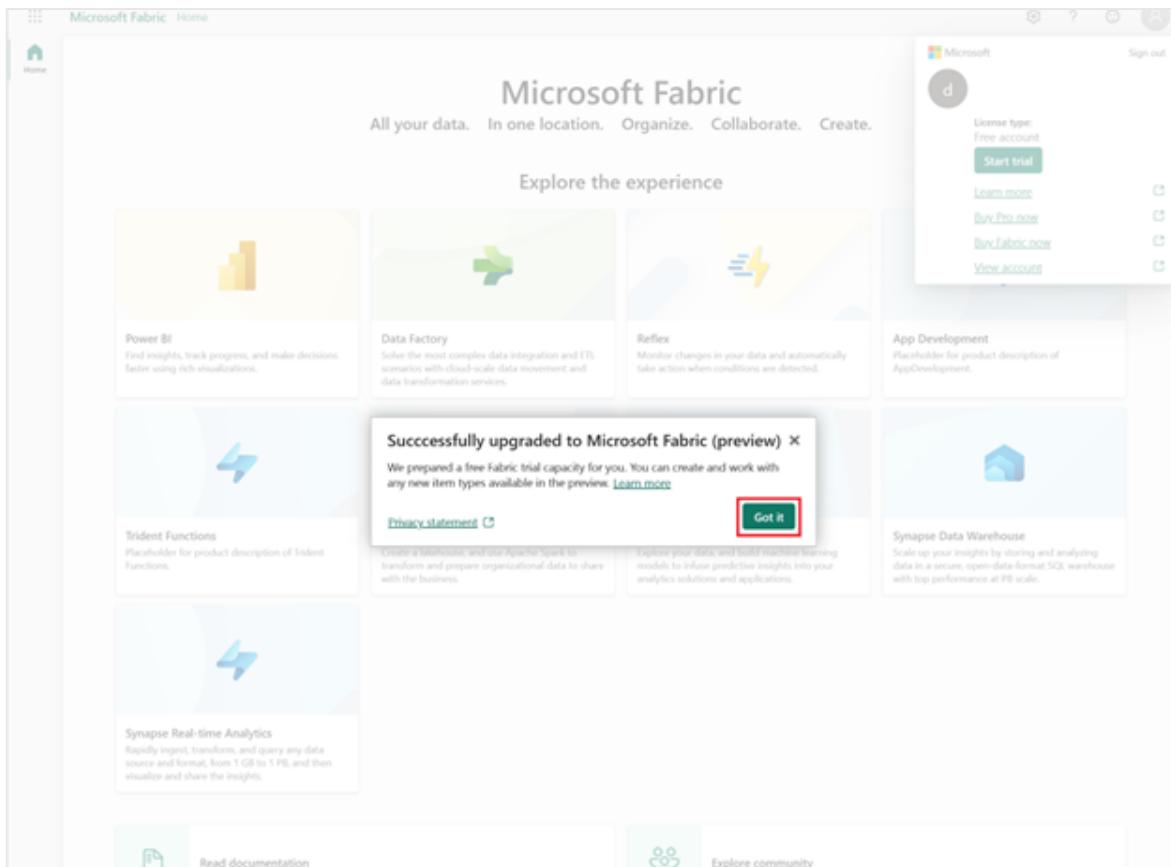
2. In the Account manager, select **Start trial**.



3. If prompted, agree to the terms and then select **Start trial**.

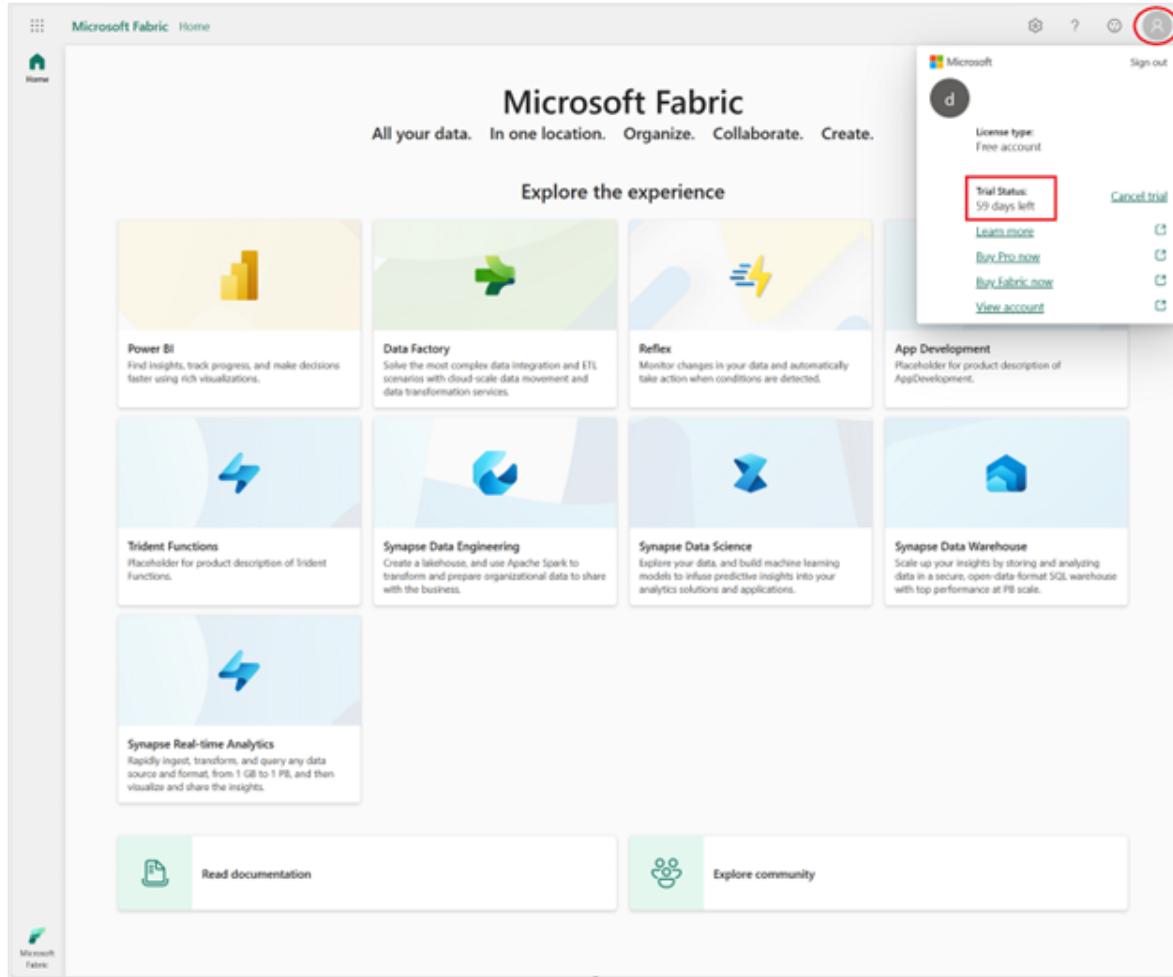


- Once your trial capacity is ready, you receive a confirmation message. Select **Got it** to begin working in Fabric.



- Open your Account manager again. Notice that you now have a heading for **Trial status**. Your Account manager keeps track of the number of days remaining in your

trial. You also see the countdown in your Fabric menu bar when you work in a product experience.



Congratulations! You now have a Fabric (Preview) trial that includes a Power BI individual trial (if you didn't already have a Power BI *paid* license) and a Fabric (Preview) trial capacity.

## Other ways to start a Microsoft Fabric (Preview) trial

If your Power BI administrator has [enabled the preview of Microsoft Fabric for the tenant](#), you have another option for enabling a Fabric (Preview) trial. When you try to create a Fabric item in a workspace that you own (such as **My Workspace**) and that workspace doesn't support Fabric items, you're prompted to start a Fabric (Preview) trial. If you agree, your Fabric (Preview) trial starts and your workspace is upgraded to a trial capacity workspace.

# Microsoft Fabric

All your data. In one location. Organize. Collaborate. Create.

Explore the experience

The screenshot shows the Microsoft Fabric homepage. At the top, there are two large icons: a green plus sign for 'Create' and a yellow lightning bolt for 'Collaborate'. Below them is a modal dialog box with the title 'Upgrade to a free Microsoft Fabric (preview) trial'. The dialog contains text explaining that users can sign up for a trial to use enhanced capabilities, mentioning 'Fabric's enhanced capabilities', 'sign up for a trial', 'free trial capacity', and a link to 'Learn more'. It also states that by selecting 'Start trial', the user agrees to the 'terms and conditions'. At the bottom of the dialog are two buttons: a green 'Start trial' button and a grey 'Cancel' button. The background of the page shows sections for 'Synapse Data Engineering' and 'Synapse Data Science', each with a brief description and a 'Scale' button.

## What is a trial capacity?

A trial capacity is a distinct pool of resources allocated to Microsoft Fabric. The size of the capacity determines the amount of computation power reserved for users of that capacity. The amount of compute resources is based on the [SKU](#).

With a Fabric (Preview) trial, you get full access to all of the Fabric experiences and features. You also get OneLake storage up to 1 TB. Create Fabric items and collaborate with others in the same Fabric trial capacity. With a Fabric (Preview) trial, you can:

- create workspaces (folders) for projects that support Fabric capabilities.
- share Fabric items, such as datasets, warehouses, and notebooks, and collaborate on them with other Fabric users.
- create analytics solutions using these Fabric items.

You don't have access to your capacity until you put something into it. To begin using your Fabric (Preview) trial, add items to **My workspace** or create a new workspace.

Assign that workspace to your trial capacity using the "Trial" license mode, and then all the items in that workspace will be saved and executed in that capacity.

To learn more about workspaces and license mode settings, see [Workspaces](#).

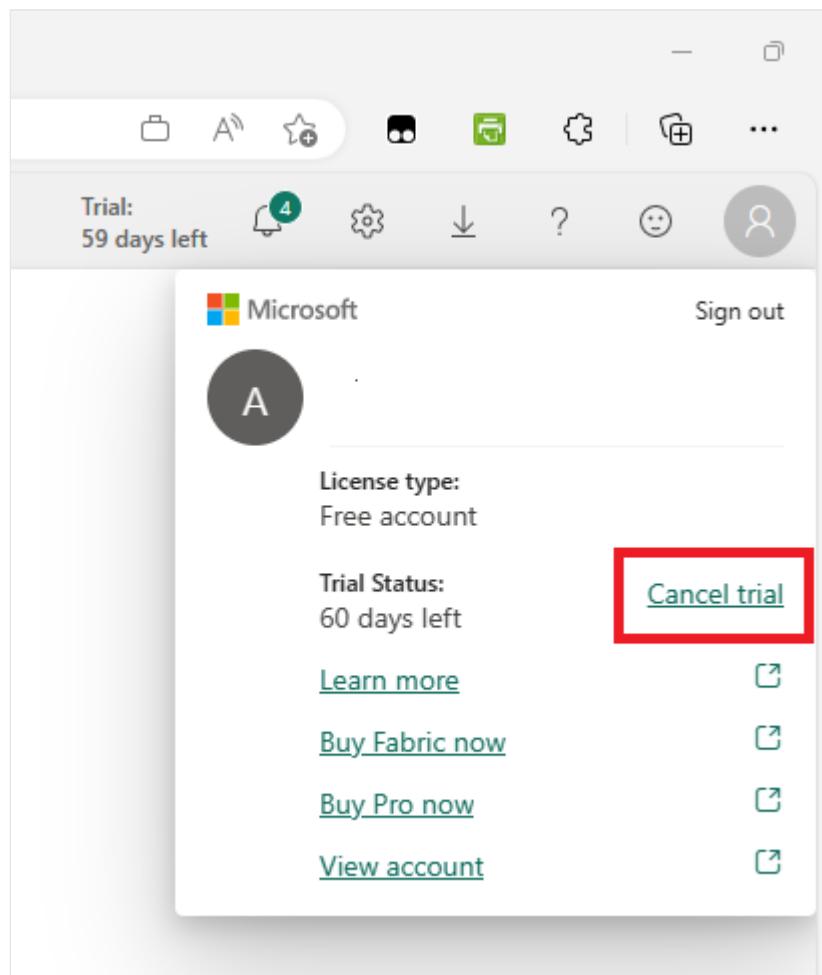
# Capacity units

When you start a Fabric (Preview) trial, Microsoft provisions one 64 capacity unit (CU) trial capacity. These CUs allow users of your trial capacity to consume 64x60 CU seconds every minute. Every time the Fabric trial capacity is used, it consumes CUs. The Fabric platform aggregates consumption from all experiences and applies it to your reserved capacity. Not all functions have the same consumption rate. For example, running a Data Warehouse might consume more capacity units than authoring a Power BI report. When the capacity consumption exceeds its size, Microsoft slows down the experience similar to slowing down CPU performance.

There's no limit on the number of workspaces or items you can create within your capacity. The only constraint is the availability of capacity units and the rate at which you consume them.

You're the capacity owner for your trial capacity. As your own capacity administrator for your Fabric trial capacity, you have access to a detailed and transparent report for how capacity units are consumed via the [Capacity Metrics app](#). For more information about administering your trials, see [Administer a Fabric trial capacity](#).

## End a Fabric (Preview) trial



You may cancel your trial from the Account manager. When you cancel your free Fabric (Preview) trial, the trial capacity, with all of its workspaces and their contents, is deleted. In addition, you can't:

- create workspaces that support Fabric capabilities.
- share Fabric items, such as machine learning models, warehouses, and notebooks, and collaborate on them with other Fabric users.
- create analytics solutions using these Fabric items.

Additionally, if you cancel your trial, you may not be able to start another trial.

## Administer user access to a Fabric (Preview) trial

Power BI administrators can enable and disable trials for paid features for Power BI and Fabric. This setting is at a tenant level and is applied to all users or to specific security groups. This one tenant setting applies to **both** Power BI and Fabric trials, so Power BI administrators should carefully evaluate the impact of making a change to this setting.

△ Users can try Microsoft Fabric paid features  
*Enabled for the entire organization*

When users sign up for a Microsoft Fabric trial, they can try Fabric paid features for free for 60 days from the day they signed up. [Learn More](#)

 Enabled

Apply to:

The entire organization

Specific security groups

Except specific security groups

[Apply](#) [Cancel](#)

Each trial user is the capacity admin for their trial capacity. Microsoft currently doesn't support multiple capacity administrators per trial capacity. Therefore, Power BI administrators can't view metrics for individual capacities. We do have plans to support this capability in an upcoming admin monitoring feature.

# Considerations and limitations

## I am unable to start a trial

If you don't see the **Start trial** button in your Account manager:

- Your Power BI administrator may have disabled access, and you can't start a Fabric (Preview) trial. Contact your Power BI administrator to request access. You can also start a trial using your own tenant. For more information, see [Sign up for Power BI with a new Microsoft 365 account](#).
- If you're an existing Power BI trial user, you don't see **Start trial** in your Account manager. You can start a Fabric (Preview) trial by attempting to [create a Fabric item](#). When you attempt to create a Fabric item, you're prompted to start a Fabric (Preview) trial. If you don't see this prompt, your Power BI administrator may have disabled the Fabric (Preview) feature.

If you do see the **Start trial** button in your Account manager:

- you might not be able to start a trial if your tenant has exhausted its limit of trial capacities. If that is the case, you have the following options:
  - [Purchase a Fabric capacity from Azure](#)
  - Request another trial capacity user to share their trial capacity with you.
  - Reach out to your Power BI administrator to create a CSS request to increase tenant trial capacity limits.

## In Workplace settings, I can't assign a workspace to the trial capacity

This known bug occurs when the Power BI administrator turns off trials after you start a trial. To add your workspace to the trial capacity, open the Admin portal by selecting it from the gear icon in the top menu bar. Then, select **Trial > Capacity settings** and choose the name of the capacity. If you don't see your workspace assigned, add it here.

The screenshot shows the Admin portal's Capacity settings page for a trial capacity. The left sidebar has 'Capacity settings' selected. The main area shows a list of workspaces assigned to the capacity, with a search bar and a 'Remove all' button. A red box highlights the '+ Assign workspaces' button at the top right of the list.

Workspace name	Actions	Status
bu	<a href="#">View admins</a>	Assigned
pp	<a href="#">View admins</a>	Assigned
tri	<a href="#">View admins</a>	Assigned

## What is the region for my Fabric (Preview) trial capacity?

If you start the trial using the Account manager, your trial capacity is located in the home region for your tenant. To identify the home region, select the ? icon on the top menu bar and then choose **About Power BI > About Fabric**. Your home region is where your data is stored.

**What impact does region have on my Fabric (Preview) trial?** If your home region doesn't have Fabric enabled, you won't be able to create any Fabric items in your trial capacity. When Fabric is Generally Available (GA), you can use the Account manager to start a trial and assign your Fabric capacity to a specific region. Until GA, if your home region doesn't have Fabric enabled, don't use the Account manager to start a trial. If you've already started a trial from Account manager, cancel that trial and follow the steps in [Other ways to start a Fabric \(Preview\) trial](#) instead.

## How is the Fabric (Preview) trial different from an individual trial of Power BI paid?

A per-user trial of Power BI paid allows access to the Fabric landing page. Once you sign up for the Fabric (Preview) trial, you can use the trial capacity for storing Fabric workspaces and items and for running Fabric experiences. All rules guiding [Power BI licenses](#) and what you can do in the Power BI experience remain the same. The key difference is that a Fabric capacity is required to access non-Power BI experiences and items.

## Private links and private access

During the Fabric preview, you can't create Fabric items in the trial capacity if you or your tenant have private links enabled **and** public access is disabled. This limitation is a known bug for Fabric preview.

## Autoscale

The Fabric (Preview) trial capacity doesn't support autoscale. If you need more compute capacity, you can purchase a Fabric capacity in Azure.

## For existing Synapse users

- The Fabric (Preview) trial is different from a Proof of Concept (POC). A Proof of Concept (POC) is standard enterprise vetting that requires financial investment and months' worth of work customizing the platform and using fed data. The Fabric (Preview) trial is free for users through public preview and doesn't require customization. Users can sign up for a free trial and start running product experiences immediately, within the confines of available capacity units.
- You don't need an Azure subscription to start a Fabric (Preview) trial. If you have an existing Azure subscription, you can purchase a (paid) Fabric capacity.

## For existing Power BI users

You can migrate your existing workspaces into a trial capacity using workspace settings and choosing "Trial" as the license mode. To learn how to migrate workspaces, see [create workspaces](#).

The screenshot shows the 'Workspace settings' dialog box in the Power BI interface. On the left, the workspace navigation pane lists 'Test Workspace 1' with items like 'Name', 'Test Report 1', and 'Test Table 1'. The main area displays the 'Workspace settings' configuration. Under the 'License mode' section, the 'Trial' option is highlighted with a red box. Other options shown include 'Pro', 'Premium per-user', 'Premium capacity', 'Embedded', and 'Fabric capacity'. Below the license mode, the 'Default storage format' is set to 'Small dataset storage format'. At the bottom, there are 'Apply' and 'Cancel' buttons, with 'Apply' also highlighted with a red box. The top right corner of the dialog shows a 'Trial: 59 days left' message.

# Next steps

- Learn about [licenses](#)
- Review Fabric [terminology](#)

# Microsoft Fabric terminology

Article • 05/23/2023

Learn the definitions of terms used in Microsoft Fabric, including terms specific to Synapse Data Warehouse, Synapse Data Engineering, Synapse Data Science, Synapse Real-Time Analytics, Data Factory, and Power BI.

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## General terms

- **Capacity:** Capacity is a dedicated set of resources that is available at a given time to be used. Capacity defines the ability of a resource to perform an activity or to produce output. Different items consume different capacity at a certain time. Fabric offers capacity through the Fabric SKU and Trials. For more information, see [What is capacity?](#)
- **Experience:** A collection of capabilities targeted to a specific functionality. The Fabric experiences include Synapse Data Warehouse, Synapse Data Engineering, Synapse Data Science, Synapse Real-Time Analytics, Data Factory and Power BI.
- **Item:** An item a set of capabilities within an experience. Users can create, edit, and delete them. Each item type provides different capabilities. For example, the Data Engineering experience includes the lakehouse, notebook, and Spark job definition items.
- **Tenant:** A tenant is a single instance of Fabric for an organization and is aligned with an Azure Active Directory.
- **Workspace:** A workspace is a collection of items that brings together different functionality in a single environment designed for collaboration. It acts as a container that leverages capacity for the work that is executed, and provides controls for who can access the items in it. For example, in a workspace, users create reports, notebooks, datasets, etc. For more information, see [Workspaces](#) article.

# Synapse Data Engineering

- **Lakehouse:** A lakehouse is a collection of files, folders, and tables that represent a database over a data lake used by the Apache Spark engine and SQL engine for big data processing. A lakehouse includes enhanced capabilities for ACID transactions when using the open-source Delta formatted tables. The lakehouse item is hosted within a unique workspace folder in [Microsoft OneLake](#). It contains files in various formats (structured and unstructured) organized in folders and subfolders. For more information, see [What is a lakehouse?](#)
- **Notebook:** A Fabric notebook is a multi-language interactive programming tool with rich functions. Which include authoring code and markdown, running and monitoring a Spark job, viewing and visualizing result, and collaborating with the team. It helps data engineers and data scientist to explore and process data, and build machine learning experiments with both code and low-code experience. It can be easily transformed to a pipeline activity for orchestration.
- **Spark application:** An Apache Spark application is a program written by a user using one of Spark's API languages (Scala, Python, Spark SQL, or Java) or Microsoft-added languages (.NET with C# or F#). When an application runs, it's divided into one or more Spark jobs that run in parallel to process the data faster. For more information, see [Spark application monitoring](#).
- **Apache Spark job:** A Spark job is part of a Spark application that is run in parallel with other jobs in the application. A job consists of multiple tasks. For more information, see [Spark job monitoring](#).
- **Apache Spark job definition:** A Spark job definition is a set of parameters, set by the user, indicating how a Spark application should be run. It allows you to submit batch or streaming jobs to the Spark cluster. For more information, see [What is an Apache Spark job definition?](#)
- **V-order:** A write optimization to the parquet file format that enables fast reads and provides cost efficiency and better performance. All the Fabric engines write v-ordered parquet files by default.

# Data Factory

- **Connector:** Data Factory offers a rich set of connectors that allow you to connect to different types of data stores. Once connected, you can transform the data. For more information, see [connectors](#).

- **Data pipeline:** In Data Factory, a data pipeline is used for orchestrating data movement and transformation. These pipelines are different from the deployment pipelines in Fabric. For more information, see [Pipelines](#) in the Data Factory overview.
- **Dataflow Gen2:** Dataflows provide a low-code interface for ingesting data from hundreds of data sources and transforming your data. Dataflows in Fabric are referred to as Dataflow Gen2. Dataflow Gen1 exists in Power BI. Dataflow Gen2 offers extra capabilities compared to Dataflows in Azure Data Factory or Power BI. You can't upgrade from Gen1 to Gen2. For more information, see [Dataflows](#) in the Data Factory overview.

## Synapse Data Science

- **Data Wrangler:** Data Wrangler is a notebook-based tool that provides users with an immersive experience to conduct exploratory data analysis. The feature combines a grid-like data display with dynamic summary statistics and a set of common data-cleansing operations, all available with a few selected icons. Each operation generates code that can be saved back to the notebook as a reusable script.
- **Experiment:** A machine learning experiment is the primary unit of organization and control for all related machine learning runs. For more information, see [Machine learning experiments in Microsoft Fabric](#).
- **Model:** A machine learning model is a file trained to recognize certain types of patterns. You train a model over a set of data, and you provide it with an algorithm that it uses to reason over and learn from that data set. For more information, see [Machine learning model](#).
- **Run:** A run corresponds to a single execution of model code. In [MLflow](#), tracking is based on experiments and runs.

## Synapse data warehousing

- **SQL Endpoint:** Each Lakehouse has a SQL Endpoint that allows a user to query delta table data with TSQL over TDS. For more information, see [SQL Endpoint](#).
- **Synapse Data Warehouse:** The Synapse Data Warehouse functionality is a traditional data warehouse and supports the full transactional T-SQL capabilities you would expect from an enterprise data warehouse. For more information, see [Synapse Data Warehouse](#).

# Synapse Real-Time Analytics

- **KQL database:** The KQL database is the representation of a database holding data in a format to execute a KQL query against it. For more information, see [Query a KQL database](#).
- **KQL Queryset:** The KQL Queryset is the item used to run queries, view results, and manipulate query results on data from your Data Explorer database. The queryset includes the databases and tables, the queries, and the results. The KQL Queryset allows you to save queries for future use, or export and share queries with others. For more information, see [Query data in the KQL Queryset](#)
- **Event stream:** The Microsoft Fabric event streams feature provides a centralized place in the Fabric platform to capture, transform, and route real-time events to destinations with a no-code experience. An event stream consists of various streaming data sources, ingestion destinations, and an event processor when the transformation is needed. For more information, see [Microsoft Fabric event streams](#).

## OneLake

- **Shortcut:** Shortcuts are embedded references within OneLake that point to other file store locations. They provide a way to connect to existing data without having to directly copy it. For more information, see [OneLake shortcuts](#).

## Next steps

- [Navigate to your items from Microsoft Fabric Home page](#)
- [Discover data items in the OneLake data hub](#)
- [End-to-end tutorials in Microsoft Fabric](#)

# End-to-end tutorials in Microsoft Fabric

Article • 05/23/2023

In this article, you find a comprehensive list of end-to-end tutorials available in Microsoft Fabric. These tutorials guide you through a scenario that covers the entire process, from data acquisition to data consumption. They're designed to help you develop a foundational understanding of the Fabric UI, the various experiences supported by Fabric and their integration points, and the professional and citizen developer experiences that are available.

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## Multi-experience tutorials

The following table lists tutorials that span multiple Fabric experiences.

Tutorial name	Scenario
Lakehouse	In this tutorial, you ingest, transform, and load the data of a fictional retail company, Wide World Importers, into the lakehouse and analyze sales data across various dimensions.
Data Science	In this tutorial, you explore, clean, and transform a taxicab trip dataset, and build a machine learning model to predict trip duration at scale on a large dataset.
Real-Time Analytics	In this tutorial, you use the streaming and query capabilities of Real-Time Analytics to analyze the New York Yellow Taxi trip dataset. You uncover essential insights into trip statistics, taxi demand across the boroughs of New York, and other related insights.
Data warehouse	In this tutorial, you build an end-to-end data warehouse for the fictional Wide World Importers company. You ingest data into data warehouse, transform it using T-SQL and pipelines, run queries, and build reports.

## Experience-specific tutorials

The following tutorials walk you through scenarios within specific Fabric experiences.

Tutorial name	Scenario
Power BI	In this tutorial, you build a dataflow and pipeline to bring data into a lakehouse, create a dimensional model, and generate a compelling report.
Data Factory	In this tutorial, you ingest data with data pipelines and transform data with dataflows, then use the automation and notification to create a complete data integration scenario.
Data Science end-to-end AI samples	In this set of tutorials, learn about the different Data Science experience capabilities and examples of how ML models can address your common business problems.
Data Science - Price prediction with R	In this tutorial, you build a machine learning model to analyze and visualize the avocado prices in the US and predict future prices.

## Next steps

- [Create a workspace](#)
- Discover data items in the [OneLake data hub](#)

# Microsoft Fabric decision guide: copy activity, dataflow, or Spark

Article • 05/23/2023

Use this reference guide and the example scenarios to help you in deciding whether you need a copy activity, a dataflow, or Spark for your workloads using Microsoft Fabric.

## ⓘ Important

Microsoft Fabric is currently in PREVIEW. This information relates to a prerelease product that may be substantially modified before it's released. Microsoft makes no warranties, expressed or implied, with respect to the information provided here.

## Copy activity, dataflow, and Spark properties

	Pipeline copy activity	Dataflow Gen 2	Spark
<b>Use case</b>	Data lake and data warehouse migration, data ingestion, lightweight transformation	Data ingestion, data transformation, data wrangling, data profiling	Data ingestion, data transformation, data processing, data profiling
<b>Primary developer persona</b>	Data engineer, data integrator	Data engineer, data integrator, business analyst	Data engineer, data scientist, data developer
<b>Primary developer skill set</b>	ETL, SQL, JSON	ETL, M, SQL	Spark (Scala, Python, Spark SQL, R)
<b>Code written</b>	No code, low code	No code, low code	Code
<b>Data volume</b>	Low to high	Low to high	Low to high
<b>Development interface</b>	Wizard, canvas	Power query	Notebook, Spark job definition

	Pipeline copy activity	Dataflow Gen 2	Spark
Sources	30+ connectors	150+ connectors	Hundreds of Spark libraries
Destinations	18+ connectors	Lakehouse, Azure SQL database, Azure Data explorer, Azure Synapse analytics	Hundreds of Spark libraries
Transformation complexity	Low: lightweight - type conversion, column mapping, merge/split files, flatten hierarchy	Low to high: 300+ transformation functions	Low to high: support for native Spark and open-source libraries

Review the following three scenarios for help with choosing how to work with your data in Fabric.

## Scenario1

Leo, a data engineer, needs to ingest a large volume of data from external systems, both on-premises and cloud. These external systems include databases, file systems, and APIs. Leo doesn't want to write and maintain code for each connector or data movement operation. He wants to follow the medallion layers best practices, with bronze, silver, and gold. Leo doesn't have any experience with Spark, so he prefers the drag and drop UI as much as possible, with minimal coding. And he also wants to process the data on a schedule.

The first step is to get the raw data into the bronze layer lakehouse from Azure data resources and various third party sources (like Snowflake Web, REST, AWS S3, GCS, etc.). He wants a consolidated lakehouse, so that all the data from various LOB, on-premises, and cloud sources reside in a single place. Leo reviews the options and selects **pipeline copy activity** as the appropriate choice for his raw binary copy. This pattern applies to both historical and incremental data refresh. With copy activity, Leo can load Gold data to a data warehouse with no code if the need arises and pipelines provide high scale data ingestion that can move petabyte-scale data. Copy activity is the best low-code and no-code choice to move petabytes of data to lakehouses and warehouses from varieties of sources, either ad-hoc or via a schedule.

## Scenario2

Mary is a data engineer with a deep knowledge of the multiple LOB analytic reporting requirements. An upstream team has successfully implemented a solution to migrate multiple LOB's historical and incremental data into a common lakehouse. Mary has been tasked with cleaning the data, applying business logics, and loading it into multiple destinations (such as Azure SQL DB, ADX, and a lakehouse) in preparation for their respective reporting teams.

Mary is an experienced Power Query user, and the data volume is in the low to medium range to achieve desired performance. Dataflows provide no-code or low-code interfaces for ingesting data from hundreds of data sources. With dataflows, you can transform data using 300+ data transformation options, and write the results into multiple destinations with an easy to use, highly visual user interface. Mary reviews the options and decides that it makes sense to use **Dataflow Gen 2** as her preferred transformation option.

## Scenario3

Adam is a data engineer working for a large retail company that uses a lakehouse to store and analyze its customer data. As part of his job, Adam is responsible for building and maintaining the data pipelines that extract, transform, and load data into the lakehouse. One of the company's business requirements is to perform customer review analytics to gain insights into their customers' experiences and improve their services.

Adam decides the best option is to use **Spark** to build the extract and transformation logic. Spark provides a distributed computing platform that can process large amounts of data in parallel. He writes a Spark application using Python or Scala, which reads structured, semi-structured, and unstructured data from OneLake for customer reviews and feedback. The application cleanses, transforms, and writes data to Delta tables in the lakehouse. The data is then ready to be used for downstream analytics.

## Next steps

- [How to copy data using copy activity](#)
- [Quickstart: Create your first dataflow to get and transform data](#)
- [How to create an Apache Spark job definition in Fabric](#)

# Microsoft Fabric decision guide: data warehouse or lakehouse

Article • 05/23/2023

Use this reference guide and the example scenarios to help you choose between the data warehouse or a lakehouse for your workloads using Microsoft Fabric.

## ⓘ Important

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## Data warehouse and lakehouse properties

	Data warehouse	Lakehouse	Power BI Datamart
<b>Data volume</b>	Unlimited	Unlimited	Up to 100 GB
<b>Type of data</b>	Structured	Unstructured, semi-structured, structured	Structured
<b>Primary developer persona</b>	Data warehouse developer, SQL engineer	Data engineer, data scientist	Citizen developer
<b>Primary developer skill set</b>	SQL	Spark (Scala, PySpark, Spark SQL, R)	No code, SQL
<b>Data organized by</b>	Databases, schemas, and tables	Folders and files, databases and tables	Database, tables, queries
<b>Read operations</b>	Spark, T-SQL	Spark, T-SQL	Spark, T-SQL, Power BI
<b>Write operations</b>	T-SQL	Spark (Scala, PySpark, Spark SQL, R)	Dataflows, T-SQL

	Data warehouse	Lakehouse	Power BI Datamart
<b>Multi-table transactions</b>	Yes	No	No
<b>Primary development interface</b>	SQL scripts	Spark notebooks, Spark job definitions	Power BI
<b>Security</b>	Object level (table, view, function, stored procedure, etc.),  column level, row level, DDL/DML	Row level, table level (when using T- SQL),  none for Spark	Built-in RLS editor
<b>Access data via shortcuts</b>	Yes (indirectly through the lakehouse)	Yes	No
<b>Can be a source for shortcuts</b>	Yes (tables)	Yes (files and tables)	No
<b>Query across items</b>	Yes, query across lakehouse and warehouse tables	Yes, query across lakehouse and warehouse tables; query across lakehouses (including shortcuts using Spark)	No

## Scenarios

Review these scenarios for help with choosing between using a lakehouse or a data warehouse in Fabric.

### Scenario 1

Susan, a professional developer, is new to Microsoft Fabric. They are ready to get started cleaning, modeling, and analyzing data but need to decide to build a data warehouse or a lakehouse. After review of the details in the previous table, the primary decision points are the available skill set and the need for multi-table transactions.

Susan has spent many years building data warehouses on relational database engines, and is familiar with SQL syntax and functionality. Thinking about the larger team, the primary consumers of this data are also skilled with SQL and SQL analytical tools. Susan decides to use a **data warehouse**, which allows the team to interact primarily with T-SQL, while also allowing any Spark users in the organization to access the data.

## Scenario 2

Rob, a data engineer, needs to store and model several terabytes of data in Fabric. The team has a mix of PySpark and T-SQL skills. Most of the team running T-SQL queries are consumers, and therefore don't need to write INSERT, UPDATE, or DELETE statements. The remaining developers are comfortable working in notebooks, and because the data is stored in Delta, they're able to interact with a similar SQL syntax.

Rob decides to use a **lakehouse**, which allows the data engineering team to use their diverse skills against the data, while allowing the team members who are highly skilled in T-SQL to consume the data.

## Scenario 3

Ash, a citizen developer, is a Power BI developer. They're familiar with Excel, Power BI, and Office. They need to build a data product for a business unit. They know they don't quite have the skills to build a data warehouse or a lakehouse, and those seem like too much for their needs and data volumes. They review the details in the previous table and see that the primary decision points are their own skills and their need for a self service, no code capability, and data volume under 100 GB.

Ash works with business analysts familiar with Power BI and Microsoft Office, and knows that they already have a Premium capacity subscription. As they think about their larger team, they realize the primary consumers of this data may be analysts, familiar with no-code and SQL analytical tools. Ash decides to use a **Power BI datamart**, which allows the team to interact build the capability fast, using a no-code experience. Queries can be executed via Power BI and T-SQL, while also allowing any Spark users in the organization to access the data as well.

## Next steps

- [What is data warehousing in Microsoft Fabric?](#)
- [Create a warehouse in Microsoft Fabric](#)
- [Create a lakehouse in Microsoft Fabric](#)
- [Introduction to Power BI datamarts](#)

# Navigate to your items from Microsoft Fabric Home

Article • 05/23/2023

This article gives a high level view of navigating to your items and actions from Microsoft Fabric Home. Each product experience has its own Home, and there are similarities that they all share. Those similarities are described in this article. For detailed information about **Home** for a particular product experience, such as Data Factory Home, visit the relevant page for that product experience.

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## Overview of Home

On Home, you see items that you create and that you have permission to use. These are items from all the workspaces that you access. That means that the items available on everyone's Home are different. At first, you might not have much content, but that changes as you start to create and share Microsoft Fabric items.

## ⓘ Note

Home is not workspace-specific. For example, the **Recent** area on Home might include items from many different workspaces.

In Microsoft Fabric, the term *item* refers to: apps, lakehouses, warehouses, reports, and more. Your items are accessible and viewable in Microsoft Fabric, and often the best place to start working in Microsoft Fabric is from **Home**. However, once you've created at least one new workspace, been granted access to a workspace, or you've added an item to **My workspace**, you might find it more convenient to navigate directly to a workspace. One way to navigate to a workspace is by using the nav pane and workspace selector.

To open **Home**, select it from the top of your left navigation pane.

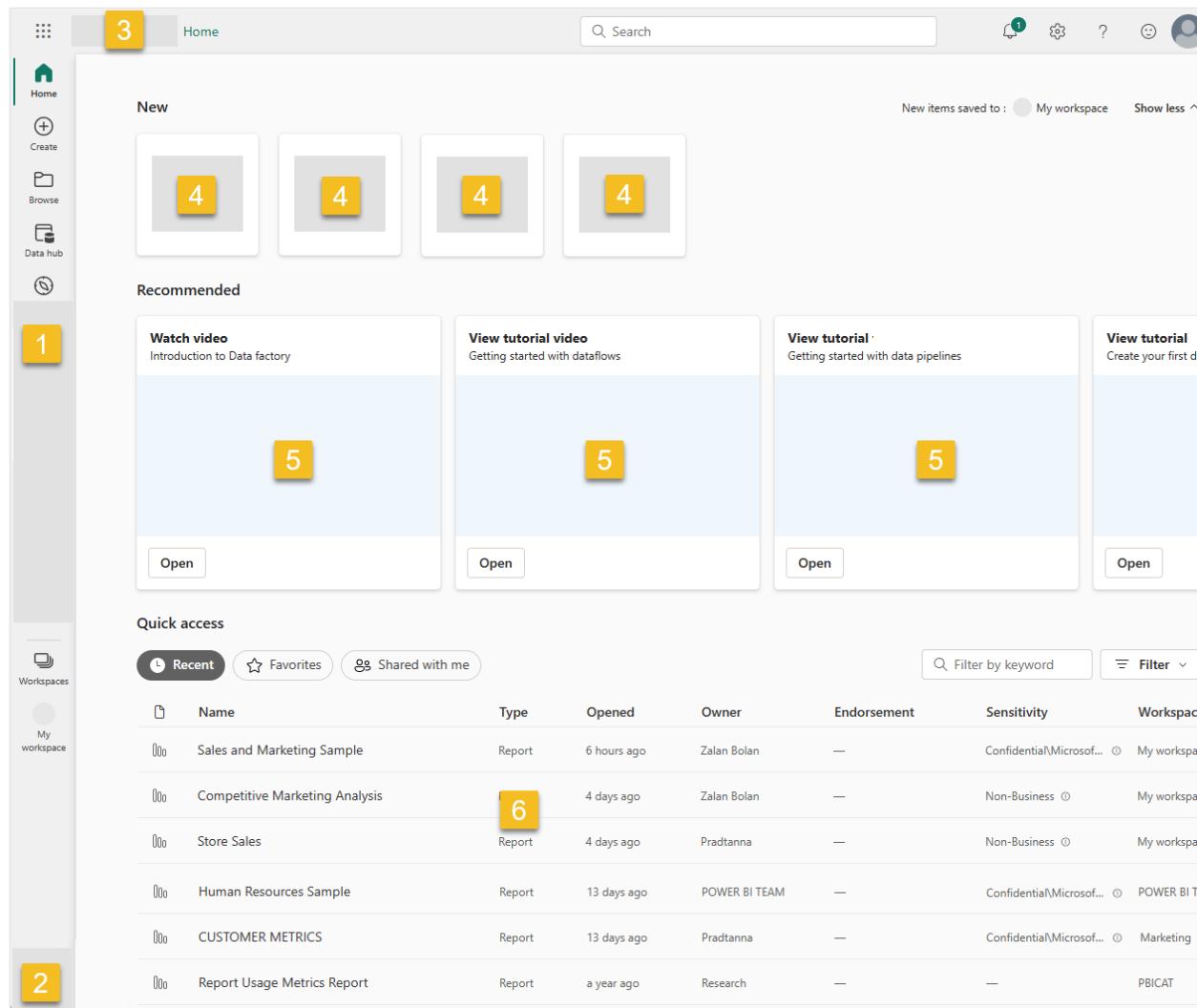


## Most important content at your fingertips

The items that you can access appear on Home. If your Home canvas gets crowded, use [global search](#) to find what you need, quickly. The layout and content on Home is different for every user and every product experience, but there are numerous similarities as well. These similarities are listed here and discussed in more detail later in this article.

### Note

**Power BI Home** is different from the other product experiences. To learn more, visit [Power BI Home](#).



1. The left navigation pane (nav pane) for your product experience links you to different views of your items and to creator resources.
2. The selector for switching product experiences.
3. The top menu bar for orienting yourself in Microsoft Fabric, finding items, help, and sending Microsoft feedback. The **Account manager** control is a critical icon for looking up your account information and managing your Fabric trial.
4. Options for creating new items.
5. Links to recommended content. This content helps you get started using the product experience and links to items and workspaces that you visit often.
6. Your items organized by recent, favorites, and items shared with you by your colleagues. The items that appear here are the same across product experiences, with the exception of the Power BI experience.

## ⓘ Important

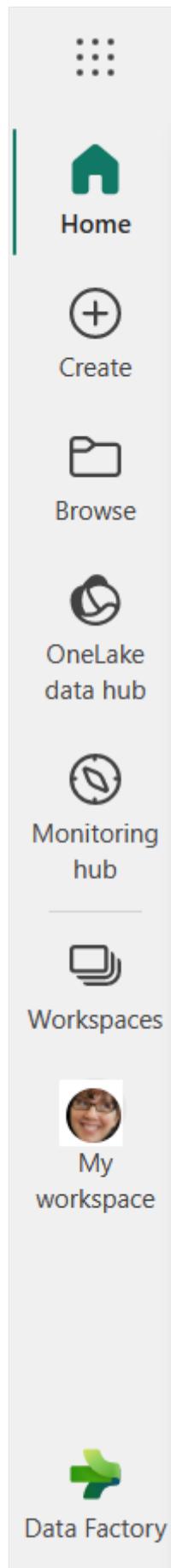
Only the content that you can access appears on your Home. For example, if you don't have permissions to a report, that report doesn't appear on Home. The exception to this is if your subscription or license changes to one with less access, then you will receive a prompt asking you to start a trial or upgrade your license.

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## Locate items from Home

Microsoft Fabric offers many ways of locating and viewing your content. All approaches access the same pool of content in different ways. Searching is sometimes the easiest and quickest way to find something. While other times, using the nav pane to open a workspace or selecting a card on the Home canvas is your best option.

### Use the navigation pane



Along the left side is a narrow vertical bar, referred to as the ***nav pane***. This example uses the Data factory nav pane. Notice that **My workspace** is the active workspace. The options in your nav pane depend on the product experience you've selected. The nav pane organizes actions you can take with your items in ways that help you get to where

you want to be quickly. Occasionally, using the nav pane is the quickest way to get to your items.

In the bottom section of the nav pane is where you find and open your workspaces. Use the [workspace selector](#) to view a list of your workspaces and select one to open. Below the workspace selector is the name of the currently open workspace.

- By default, you see the **Workspaces** selector and **My workspace**.
- When you open a workspace, its name replaces **My workspace**.
- Whenever you create a new item, it's added to the open workspace.

The nav pane is there when you open Home and remains there as you open other areas of Microsoft Fabric. Every Microsoft Fabric product experience nav pane includes **Home**, **Browse**, **OneLake data hub**, **Create**, and **Workspaces**.

## Find and open workspaces

*Workspaces* are places to collaborate with colleagues to create collections of items such as lakehouses, warehouses, and reports.

There are different ways to find and open your workspaces. If you know the name or owner, you can search. Or you can select the **Workspaces** icon in the nav pane and choose which workspace to open.

The screenshot shows the Data Factory Home page. On the left, there's a vertical navigation pane with icons for Home, Create, Browse, OneLake data hub, Monitoring hub, and Workspaces (which is highlighted with a red box). Below the navigation is a 'My workspace' section. In the center, there's a 'Workspaces' section with a search bar (also highlighted with a red box) and a 'My workspace' button. A list of workspaces follows, including 'Cloud + AI TV Worldwide', 'Digital Transformation Plat...', 'Formatted Table Demo', 'PBICAT', 'Power BI Hackathon', 'POWER BI TEAM', and 'Pradtanna K'. At the bottom of this list is a green 'New workspace' button. To the right, there's a sidebar with a search bar, a 'My workspace' button, and a 'Show less' link. A 'View tutorial video' section with a 'Getting started with dataflows' link and an icon of a book and cubes is also visible.

The workspace opens on your canvas, and the name of the workspace is listed on your nav pane. When you open a workspace, you can view its content. It includes items such as notebooks, pipelines, reports, and lakehouses.

For more information, see [Workspaces](#).

## Find and open other product experiences



- Power BI
- Data Factory
- App Development
- Extension API playground
- Trident Functions
- Synapse
- Data Engineering
- Data Science
- Data Warehouse
- Real-Time Analytics

In the bottom left corner is your experience selector. Click the icon to see all of the available Microsoft Fabric product experiences. Select an experience to open it and make it active.

## Find your content using search, sort, and filter

To learn about the many ways to search from Microsoft Fabric, see [Searching and sorting](#). Global searching is available by item, name, keyword, workspace, and more.

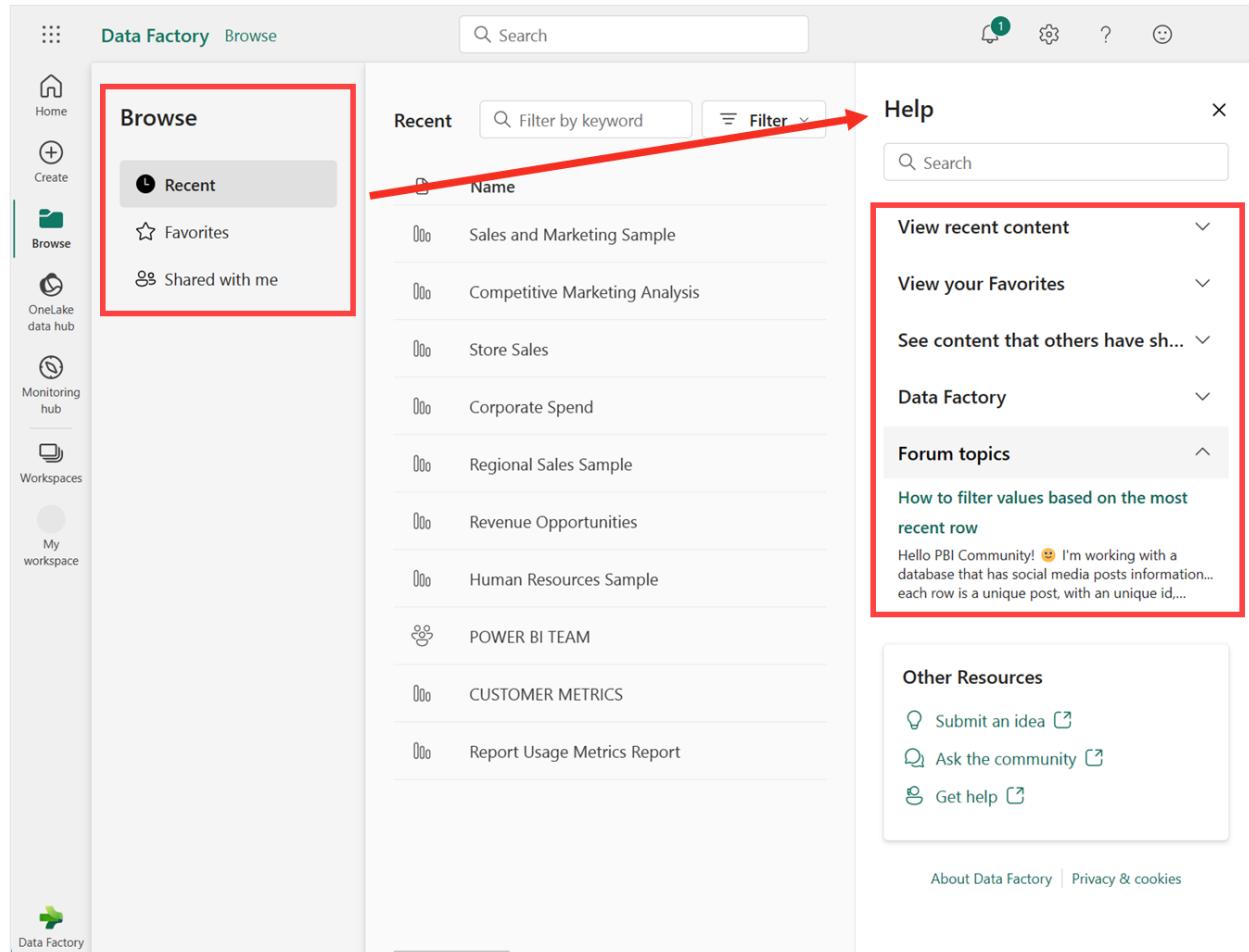
## Find answers in the context sensitive Help pane

Select the Help icon (?) to open and use the contextual Help pane and to search for answers to questions.

Microsoft Fabric provides context sensitive help in the right rail of your browser. In this example, we've selected **Browse** from the nav pane and the Help pane automatically updates to show us articles about the features of the **Browse** screen. For example, we're

shown articles on *View recent content* and *See content that others have shared with you*. If there are community posts related to the current view, they're displayed under **Forum topics**.

Leave the Help pane open as you work, and use the suggested topics to learn how to use Microsoft Fabric features and terminology. Or, select the X to close the Help pane and save screen space.



The Help pane is also a great place to search for answers to your questions. Type in the **Search** field and your answers are listed below.



# Help

X



Search pipelines



## Search results for "pipelines"

Filter ▾

✓ All

Pipelines - Create Pipeline - REST API (Power BI Power BI REST

Microsoft docs (30)

operation Returns the operation performed on the specified deployment pipeline, including the...

## Pipelines - Create Pipeline - REST API (Power

### BI Power BI REST APIs)

Microsoft doc - PipelineStage A Power BI deployment pipeline stage Name Type Description order integer The stage order, starting from zero. workspaceId string...

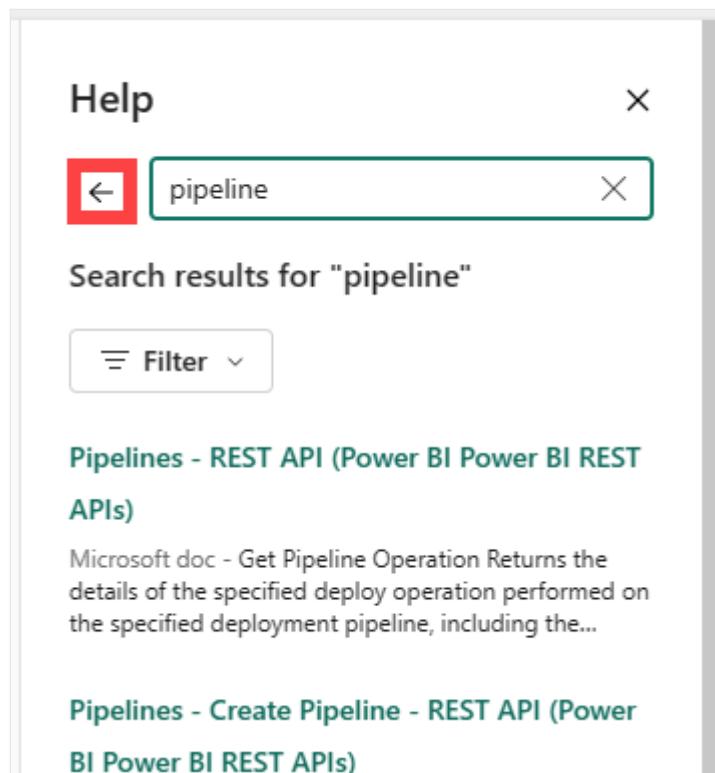
## Overview of Power BI deployment pipelines

Microsoft doc - Pipeline structure Deployment pipelines is designed as a pipeline with three stages: Development This stage is used to design, build, and...

## Deployment pipeline - accidentally deleted a dataset in Dev pipeline

Forum topic - Hi, all, I have one question about

To return to the default Help pane, select the left arrow.



For more information about searching, see [Searching and sorting](#).

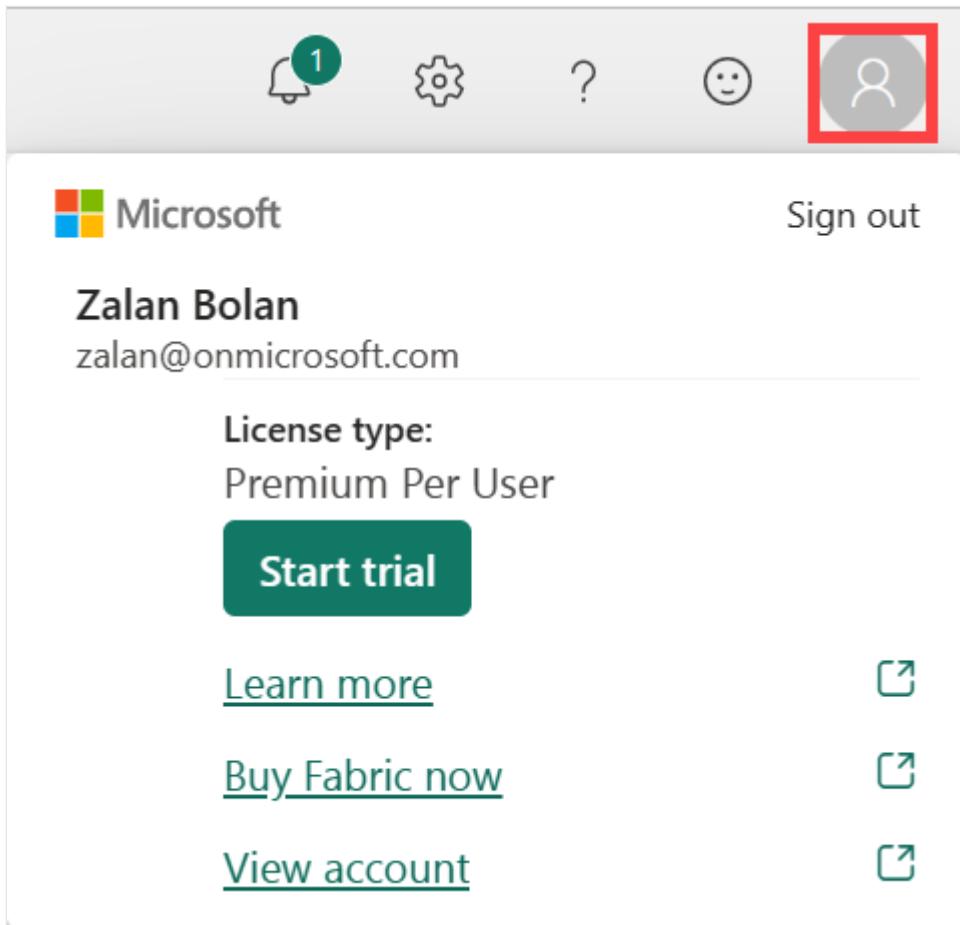
For more information about the Help pane, see [Get in-product help](#).

## Find help and support

If the self-help answers don't resolve your issue, scroll to the bottom of the Help pane for more resources. Use the links to ask the community for help or to connect with Microsoft Fabric Support. For more information about contacting Support, see [Support options](#).

## Find your account and license information

Information about your account and license is available from the Account manager. Select the tiny photo from the upper right corner of Microsoft Fabric to open your Account manager.



For more information about licenses and trials, see [Licenses](#).

## Find notifications, settings, and feedback

In the upper right corner of Home are several helpful icons. Take time to explore your **Notifications center**, **Settings**, and **Feedback** options. The **?** icon displays your [Help and search options](#) and the [Account manager icon](#) displays information about your account and license. Both of these features are described in detail earlier in this article.

## Find what you need on your Home canvas

The final section of Home is the center area, called the **canvas**. The content of your canvas updates as you select different items. By default, the Home canvas displays options for creating new items, recommended items, recents, favorites, and content that has been shared with you. If you've selected the **Show less** view, the **New** section of the canvas is collapsed.

The screenshot shows the Power BI Home interface. At the top left is a green button labeled '+ New KQL Database (Preview)'. To its right is a message 'New items saved to: My workspace'. On the far right is a 'Show more' button. Below this is a 'Recommended' section containing two cards. Each card has a title 'Get started', a subtitle, and a small icon. The first card's subtitle is 'Introduction to Real-Time Analytics' and its icon is a blue and white cube. The second card's subtitle is 'Learn KQL with sample data' and its icon is a blue and white bar chart.

When you create a new item, it's saved in your **My workspace** unless you've selected a workspace from **Workspaces**. To learn more about creating items in workspaces, see [create workspaces](#).

### Note

Power BI Home is different from the other product experiences. To learn more, visit [Power BI Home](#).

The **Recommended** area might include getting started content as well as items and workspaces that you use frequently.

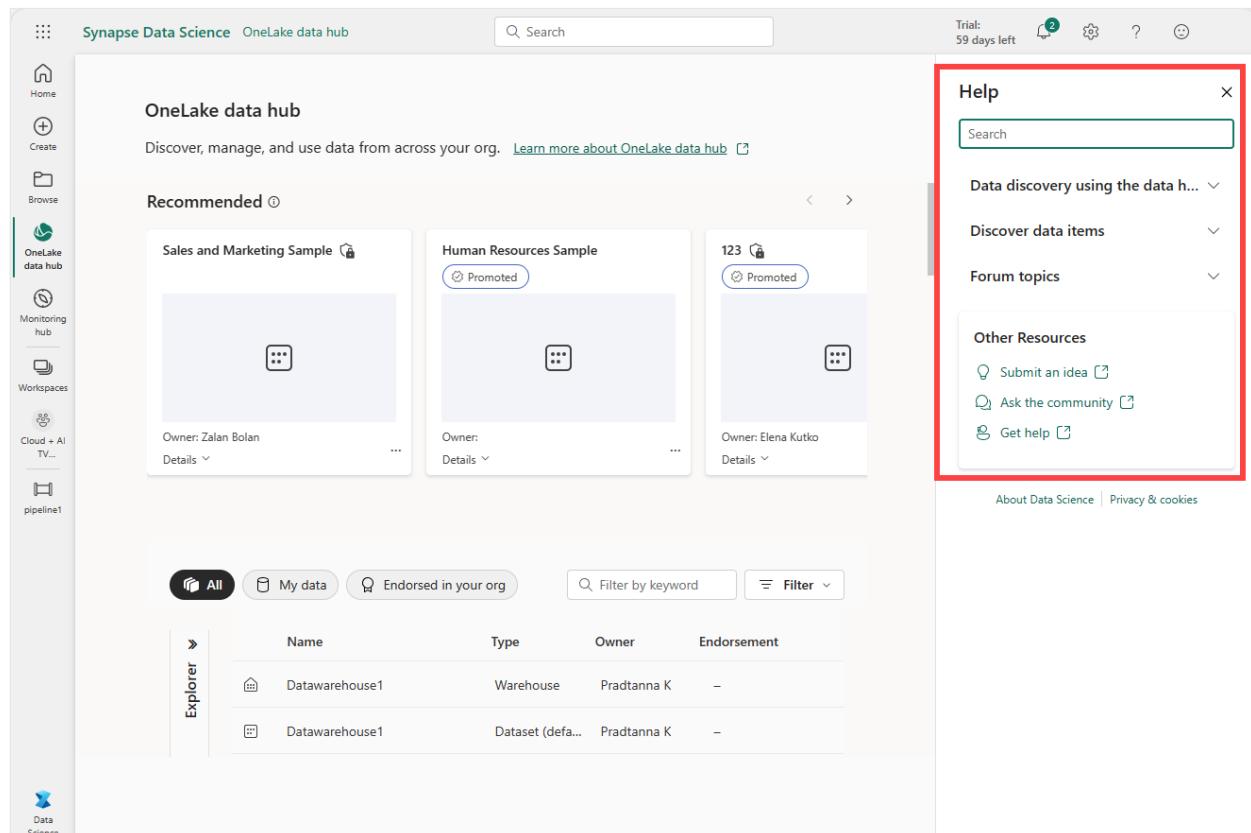
## Next steps

- [Power BI Home](#)
- [Start a Fabric trial](#)

# Self-help with the Fabric contextual Help pane

Article • 05/23/2023

This article explains how to use the Fabric Help pane. The Help pane is feature-aware and displays articles about the actions and features available on the current Fabric screen. The Help pane is also a search engine that quickly finds answers to questions in the Fabric documentation and Fabric community forums.



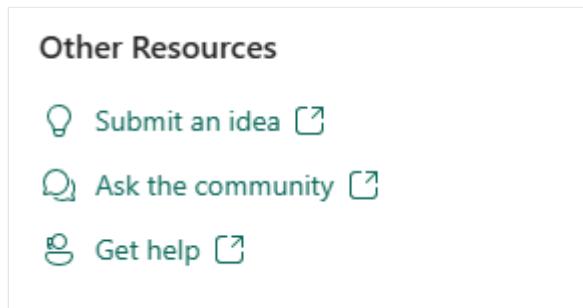
## ⓘ Important

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## The Help pane is feature-aware

The feature-aware state is the default view of the Help pane when you open it without entering any search terms. The Help pane shows a list of recommended topics, resources that are relevant to your current context and location in Fabric, and a list of links for other resources. It has three sections:

- **Feature-aware documents:** This section groups the documents by the features that are available on the current screen. Select a feature in the Fabric screen and the Help pane updates with documents related to that feature. Select a document to open it in a separate browser tab.
- **Forum topics:** This section shows topics from the community forums that are related to the features on the current screen. Select a topic to open it in a separate browser tab.
- **Other resources:** This section has links for feedback and Support.



## The Help pane is a search engine

The Help pane is also a search engine. Enter a keyword to find relevant information and resources from Microsoft documentation and community forum topics. Use the dropdown to filter the results.

The image shows a screenshot of the Microsoft Help pane. At the top, there's a search bar with the text "refresh data". Below the search bar, the title "Search results for \"refresh data\" " is displayed. A "Filter" button is shown with a dropdown menu open, containing the option "All" which is checked. To the right of the filter, a preview of a search result is visible, showing the title "dataflows refresh" and a snippet of text explaining what it does. Below the filter, there are two sections: "Microsoft docs (30)" and "Forum topics (10)". At the bottom of the pane, there are two blue links: "Refresh a dataset created from an Excel workbook - cloud" and "Refresh a dataset created from an Excel".

## **workbook - local**

Microsoft doc - In Power BI, Refresh Now and Schedule Refresh is supported for datasets created from Excel workbooks imported from a local drive where Power...

## **How to refresh data from standalone mysql database in app.powerbi.com(Web services) without gateways**

Forum topic - Hi, We have a strange requirement where we have to connect directly to standalone mysql database installed in our on-premises server for...

## **can't see power BI datasets using power pivot in excel**

Forum topic - ...o longer see any datasets. If I open a workbook from a colleague, then I can refresh data. I can also see the datasets in power BI web. I can also...

## **Refresh datasets created from local Power BI Desktop files**

Microsoft doc - Scheduled refresh When you set up a refresh schedule, Power BI connects directly to the data sources by using the connection information and...

## **Manage your data source - import and scheduled refresh**

Microsoft doc - Add a data source Select a data source type. All of the data source types listed can be used for scheduled refresh with the on-premises data gateway...

## **Refresh summaries for Power BI**

Microsoft doc - The Refresh time (hours, minutes)

# **The Help pane is perfect for learning and getting started**

As you explore Fabric, the feature-aware documents update based on what you've selected and where you are in Fabric. This is a great way to learn how to use Fabric. Give yourself a guided tour by making selections in Fabric and reading the feature-aware documents. For example, in the Data Science experience, select **OneLake data hub**. The Help pane updates with articles that you can use to learn about the data hub.

The screenshot shows the OneLake data hub interface in Synapse Data Science. On the left, there's a sidebar with icons for Home, Create, Browse, OneLake data hub (which is highlighted with a red box), Monitoring hub, Workspaces, and My workspace. The main area displays three sample datasets: Sales and Marketing Sample, Human Resources Sample, and 123. Below these are filter buttons (All, My data, Endorsed in your org, Filter by keyword, Filter) and an Explorer table listing various datasets and warehouses. The Help pane, also highlighted with a red box, is open on the right, showing sections like Data discovery using the data hub, Discover data items, Forum topics, and Other Resources.

# Open the Help pane

Follow the instructions to practice using the Help pane.

1. From the upper-right corner of Fabric, select the ? icon to open the Help pane.

The screenshot shows the Synapse Data Warehouse Home page. On the left, there's a sidebar with icons for Home (highlighted with a red box), Create, Browse, OneLake data hub, and Workspaces. The main area features a 'New Warehouse (Preview)' button and a 'Recommended' section with a 'Getting started with warehouse' card. In the top right corner, there are icons for a trial (59 days left), notifications (2), settings, and a help icon (highlighted with a red box).

2. Open Browse and select the Recent feature. The Fabric Help pane displays documents about the Recent feature. Select a document to learn more. The

document opens in a separate browser tab.

The screenshot shows the Microsoft Synapse Data Science interface. On the left, there's a sidebar with icons for Home, Create, Browse (which is selected and highlighted in green), OneLake data hub, Monitoring hub, Workspaces, and My workspace. The main area is titled 'Browse' and has a 'Recent' section. A red arrow points to the 'Recent' tab. Below it are 'Favorites' and 'Shared with me'. The 'Recent' section lists various datasets and workspaces:

Name	Type
Sales and Marketing Sample	Dataset
Datawarehouse1	Dataset (default)
Cloud + AI TV Worldwide	Workspace
Digital Transformation Platform	Workspace
My workspace	Workspace
Sales and Marketing Sample	Report
Competitive Marketing Analysis	Report
Store Sales	Report
Corporate Spend	Report
Regional Sales Sample	Report
Revenue Opportunities	Report

To the right is a 'Help' panel with a 'View recent content' section, which is also highlighted with a red box. It contains instructions on how to find recently visited content in the Power BI service, along with links to 'View your Favorites', 'See content that others have sh...', 'Data discovery using the data h...', and 'Forum topics'.

3. Forum posts often provide interesting context. Select one that looks helpful or interesting.

This screenshot is similar to the previous one, showing the 'Recent' section in the 'Browse' area. A red arrow points to the 'Recent' tab. The 'Help' panel on the right now displays a forum topic titled 'recently viewed reports in App - can I mark them as favorites?'. The post discusses the use of Apps to share reports and asks if it's possible to star them. Other forum topics and resources are also listed in the help panel.

4. Search the Microsoft documentation and community forums by entering a keyword in the search pane.

The screenshot shows the Microsoft Power BI service interface. On the left is a vertical navigation bar with icons for Home, Create, Browse, Data Hub, Monitoring hub, Metrics, Apps, Deployment pipelines, Learn, Workspaces, and Tenant. The main area has a title 'Build your first report' with three steps: 'Add and prepare your data', 'Generate a premade report', and 'Customize to suit your needs'. Below this is a section 'Add data to start building a report' with two options: 'Paste or manually enter data' and 'Pick a published dataset'. A note says 'Don't see the source you're looking for? Download the desktop app.' To the right of the main content is a 'Help' pane with a search bar containing 'customize report visuals'. The pane lists several articles: 'Search results for "customize report visuals"', 'Let users personalize visuals in a report', 'Customize visualization titles, backgrounds, and more in Power BI', 'Overview of report visualizations in Power BI service and Desktop', 'Create and use the paginated report visual', 'Main sources for acquiring Power BI custom visuals', 'Create modern visual tooltips (preview)', 'Understand how visuals interact in a report', 'Develop custom visuals in Power BI', and 'Tips and tricks for formatting in reports'. A red box highlights the search bar.

5. Return to the default display of the Help pane by selecting the arrow.

The screenshot shows the Microsoft Power BI service interface with the Help pane open. The search bar at the top contains 'pipeline'. The results show a single item: 'Pipelines - REST API (Power BI Power BI REST APIs)'. Below the title is a snippet of text: 'Microsoft doc - Get Pipeline Operation Returns the details of the specified deploy operation performed on the specified deployment pipeline, including the...'. A red box highlights the search bar.

6. Close the Help pane by selecting the X icon in the upper-right corner of the pane.

The screenshot shows the Microsoft Data Science Help center. At the top, there are icons for notifications (1), settings, help, and user profile. A red box highlights the close button ('X') in the top right corner of the main content area. Below the header is a search bar with the placeholder 'Search'. The main content area contains several sections: 'View recent content' (with a dropdown arrow), 'View your Favorites' (with a dropdown arrow), 'See content that others have sh...' (with a dropdown arrow), and 'Data discovery using the data h...' (with a dropdown arrow). The 'Data discovery using the data hub' section is expanded, showing a description: 'Learn how you can find, explore, and use the data items in your organization and their related reports.' Below this is a 'Forum topics' section (with a dropdown arrow) and an 'Other Resources' box containing links: 'Submit an idea' (with a lightbulb icon), 'Ask the community' (with a question mark icon), and 'Get help' (with a person icon).

Help

X

Search

View recent content

View your Favorites

See content that others have sh...

Data discovery using the data h...

**Data discovery using the data hub**

Learn how you can find, explore, and use the data items in your organization and their related reports.

Forum topics

Other Resources

Submit an idea

Ask the community

Get help

About Data Science | Privacy & cookies

## Still need help?

If you still need help, select **Ask the community** and submit a question. If you have an idea for a new feature, let us know by selecting **Submit an idea**. To open the Support site, select **Get help** in **Other Resources**.

# Global search

Article • 05/23/2023

When you're new to Microsoft Fabric, you have only a few items (workspaces, reports, apps, lakehouses). But as you begin creating and sharing items, you can end up with long lists of content. That's when searching, filtering, and sorting become helpful.

## Important

Microsoft Fabric is currently in PREVIEW. This information relates to a prerelease product that may be substantially modified before it's released. Microsoft makes no warranties, expressed or implied, with respect to the information provided here.

## Search for content

At the top of Home, the global search box finds items by title, name, or keyword. Sometimes, the fastest way to find an item is to search for it. For example, if a dashboard you haven't used in a while isn't showing up on your Home canvas. Or, if your colleague shared something with you, but you don't remember what it's named or what type of content they shared. Sometimes, you might have so much content that it's easier to search for it rather than scrolling or sorting.

Search is available from Home and also most other areas of Microsoft Fabric. Just look for the search box or search icon .

In the **Search** field, type all or part of the name of an item, creator, keyword, or workspace. You can even enter your colleague's name to search for content that they've shared with you. The search finds matches in all the items that you own or have access to.

The screenshot shows the Microsoft Fabric canvas interface. At the top, there is a search bar with the word "Sales" highlighted by a red box. To the right of the search bar are various icons: a bell, a gear, a download arrow, a question mark, and a user profile picture. Below the search bar is a list of items under the heading "Sales and Marketing". The items listed are: "Sales and Marketing sample 11/...", "Sales and Marketing Sample from Workspace: Sales and Marketing", "Marketing and sales from App: Sales and Marketing sampl...", and "Marketing and sales from Workspace: Sales and Marketing...". A green button labeled "+ New report" is located at the top right of the list. To the right of the list, there is a sidebar with the message "You frequently open t..." and a "See more results for Sales" link.

In addition to the **Search** field, most experiences on the Microsoft Fabric canvas also include a **Filter by keyword** field. Similar to search, use **Filter by keyword** to narrow down the content on your canvas to find what you need. The keywords you enter in the **Filter by keyword** pane apply to the current view only. For example, if you open **Browse** and enter a keyword in the **Filter by keyword** pane, Microsoft Fabric searches only the content that appears on the **Browse** canvas.

The screenshot shows the Microsoft Fabric canvas interface in the "Browse" mode for the "Synapse Data Warehouse". On the left is a navigation sidebar with icons for Home, Create, Browse, OneLake data hub, Workspaces, My workspace, and Data Warehouse. The "Browse" icon is selected. The main area has a header "Synapse Data Warehouse Browse" and a search bar. Below the search bar is a "Recent" section and a "Recent" filter bar where the word "sample" is entered and highlighted by a red box. To the right is a table of recent items:

	Name	Type	Opened	Owner	Endorsemen
1	Sales and Marketing Sample	Report	a month ago	Megan B	—
2	Regional Sales Sample	Report	a month ago	Megan B	—
3	Human Resources Sample	Report	a month ago	POWER BI TEAM	—

## Sort content lists

If you have only a few items, sorting isn't necessary. But when you have long lists of items, sorting helps you find what you need. For example, this **Shared with me** content list has many items.

Power BI Browse

Home Create Browse Data hub Metrics Apps Deployment pipelines Learn

Browse

Recent Favorites Shared with me

Shared with me

Name ↓

	Name	Type	Shared	Owner
	Usage Metrics Report	Report	10/25/22, 1:24:56 PM	Sales and Marketing
	Sales and Marketing Sample PBIX	Report	11/3/22, 10:56:15 AM	Sales and Marketing
	Sales and Marketing Sample	Dashboard	11/11/22, 11:22:57 AM	Sales and Marketing
	Sales and Marketing Sample	Report	11/11/22, 11:22:57 AM	Sales and Marketing
	Report Usage Metrics Report	Report	10/25/22, 1:24:56 PM	Sales and Marketing
	Report Usage Metrics Report	Report	10/25/22, 1:24:56 PM	Mark 8 Project Team
	Operations Usage Metrics	Report	10/25/22, 1:24:56 PM	Mark 8 Project Team

Q Filter by keyword Filter

Right now, this content list is sorted alphabetical by name, from Z to A. To change the sort criteria, select the arrow to the right of **Name**.

Shared with me

Name ↓

Sorted: Z to A

	Usage Metrics Report
	Sales and Marketing Sample PBIX
	Sales and Marketing Sample
	Sales and Marketing Sample
	Report Usage Metrics Report
	Report Usage Metrics Report
	Operations Usage Metrics

Sorting is also available in other areas of Microsoft Fabric. In this example, the workspaces are sorted by the **Refreshed** date. To set sorting criteria for workspaces, select a column header, and then select again to change the sorting direction.

The screenshot shows the Microsoft Fabric interface for the 'Sales and Marketing' workspace. On the left, there's a sidebar with various navigation options like Home, Create, Browse, Data Hub, Metrics, Apps, Deployment pipelines, Learn, and Workspaces. The main area is titled 'Sales and Marketing' and shows a list of content items. The columns include Name, Type, Owner, Refreshed (which is highlighted with a red box), Next refresh, Endorsement, and Sensitivity. The content items listed are 'Sales and Marketing Sample' (Report), 'Sales and Marketing Sample' (Dataset), 'Contoso Q2 Division Sales' (Dataset), 'Sales' (Dataset), and 'Sales and Marketing Sample' (Dashboard).

Not all columns can be sorted. Hover over the column headings to discover which can be sorted.

## Filter content lists

Another way to locate content quickly is to use the content list **Filter**. Display the filters by selecting **Filter** from the upper right corner. The filters available depend on your location in Microsoft Fabric. This example is from a **Recent** content list. It allows you to filter the list by content **Type**, **Time**, or **Owner**.

The screenshot shows a 'Recent' content list in Microsoft Fabric. At the top, there's a search bar, a notification bell, a gear icon, a download icon, a help icon, and a user profile picture. Below the search bar is a 'Filter by keyword' input field and a 'Filter' button (highlighted with a red box). A dropdown menu is open under the 'Filter' button, showing options like 'Reset all filters'. The list below is organized by workspace: 'Workspaces' (with 'Workspaces', 'Workspaces', and 'Workspaces' entries), 'Sales and Marketing' (with 'Sales and Marketing' entry), and 'Apps' (with 'Apps' entry). Each item has a checkbox and a small icon next to it.

## Next steps

- Find Fabric items from Home
- Start a Fabric trial

# Fabric settings

Article • 05/23/2023

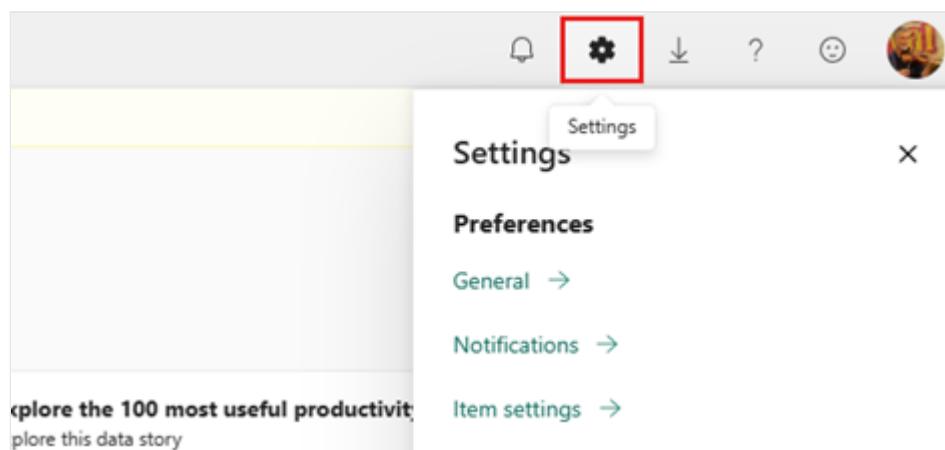
## ⓘ Important

Microsoft Fabric is currently in PREVIEW. This information relates to a prerelease product that may be substantially modified before it's released. Microsoft makes no warranties, expressed or implied, with respect to the information provided here.

The Fabric settings pane provides links to various kinds of settings you can configure. This article shows how to open the Fabric settings pane and describes the kinds of settings you can access from there.

## Open the Fabric settings pane

To open the Fabric settings pane, select the gear icon in the Fabric portal header.



## Preferences

In the preferences section, individual users can set their user preferences, specify the language of the Fabric user interface, manage their account and notifications, and configure settings for their personal use throughout the system.

Link	Description
General	Opens the generate settings page, where you can set the display language for the Fabric interface and parts of visuals.
Notifications	Opens the notifications settings page where you can view your subscriptions and alerts.

<b>Link</b>	<b>Description</b>
Item settings	Opens the item settings page, where you can configure per-item-type settings.
Developer settings	Opens the developer settings page, where you can configure developer mode settings.

## Resources and extensions

The resources and extensions section provides links to pages where users can use following capabilities.

<b>Link</b>	<b>Description</b>
Manage personal/group storage	Opens the personal/group storage management page, where you can see and manage data items that you own or that have been shared with you.
Power BI settings	Opens the Power BI settings page, where you can get to the settings pages for the Power BI items (dashboards, datasets, workbooks, reports, datamarts, and dataflows) that are in the current workspace.
Manage connections and gateways	Opens page where you can manage connections, on-premises data gateways, and virtual networks data gateways.
Manage embed codes	Opens a page where you can manage <a href="#">embed codes</a> you have created.
Azure Analysis Services migrations	Opens up a page where you can <a href="#">migrate your Azure Analysis Services datasets to Power BI Premium</a> .

## Governance and insights settings

The governance and insights section provides links to help admins and users with their admin, governance, and compliance tasks.

<b>Link</b>	<b>Description</b>
Admin portal	Opens the Fabric admin portal where admins perform various management tasks and configure Fabric tenant settings. For more information, see <a href="#">What is the admin portal?</a>

Link	Description
<a href="#">Microsoft Purview hub (preview)</a>	Currently available to Power BI admins only. Opens the Microsoft Purview hub where you can view Purview insights about your organization's sensitive data. The Microsoft Purview hub also provides links to Purview governance and compliance capabilities and has links to documentation to help you get started with Microsoft Purview governance and compliance in Fabric.

## Next steps

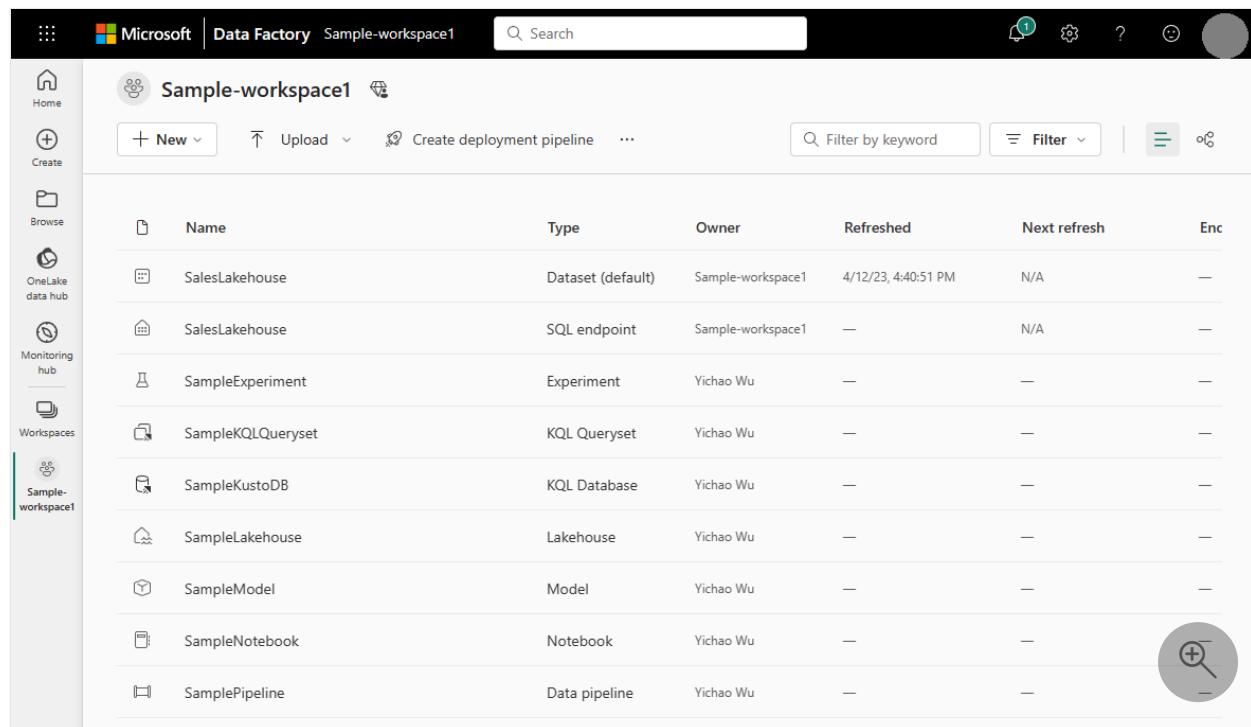
- [What is Fabric](#)
- [What is Microsoft Fabric admin?](#)

# Workspaces

Article • 05/23/2023

*Workspaces* are places to collaborate with colleagues to create collections of items such as lakehouses, warehouses, and reports. This article describes workspaces, how to manage access to them, and what settings are available.

Ready to get started? Read [Create a workspace](#).



The screenshot shows the Microsoft Data Factory workspace interface. On the left, there's a sidebar with icons for Home, Create, Browse, OneLake data hub, Monitoring hub, Workspaces, and Sample-workspace1 (which is selected). The main area has a title bar with 'Microsoft Data Factory Sample-workspace1' and a search bar. Below that is a toolbar with 'New', 'Upload', 'Create deployment pipeline', 'Filter by keyword', 'Filter', and a refresh icon. The main content area is a table listing various workspace items:

	Name	Type	Owner	Refreshed	Next refresh	Enc
	SalesLakehouse	Dataset (default)	Sample-workspace1	4/12/23, 4:40:51 PM	N/A	—
	SalesLakehouse	SQL endpoint	Sample-workspace1	—	N/A	—
	SampleExperiment	Experiment	Yichao Wu	—	—	—
	SampleKQLQueryset	KQL Queryset	Yichao Wu	—	—	—
	SampleKustoDB	KQL Database	Yichao Wu	—	—	—
	SampleLakehouse	Lakehouse	Yichao Wu	—	—	—
	SampleModel	Model	Yichao Wu	—	—	—
	SampleNotebook	Notebook	Yichao Wu	—	—	—
	SamplePipeline	Data pipeline	Yichao Wu	—	—	—

A large circular button with a plus sign and a magnifying glass is located in the bottom right corner of the table area.

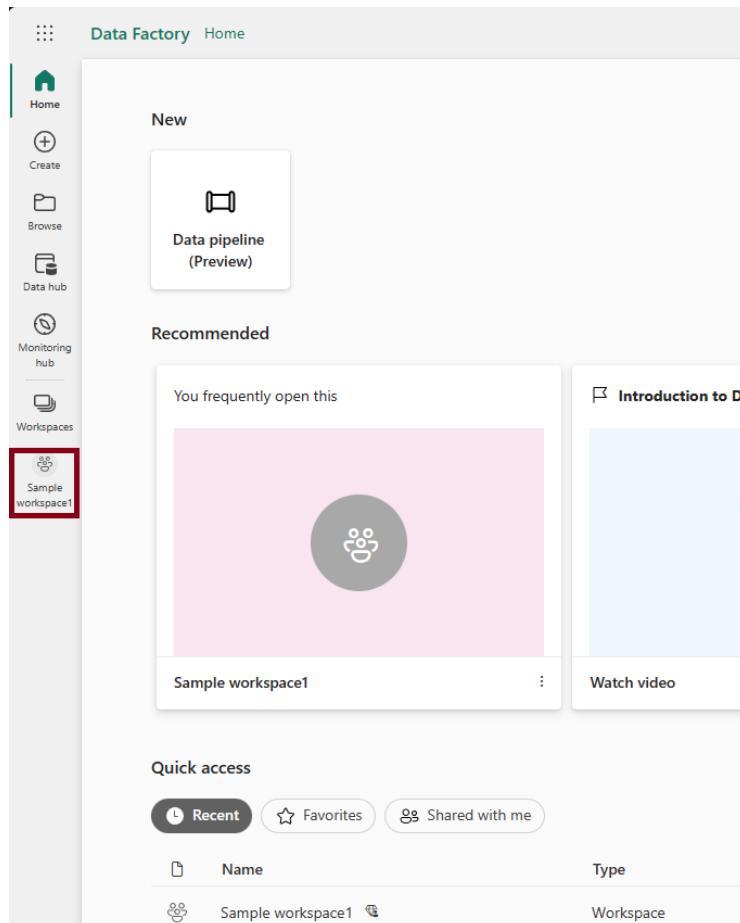
## Working with workspaces

Here are some useful tips about working with workspaces.

- **Pin workspaces** to the top of the workspace flyout list to quickly access your favorite workspaces. Read more about [pin workspaces](#).
- **Use granular workspace roles** for flexible permissions management in the workspaces: Admin, Member, Contributor, and Viewer. Read more about [workspace roles](#).
- **Navigate to current workspace** from anywhere by selecting the icon on left nav pane. Read more about [current workspace](#) in this article.
- **Workspace settings**: As workspace admin, you can update and manage your workspace configurations in [workspace settings](#).
- **Contact list**: Specify who receives notification about workspace activity. Read more about [workspace contact lists](#) in this article.

# Current workspace

After you select and open to a workspace, this workspace becomes your current workspace. You can quickly navigate to it from anywhere by selecting the workspace icon from left nav pane.



## Workspace settings

Workspace admins can use workspace settings to manage and update the workspace. The settings include general settings of the workspace, like the basic information of the workspace, contact list, OneDrive, license, Azure connections, storage, and other experiences' specific settings.

To open the workspace settings, you can select the workspace in the nav pane, then select **More options (...)** > **Workspace settings** next to the workspace name.

Microsoft | Power BI Home

Workspaces

Search: projectbase

All

ProjectBasedWS

...

Workspace settings

Workspace access

Share

Home

Create

Browse

Data hub

Monitoring hub

Metrics

Apps

Deployment pipelines

Learn

Workspaces

My workspace

You can also open it from the workspace page.

The screenshot shows the Microsoft Power BI workspace interface for 'ProjectBasedWS'. On the left is a sidebar with icons for Home, Create, Browse, Data hub, Monitoring hub, Metrics, Apps, Deployment pipelines, and Learn. The main area has a title 'ProjectBasedWS' with a 'describe workspace' link. Below are buttons for '+ New', 'Upload', 'Create deployment pipeline', 'Update app', 'Manage access', and 'Workspace settings' (which is highlighted with a red box). A table lists various items: 'Datamart2' (Dataset), 'dataset1' (Report), 'date1' (Dataset), 'direct query' (Dataset), 'direct query report' (Report), 'DW1' (Dataset), and 'ered' (Report). The table includes columns for Name, Type, Owner, Refreshed, and Next refresh. A large circular button with a plus sign and a magnifying glass is in the bottom right.

	Name	Type	Owner	Refreshed	Next refresh
	Datamart2	Dataset (default)	ProjectBasedWS	2/11/23, 5:05:01 AM	N/A
	dataset1	Report	ProjectBasedWS	—	—
	date1	Dataset	ProjectBasedWS	9/17/21, 9:55:21 AM	N/A
	direct query	Dataset	ProjectBasedWS	3/13/23, 5:13:00 PM	N/A
	direct query report	Report	ProjectBasedWS	3/13/23, 5:13:00 PM	—
	DW1	Dataset (default)	ProjectBasedWS	3/7/23, 12:49:52 PM	N/A
	ered	Report	ProjectBasedWS	12/17/21, 4:06:43 PM	—

## Workspace contact list

The Contact list feature allows you to specify which users receive notification about issues occurring in the workspace. By default, the one who created the workspace is in the contact list. You can add others to that list while [creating workspace](#) or in workspace settings after creation. Users or groups in the contact list are also listed in the user interface (UI) of the workspace settings, so workspace users know whom to contact.

The screenshot shows the 'Workspace settings' page. On the left is a sidebar with sections: About (selected), Premium, Azure connections, System Storage, Git integration, Other, Power BI, and Data Engineering/Science. The main area has a 'Search' bar, a 'Workspace image' section with 'Upload' and 'Reset' buttons, and fields for 'Name' (Sample workspace1) and 'Description' (Describe this workspace (Optional)). A 'Domain (preview)' section has a dropdown for 'Assign to a domain (optional)'. The 'Contact list' section is expanded and highlighted with a red box, showing a list containing 'Sample User'. Below it is a 'Workspace OneDrive' section with a field for '(Optional)'.

## Microsoft 365 and OneDrive

The Workspace OneDrive feature allows you to configure a Microsoft 365 Group whose SharePoint document library is available to workspace users. You create the Group

outside of Microsoft Fabric first, with one available method being from OneDrive. Read about creating a [OneDrive shared library](#).

### ⓘ Note

Creating Microsoft 365 Groups may be restricted in your environment, or the ability to create them from your OneDrive site may be disabled. If this is the case, speak with your IT department.

Microsoft Fabric doesn't synchronize permissions between users or groups with workspace access, and users or groups with Microsoft 365 Group membership. A best practice is to [give access to the workspace](#) to the same Microsoft 365 Group whose file storage you configured. Then manage workspace access by managing membership of the Microsoft 365 Group.

You can configure OneDrive in workspace settings by typing in the name of the Microsoft 365 group that you created earlier. Type just the name, not the URL. Microsoft Fabric automatically picks up the OneDrive for the group.

The screenshot shows the 'Workspace settings' page. On the left, there's a sidebar with sections like 'About', 'Premium', 'Azure connections', 'System Storage', 'Git integration', 'Other', 'Power BI', and 'Data Engineering/Science'. The 'About' section is currently selected. On the right, there are several input fields: 'Name' (set to 'Sample workspace1'), 'Description' (with placeholder 'Describe this workspace (Optional)'), 'Domain (preview)' (with placeholder 'Assign to a domain (optional)'), and a 'Contact list' section containing 'Sample User'. At the bottom, there's a 'Workspace OneDrive' section where 'Test user testuser@contoso.com' is listed. This 'Workspace OneDrive' section is highlighted with a red box.

## License mode

By default, workspaces are created in your organization's shared capacity. When your organization has other capacities, workspaces including My Workspaces can be assigned to any capacity in your organization. You can configure it while creating a workspace or in **Workspace settings -> Premium**. Read more about [licenses](#).

**Choose a license**

**License mode**

- Pro**  
Select Pro to use basic Power BI features and collaborate on reports, dashboards, and scorecards. To access a Pro workspace, users need Pro per-user licenses. [Learn more](#)
- Premium per-user**  
Select Premium per-user to collaborate using Power BI Premium features, including paginated reports, dataflows, and datamarts. To collaborate and share content in a Premium per-user workspace, users need Premium per-user licenses. [Learn more](#)
- Premium capacity**  
Select premium capacity if the workspace will be hosted in a premium capacity. When you share, collaborate on, and distribute Power BI and Microsoft Fabric content, users in the viewer role can access this content without needing a Pro or Premium per-user license. [Learn more](#)
- Embedded**  
Select embedded if the workspace will be hosted in an Azure embedded capacity. ISVs and developers use Power BI Embedded to embed visuals and analytics in their applications. [Learn more](#)
- Fabric capacity**  
Select Fabric capacity if the workspace will be hosted in a Microsoft Fabric capacity. With Fabric capacities, users can create Microsoft Fabric items and collaborate with others using Fabric features and experiences. Explore new capabilities in Power BI, Data Factory, Data Engineering, and Real-Time Analytics, among others. [Learn more](#)
- Trial**  
Select the free trial per-user license to try all the new features and experiences in Microsoft Fabric for 60 days. A Microsoft Fabric trial license allows users to create Microsoft Fabric items and collaborate with others in a Microsoft Fabric trial capacity. Explore new capabilities in Power BI, Data Factory, Data Engineering, and Real-Time Analytics, among others. [Learn more](#)

## Azure connections configuration

Workspace admins can configure dataflow storage to use Azure Data Lake Gen 2 storage and Azure Log Analytics (LA) connection to collect usage and performance logs for the workspace in workspace settings.

**Workspace settings**

**Azure Data Lake Gen2 Storage**

- About**  
Connect an Azure Data Lake Gen2 storage account. [Learn more about Azure Data Lake Storage](#)
- Premium**  
 Use the default Azure connection

**Azure connections**

- System Storage**
- Git integration**
- Other**  
Connect an Azure Log Analytics workspace to collect usage and performance logs for this workspace. [Learn more about Azure Log Analytics](#)

**Power BI**

**Data**

**Engineering/Science**

With the integration of Azure Data Lake Gen 2 storage, you can bring your own storage to dataflows, and establish a connection at the workspace level. Read [Configure dataflow storage to use Azure Data Lake Gen 2](#) for more detail.

After the connection with Azure Log Analytics (LA), activity log data is sent continuously and is available in Log Analytics in approximately 5 minutes. Read [Using Azure Log Analytics](#) for more detail.

## System storage

System storage is the place to manage your dataset storage in your individual or workspace account so you can keep publishing reports and datasets. Your own datasets, Excel reports, and those items that someone has shared with you, are included in your system storage.

In the system storage, you can view how much storage you have used and free up the storage by deleting the items in it.

Keep in mind that you or someone else may have reports and dashboards based on a dataset. If you delete the dataset, those reports and dashboards don't work anymore.

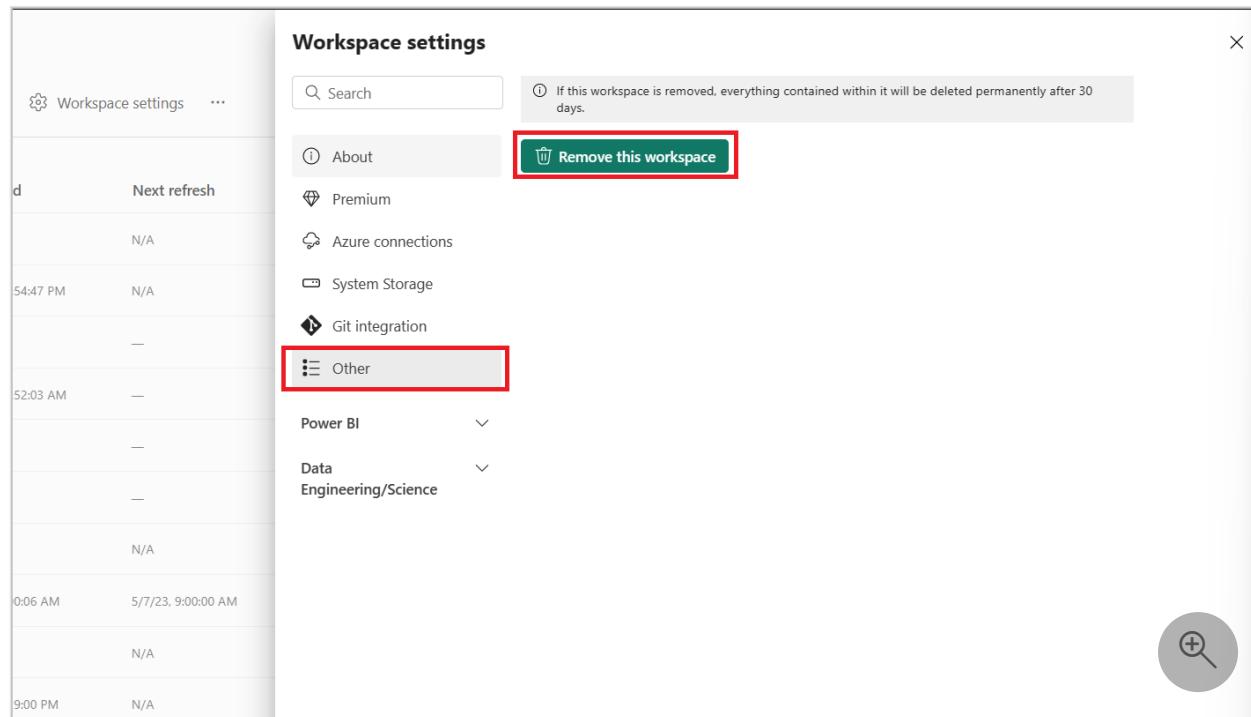
The screenshot shows the Azure Storage Explorer interface. On the left, there's a list of storage accounts and their refresh status. On the right, under 'Workspace settings', there's a summary of storage usage: 6 MB used of 10 GB (0.06%) and 9 GB available. Below this, there's a section for 'Azure connections' which includes a dataset named 'System Storage'. This dataset is highlighted with a red box. The table below lists datasets, their sizes, types, and related objects, along with delete icons. The 'System Storage' dataset is the first item in the list.

Name	Size	Type	Related objects
Untitled 2022-05-23T13:38:07.36...	1 MB	Dataset	Accessibility All.csv
Accessibility All	1 MB	Dataset	
direct query	1 MB	Dataset	direct query report
synapse cicd issues	1 MB	Dataset	synapse cicd issues.xlsx
DW1	1 MB	Dataset	
warehouse1	1 MB	Dataset	

## Remove the workspace

As an admin for a workspace, you can delete it. When you delete the workspace, everything contained within the workspace is deleted for all group members, and the associated app is also removed from AppSource.

In the Workspace settings pane, select **Other > Remove this workspace**.



## Administering and auditing workspaces

Administration for workspaces is in the Microsoft Fabric admin portal. Microsoft Fabric admins decide who in an organization can create workspaces and distribute apps. Read about [managing users' ability to create workspaces](#) in the "Workspace settings" article.

Admins can also see the state of all the workspaces in their organization. They can manage, recover, and even delete workspaces. Read about [managing the workspaces themselves](#) in the "Admin portal" article.

## Auditing

Microsoft Fabric audits the following activities for workspaces.

Friendly name	Operation name
Created Microsoft Fabric folder	CreateFolder
Deleted Microsoft Fabric folder	DeleteFolder

Friendly name	Operation name
Updated Microsoft Fabric folder	UpdateFolder
Updated Microsoft Fabric folder access	UpdateFolderAccess

Read more about [Microsoft Fabric auditing](#).

## Considerations and limitations

Limitations to be aware of:

- Workspaces can contain a maximum of 1,000 datasets, or 1,000 reports per dataset.
- Certain special characters aren't supported in workspace names when using an XMLA endpoint. As a workaround, use URL encoding of special characters, for example, for a forward slash /, use %2F.
- A user or a [service principal](#) can be a member of up to 1,000 workspaces.

## Next steps

- [Create workspaces](#)
- [Give users access to workspaces](#)

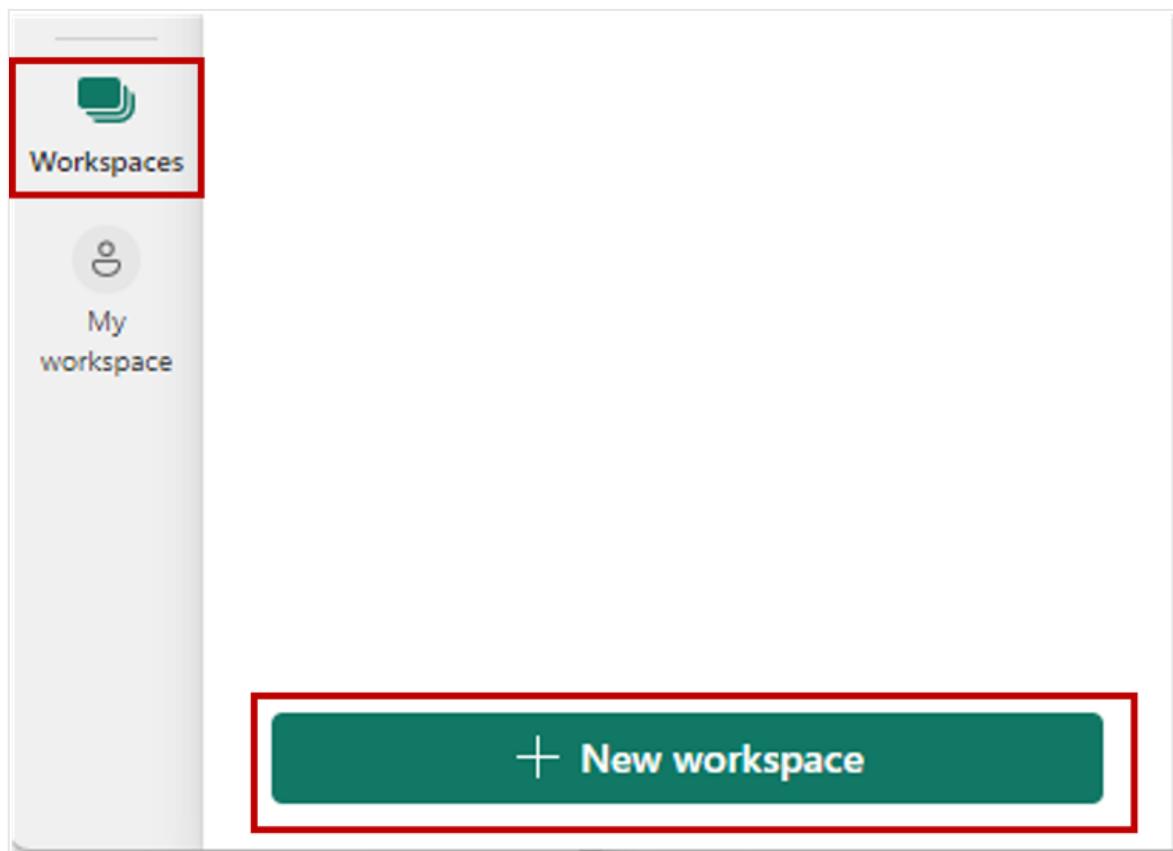
# Create a workspace

Article • 05/23/2023

This article explains how to create *workspaces* in Microsoft Fabric. In workspaces, you create collections of items such as lakehouses, warehouses, and reports. For more background, see the [Workspaces](#) article.

To create a workspace:

1. Select **Workspaces** > **New workspace**. The Create a workspace pane opens.



2. The Create a workspace pane opens.

## Create a workspace

Name \*

Description

Domain (preview) ⓘ

[Learn more about workspace settings](#) ↗

Workspace image



Upload

Reset

Advanced ▾

- Give the workspace a unique name (mandatory).
- Provide a description of the workspace (optional).
- Assign the workspace to a domain (optional).

If you are a domain contributor for the workspace, you can associate the workspace to a domain, or you can change an existing association. For information about domains, see [Domains in Fabric](#).

3. When done, either continue to the advanced settings, or select **Apply**.

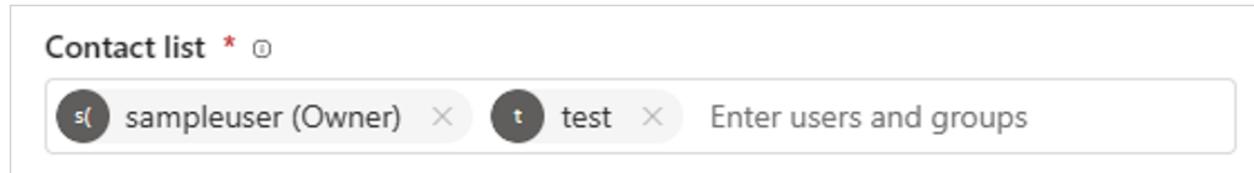
## Advanced settings

Expand **Advanced** and you see advanced setting options:

## Contact list

Contact list is a place where you can put the names of people as contacts for information about the workspace. Accordingly, people in this contact list receive system email notifications for workspace level changes.

By default, the first workspace admin who created the workspace is the contact. You can add other users or groups according to your needs. Enter the name in the input box directly, it helps you to automatically search and match users or groups in your org.



## License mode

Different [license](#) mode provides different sets of feature for your workspace. After the creation, you can still change the workspace license type in workspace settings, but some migration effort is needed.

### ! Note

Currently, if you want to downgrade the workspace license type from Premium capacity to Pro (Shared capacity), you must first remove any non-Power BI Fabric items that the workspace contains. Only after you remove such items will you be allowed to downgrade the capacity. For more information, see [Moving data around](#).

## Default storage format

Power BI datasets can store data in a highly compressed in-memory cache for optimized query performance, enabling fast user interactivity. With Premium capacities, large datasets beyond the default limit can be enabled with the Large dataset storage format setting. When enabled, dataset size is limited by the Premium capacity size or the maximum size set by the administrator. Learn more about [large dataset storage format](#).

## Template apps

[Power BI template apps](#) are developed for sharing outside your organization. If you check this option, a special type of workspace (template app workspace) is created. It's not possible to revert it back to a normal workspace after creation.

## Dataflow storage (preview)

Data used with Power BI is stored in internal storage provided by Power BI by default. With the integration of dataflows and Azure Data Lake Storage Gen 2 (ADLS Gen2), you can store your dataflows in your organization's Azure Data Lake Storage Gen2 account. Learn more about [dataflows in Azure Data Lake Storage Gen2 accounts](#).

## Give users access to your workspace

Now that you've created the workspace, you'll want to add other users to *roles* in the workspace, so you can collaborate with them. See these articles for more information:

- [Give users access to a workspace](#)
- [Roles in workspaces](#)

## Pin workspaces

Quickly access your favorite workspaces by pinning them to the top of the workspace flyout list.

1. Open the workspace flyout from the nav pane and hover over the workspace you want to pin. Select the **Pin to top** icon.

**Workspaces**

Search

My workspace

All

- Alpha Team
- Bravo Team
- Golf
- Test
- Bigdata Team
- Mike** (Pinned)
- Oscar Team
- Quebec Team
- US Team
- Dev Team
- Sales Team

+ New workspace

This screenshot shows the 'Workspaces' interface. At the top, there's a search bar. Below it, a pinned workspace named 'Mike' is highlighted with a red border around its pin icon. The list of workspaces includes 'My workspace' at the top, followed by sections for 'All' workspaces and specific teams like 'Alpha Team', 'Bravo Team', etc. A green button at the bottom right says '+ New workspace'.

2. The workspace is added in the Pinned list.

**Workspaces**

Search

**My workspace**

Pinned

- Mike

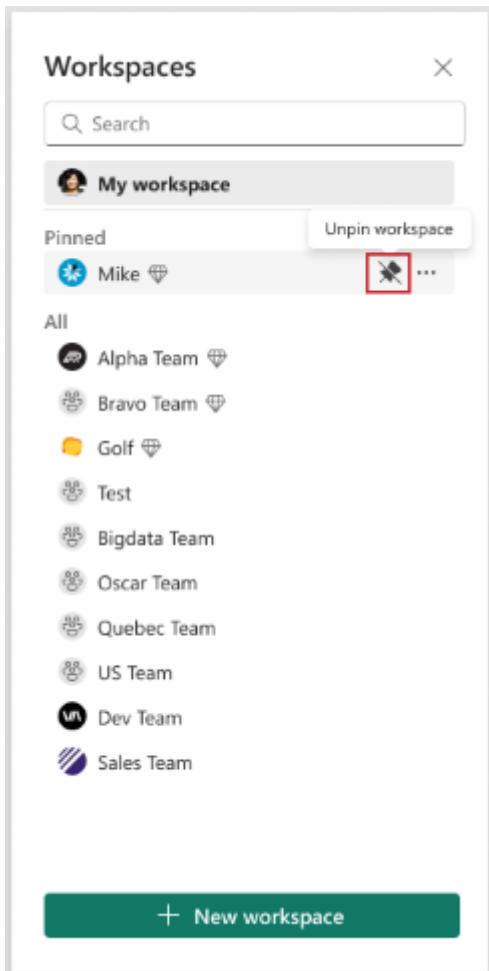
All

- Alpha Team
- Bravo Team
- Golf
- Test
- Bigdata Team
- Oscar Team
- Quebec Team
- US Team
- Dev Team
- Sales Team

+ New workspace

This screenshot shows the 'Workspaces' interface. The pinned workspace 'Mike' is now listed under the 'Pinned' section at the top. The rest of the workspace list is identical to the first screenshot, showing various team names and their corresponding icons.

3. To unpin a workspace, select the unpin button. The workspace is unpinned.



## Next steps

- Read about [workspaces](#)

# Roles in workspaces

Article • 05/23/2023

Workspace roles let you manage who can do what in a Microsoft Fabric workspace. Microsoft Fabric workspaces sit on top of OneLake and divide the data lake into separate containers that can be secured independently. Workspace roles in Microsoft Fabric extend the Power BI workspace roles by associating new Microsoft Fabric capabilities such as data integration and data exploration with existing workspace roles. For more information on Power BI roles, see [Roles in workspaces in Power BI](#).

You can either assign roles to individuals or to security groups, Microsoft 365 groups, and distribution lists. To grant access to a workspace, assign those user groups or individuals to one of the workspace roles: Admin, Member, Contributor, or Viewer. Here's how to [give users access to workspaces](#).

To create a new workspace, see [Create a workspace](#).

Everyone in a user group gets the role that you've assigned. If someone is in several user groups, they get the highest level of permission that's provided by the roles that they're assigned. If you nest user groups and assign a role to a group, all the contained users have permissions.

Users in workspace roles have the following Microsoft Fabric capabilities, in addition to the existing Power BI capabilities associated with these roles.

## Microsoft Fabric workspace roles

Capability	Admin	Member	Contributor	Viewer
View and read content of data pipelines, notebooks, Spark job definitions, ML models and experiments, and Event streams.	✓	✓	✓	✓
View and read content of KQL databases, KQL query-sets, and real-time dashboards.	✓	✓	✓	✓
Connect to SQL endpoints of Lakehouse and Data warehouse.	✓	✓	✓	✓
Read Lakehouse and Data warehouse data and shortcuts <sup>1</sup> through SQL endpoints.	✓	✓	✓	- <sup>2</sup>
Read Lakehouse and Data warehouse data and shortcuts <sup>1</sup> through OneLake APIs and Spark.	✓	✓	✓	-

Capability	Admin	Member	Contributor	Viewer
Read Lakehouse data through Lakehouse explorer.	✓	✓	✓	-
Write or delete data pipelines, notebooks, Spark job definitions, ML models and experiments, and Event streams.	✓	✓	✓	-
Write or delete KQL query-sets, real-time dashboards, and schema and data of KQL databases, Lakehouses, data warehouses, and shortcuts.	✓	✓	✓	-
Execute or cancel execution of notebooks, Spark job definitions, ML models and experiments.	✓	✓	✓	-
Execute or cancel execution of data pipelines.	✓	✓	✓	✓
View execution output of data pipelines, notebooks, ML models and experiments.	✓	✓	✓	✓

<sup>1</sup> Additional permissions are needed to read data from shortcut destination. Learn more about [shortcut security model](#).

<sup>2</sup> Admins, Members, and Contributors can grant viewers granular SQL permissions to read Lakehouse and Data warehouse data through SQL endpoints.

## Next steps

- [Roles in workspaces in Power BI](#)
- [Create workspaces](#)
- [Give users access to workspaces](#)
- [OneLake security](#)
- [OneLake shortcuts](#)
- [Data warehouse security](#)
- [Data engineering security](#)
- [Data science roles and permissions](#)

# Give users access to workspaces

Article • 05/23/2023

After you [create a workspace](#) in Microsoft Fabric, or if you have an admin or member role in a workspace, you can give others access to it by adding them to the different roles. Workspace creators are automatically admins. For an explanation of the different roles, see [Roles in workspaces](#).

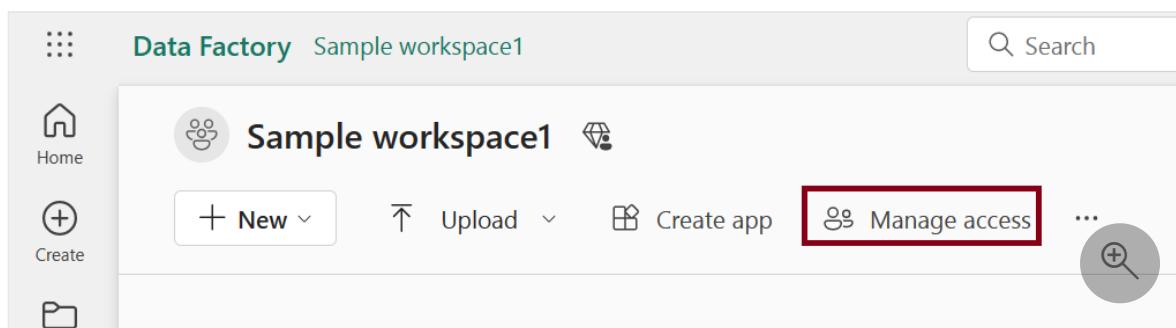
## ⓘ Note

To enforce row-level security (RLS) on Power BI items for Microsoft Fabric Pro users who browse content in a workspace, assign them the Viewer Role.

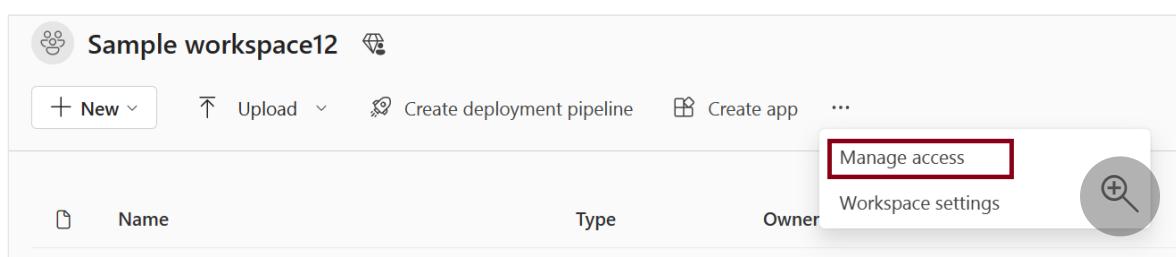
After you add or remove workspace access for a user or a group, the permission change only takes effect the next time the user logs into Microsoft Fabric.

## Give access to your workspace

1. Because you have the Admin or Member role in the workspace, on the command bar of workspace page, you see **Manage Access**. Sometimes this entry is on the **More options (...)** menu.



Manage access on the More options menu.



2. Select **Add people or groups**.

## Manage access

X

Sample workspace1

+ Add people or groups



Search within workspace

SU

Sample User ⓘ

Admin ▾

3. Enter name or email, select a **role**, and select **Add**. You can add security groups, distribution lists, Microsoft 365 groups, or individuals to these workspaces as admins, members, contributors, or viewers. If you have the member role, you can only add others to the member, contributor, or viewer roles.

## Add people

Sample workspace1

 Admins, members, and contributors have edit and view access. Viewers only have view access. [Learn more](#) 

Enter name or email

 Viewer 

Add

 Admin

 Member

 Contributor

 Viewer

4. You can view and modify access later if needed. Use the **Search** box to search for people or groups who already have access of this workspace. To modify access, select drop-down arrow, and select a role.

## Manage access

X

Sample workspace1

+ Add people or groups

Search within workspace

SU

Sample User ⓘ

Admin ▾

Su

Sample user2 ⓘ

Contributor ▾

Admin

Member

Viewer

Remove

## Next steps

- Read about [the workspace experience](#).
- [Create workspaces](#).
- [Roles in workspaces](#)

# Discover data items in the OneLake data hub

Article • 05/23/2023

The OneLake data hub makes it easy to find, explore, and use the Fabric data items in your organization that you have access to. It provides information about the items and entry points for working with them.

The data hub provides:

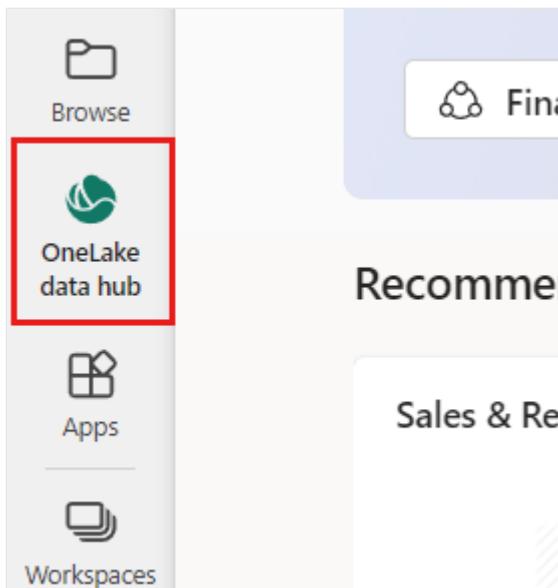
- A filterable list of all the data items you can access
- A gallery of recommended data items
- A way of finding data items by workspace
- A way to display only the data items of a selected domain
- An options menu of things you can do with the data item

This article explains what you see on the data hub and describes how to use it.

The screenshot shows the Power BI OneLake data hub interface. On the left, there's a navigation pane with icons for Home, Create, Browse, OneLake data hub (selected), Monitoring hub, Workspaces, and My workspace. The main area has a search bar at the top right. Below it, there's a section titled "OneLake data hub" with a sub-section "Recommended". This section displays six cards: "Product MAU, DAU, and NPS" (Certified), "Marketing insights" (Promoted), "Marketing" (Certified), "Top features" (Certified), "Customer feedback" (Certified), and "AppAccessSettings" (Promoted). Each card includes a small chart or icon and details like owner and last refresh. At the bottom, there's an "Explorer" section with a table of data items. The columns are: Name, Type, Refreshed, Owner, Location, Endorsement, and Sensitivity. Items listed include Sales FY21 (Dataset, 7m ago, Tim Deboar, Contoso workspace, Certified, Highly Confidential\Contoso...), Marketing DB (Datamart, 38m ago, Daichi Fukuda, New product insights, Certified, —), Client Logs Db (KQL Database, 2h ago, Emiliano Ceballos, Azure data, Promoted, Confidential\Contoso FTE), Top Campaigns (Dataset, 7h ago, Mikhail Kotov, Azure data, —, Public), Dataflow for triggers (Dataset, Yesterday at 11:12 AM, Marie Beaudouin, Contoso workspace, —, —), Daily Sales (Lakehouse, June 18 at 9:02 AM, Oscar Krog, Contoso workspace, Certified, Non-Business), Contoso DB (Warehouse, May 23 at 3:00 PM, Marie Beaudouin, Big data, Promoted, —), Test datamart (Datamart, May 15 at 5:13 AM, Tim Deboar, Events, Certified, Public), Primary dataflow (KQL Database, April 29 at 8:45 PM, Oscar Krog, Big data, —, —), and Contoso DB (Lakehouse, April 11 at 11:56 AM, Ruth Bengtsson, Contoso workspace, Certified, Confidential\Contoso FTE). There are also "All data", "My data", and "Endorsed in your org" buttons, a search bar, and a filter button.

## Open the data hub

To open the data hub, select the OneLake data hub icon in the navigation pane.



## Find items in the data items list

The data items list displays all the data items you have access to. To shorten the list, you can filter by keyword or data-item type using the filters at the top of the list. If you select the name of an item, you'll get to the item's details page. If you hover over an item, you'll see three dots that open the [options menu](#) when you select them.

	Name	Type	Refreshed	Owner	Location	Endorsement	Sensitivity
»	Sales FY21	Dataset	7m ago	Tim Deboar	Contoso workspace	<span>Certified</span>	Highly Confidential\Contoso...
»	Marketing DB	Datamart	38m ago	Daichi Fukuda	New product insights	<span>Certified</span>	—
»	Client Logs Db	KQL Database	2h ago	Emiliano Ceballos	Azure data	<span>Promoted</span>	Confidential\Contoso PR...
»	Top Campaigns	Dataset	7h ago	Mikhail Kotov	Azure data	—	Public
»	Dataflow for trincores	Dataset	Yesterday at 11:12 AM	Marie Beaudouin	Contoso workspace	—	—

The list has three tabs to narrow down the list of data items.

Tab	Description
All	Data items that you're allowed to find.
My data	Data items that you own.
Endorsed in your org	Endorsed data items in your organization that you're allowed to find. Certified data items are listed first, followed by promoted data items. For more information about endorsement, see the <a href="#">Endorsement overview</a>

The columns of the list are described below.

Column	Description
Name	The data item name. Select the name to open the item's details page.
Endorsement	<a href="#">Endorsement</a> status.

Column	Description
Owner	Data item owner (listed in the <i>All</i> and <i>Endorsed in your org</i> tabs only).
Workspace	The workspace the data item is located in.
Refreshed	Last refresh time (rounded to hour, day, month, and year. See the details section on the item's detail page for the exact time of the last refresh).
Next refresh	The time of the next scheduled refresh ( <i>My data</i> tab only).
Sensitivity	Sensitivity, if set. Select the info icon to view the sensitivity label description.

## Find items by workspace

Related data items are often grouped together in a workspace. To see the data items by workspace, expand the **Explorer** pane and select the workspace you're interested in. The data items you're allowed to see in that workspace will be displayed in the data items list.

The screenshot shows the Power BI interface with the following elements:

- Top Navigation:** Buttons for "All data", "My data", and "Endorsed in your org".
- Left Sidebar (Explorer):**
  - A button labeled "All workspaces" is highlighted with a red box.
  - Below it is a search bar with the placeholder "Search" and a filter icon.
  - A list of workspaces:
    - My Workspace
    - Contoso workspace
    - New product insights
    - RandomFolder
    - ShortcutLink Folder
    - Azure data design
- Right Panel:** A list of data items grouped by workspace:
  - Sales FY21
  - Marketing DB
  - Client Logs Db
  - Top Campaigns
  - Daily Sales
  - Contoso DB
  - Test datamart
  - Primary dataflow
  - Contoso DB
  - Primary dataflow

## Note

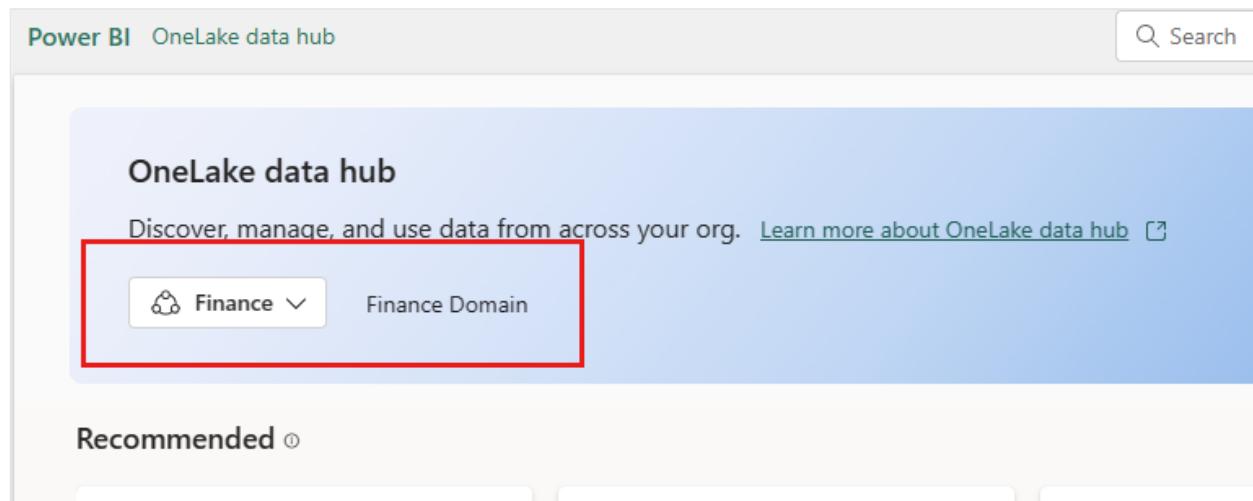
The Explorer pane may list workspaces that you don't have access to if the workspace contains items that you do have access to (through explicitly granted permissions, for example). If you select such a workspace, only the items you have access to will be displayed in the data items list.

## Find recommended items

Use the tiles across the top of the data hub to find and explore recommended data items. Recommended data items are data items that have been [certified or promoted](#) by someone in your organization or have recently been refreshed or accessed. Each tile contains information about the item and an [options menu](#) for doing things with the item. When you select a recommended tile, you are taken to the item's details page.

## Display only data items belonging to a particular domain

If [domains](#) have been defined in your organization, you can use the domain selector to select a domain so that only data items belonging to that domain will be displayed. If an image has been associated with the domain, you'll see that image on the data hub to remind you of the domain you're viewing.

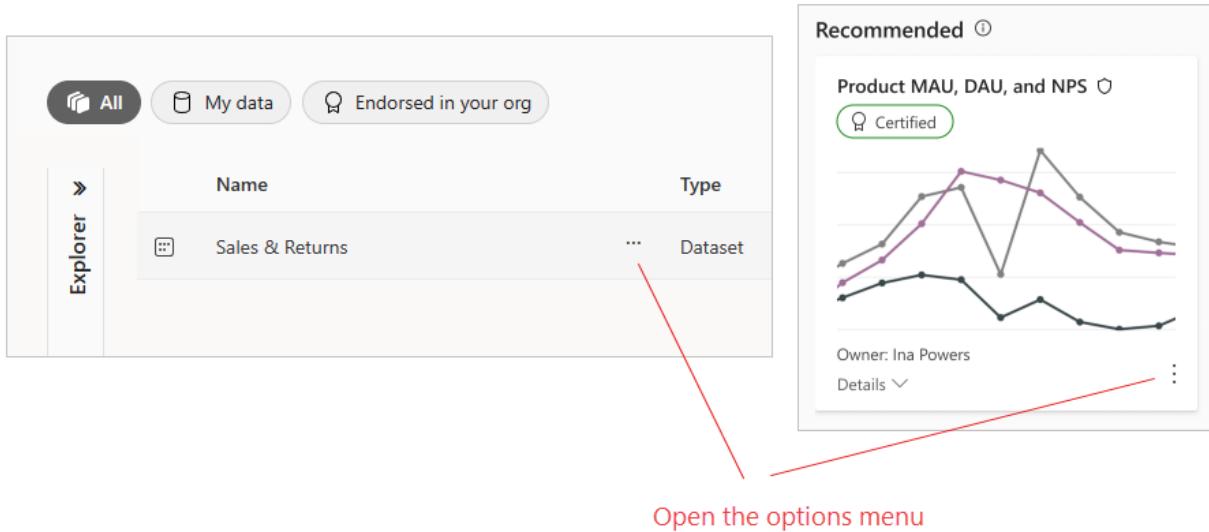


For more information about domains, see the [Domains overview](#)

## Open an item's options menu

Each item shown in the data hub has an options menu that enables you to do things, such as open the item's settings, manage item permissions, etc. The options available depend on the item and your permissions on the item.

To display the options menu, select **More options (...)** on one of the items shown in the data items list or a recommended item. In the data items list, you need to hover over the item to reveal **More options**.



### **ⓘ Note**

The Explorer pane may list workspaces that you don't have access to if the workspace contains items that you do have access to (through explicitly granted permissions, for example). If you select such a workspace, only the items you have access to will be displayed in the data items list.

## Next steps

- [Navigate to your items from Microsoft Fabric Home](#)
- [Endorsement](#)

# Promote or certify items

Article • 05/23/2023

Fabric provides two ways you can endorse your valuable, high-quality items to increase their visibility: **promotion** and **certification**.

- **Promotion:** Promotion is a way to highlight items you think are valuable and worthwhile for others to use. It encourages the collaborative use and spread of content within an organization.

Any item owner, as well as anyone with write permissions on the item, can promote the item when they think it's good enough for sharing.

- **Certification:** Certification means that the item meets the organization's quality standards and can be regarded as reliable, authoritative, and ready for use across the organization.

Only [authorized reviewers \(defined by the Power BI administrator\)](#) can certify items. Item owners who wish to see their item certified and aren't authorized to certify it themselves need to follow their organization's guidelines about getting items certified.

Currently it's possible to endorse all Fabric items except Power BI dashboards.

This article describes how to [promote items](#), how to [certify items](#) if you're an authorized reviewer, and how to [request certification](#) if you're not.

See the [endorsement overview](#) to learn more about endorsement.

## Promote items

To promote an item, you must have write permissions on the item you want to promote.

1. Go to the settings of the content you want to promote.
2. Expand the endorsement section and select **Promoted**.

If you're promoting a Power BI dataset and see a **Make discoverable** checkbox, it means you can make it possible for users who don't have access to the dataset to find it. See [dataset discovery](#) for more detail.

## Endorsement

Help coworkers find your quality content by endorsing this report. [Learn more](#)

None

The report will appear in search results but isn't endorsed.

Promoted

When you're ready to distribute the report to your coworkers, promote it to let them know.

Certified

Certify your report to show coworkers that it's been reviewed and meets your org's certification criteria. [How do I get my report certified?](#)

Feature on Home

Display this report in the Featured section on Power BI Home for people with access to it.

3. Select Apply.

## Certify items

Item certification is a significant responsibility, and only authorized users can certify items. Other users can [request item certification](#). This section describes how to certify an item.

1. Get write permissions on the item you want to certify. You can request these permissions from the item owner or from anyone who has an admin role in the workspace where the item is located.
2. Carefully review the item and determine whether it meets your organization's certification standards.
3. If you decide to certify the item, go to the workspace where it resides, and open the settings of the item you want to certify.
4. Expand the endorsement section and select **Certified**.

If you're certifying a Power BI dataset and see a **Make discoverable** checkbox, it means you can make it possible for users who don't have access to the dataset to find it. See [dataset discovery](#) for more detail.

## Endorsement

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None

The report will appear in search results but isn't endorsed.

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When you're ready to distribute the report to your coworkers, promote it to let them know.

Certified

Certify your report to show coworkers that it's been reviewed and meets your org's certification criteria. [How do I get my report certified?](#)

Feature on Home

Display this report in the Featured section on Power BI Home for people with access to it.

5. Select Apply.

## Request item certification

If you would like to certify your item but aren't authorized to do so, follow the steps below.

1. Go to the workspace where the item you want to be certified is located, and then open the settings of that item.
2. Expand the endorsement section. The **Certified** button is greyed out since you aren't authorized to certify content. Select the link about how to get your item certified.

## Endorsement

Help coworkers find your quality content by endorsing this report. [Learn more](#)

None

The report will appear in search results but isn't endorsed.

Promoted

When you're ready to distribute the report to your coworkers, promote it to let them know.

Certified

Certify your report to show coworkers that it's been reviewed and meets your org's certification criteria. [How do I get my report certified?](#)

Feature on Home

Display this report in the Featured section on Power BI Home for people with access to it.

### ⓘ Note

If you clicked the link above but got redirected back to this note, it means that your Power BI admin has not made any information available. In this case, contact the Power BI admin directly.

## Next steps

- [Read more about endorsement](#)
- [Enable content certification \(Power BI admins\)](#)
- [Read more about dataset discoverability](#)

# Apply sensitivity labels to Fabric items

Article • 05/23/2023

## ⓘ Important

Microsoft Fabric is currently in PREVIEW. This information relates to a prerelease product that may be substantially modified before it's released. Microsoft makes no warranties, expressed or implied, with respect to the information provided here.

Sensitivity labels from Microsoft Purview Information Protection on items can guard your sensitive content against unauthorized data access and leakage. They're a key component in helping your organization meet its governance and compliance requirements. Labeling your data correctly with sensitivity labels ensures that only authorized people can access your data. This article shows you how to apply sensitivity labels to your Microsoft Fabric items.

## ⓘ Note

For information about applying sensitivity labels in Power BI Desktop, see [Apply sensitivity labels in Power BI Desktop](#).

## Prerequisites

Requirements needed to apply sensitivity labels to Fabric items:

- Power BI Pro or Premium Per User (PPU) license
- Edit permissions on the item you wish to label.

## ⓘ Note

If you can't apply a sensitivity label, or if the sensitivity label is greyed out in the sensitivity label menu, you may not have permissions to use the label. Contact your organization's tech support.

## Apply a label

There are two common ways of applying a sensitivity label to an item: from the flyout menu in the item header, and in the item settings.

- From the flyout menu - select the sensitivity indication in the header to display the flyout menu:

The screenshot shows the Azure Data Lake Storage Gen2 portal. A context menu is open over a 'Lakehouse' item named 'Lakehouse\_For\_Dataflows'. The menu is titled 'Lakehouse\_For\_Dataflows' and includes a 'Confidential' sensitivity option. A red box highlights the 'Confidential' button in the top right corner of the menu. The left sidebar contains navigation links like Home, Create, Browse, OneLake data hub, Apps, Metrics, Monitoring hub, Deployment pipelines, Learn, and Help. The main content area shows details for the Lakehouse, including Name (Lakehouse\_For\_Dataflows), Sensitivity (Confidential), Owner (Debra Berger), and Description (Primary component). Below this is a table with columns Type and Relation, listing 'Lakehouse\_For\_Dataflows' as both an SQL endpoint and a Dataset (default).

- In items settings - open the item's settings, find the sensitivity section, and then choose the desired label:

The screenshot shows the settings page for a 'My KQL Database'. At the top, there is a 'Search' bar and a 'Sensitivity' dropdown set to 'Confidential'. A red box highlights the 'Sensitivity label' section. This section contains a checkbox labeled 'Apply to downstream items' with the note: 'Apply this sensitivity label to downstream items built on KQL Database that weren't manually assigned a label.' Below this is an 'Endorsement' section with a toggle switch set to 'On'. The left sidebar has sections for About, Endorsement, and Settings.

## Next steps

- [Sensitivity label overview](#)