

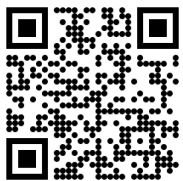


Microsoft Fabric

You're a Power BI Admin?

Let's get your threads aligned for Fabric!

Benni De Jagere
Senior Program Manager
Fabric Customer Advisory Team



Slides

Benni De Jagere

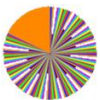
Senior Program Manager | Fabric Customer Advisory Team (FabricCAT)



dataMinds



sessionize



Fabric CAT

.be Member

@BenniDeJagere

/bennidejagere

/bennidejagere

/bennidejagere

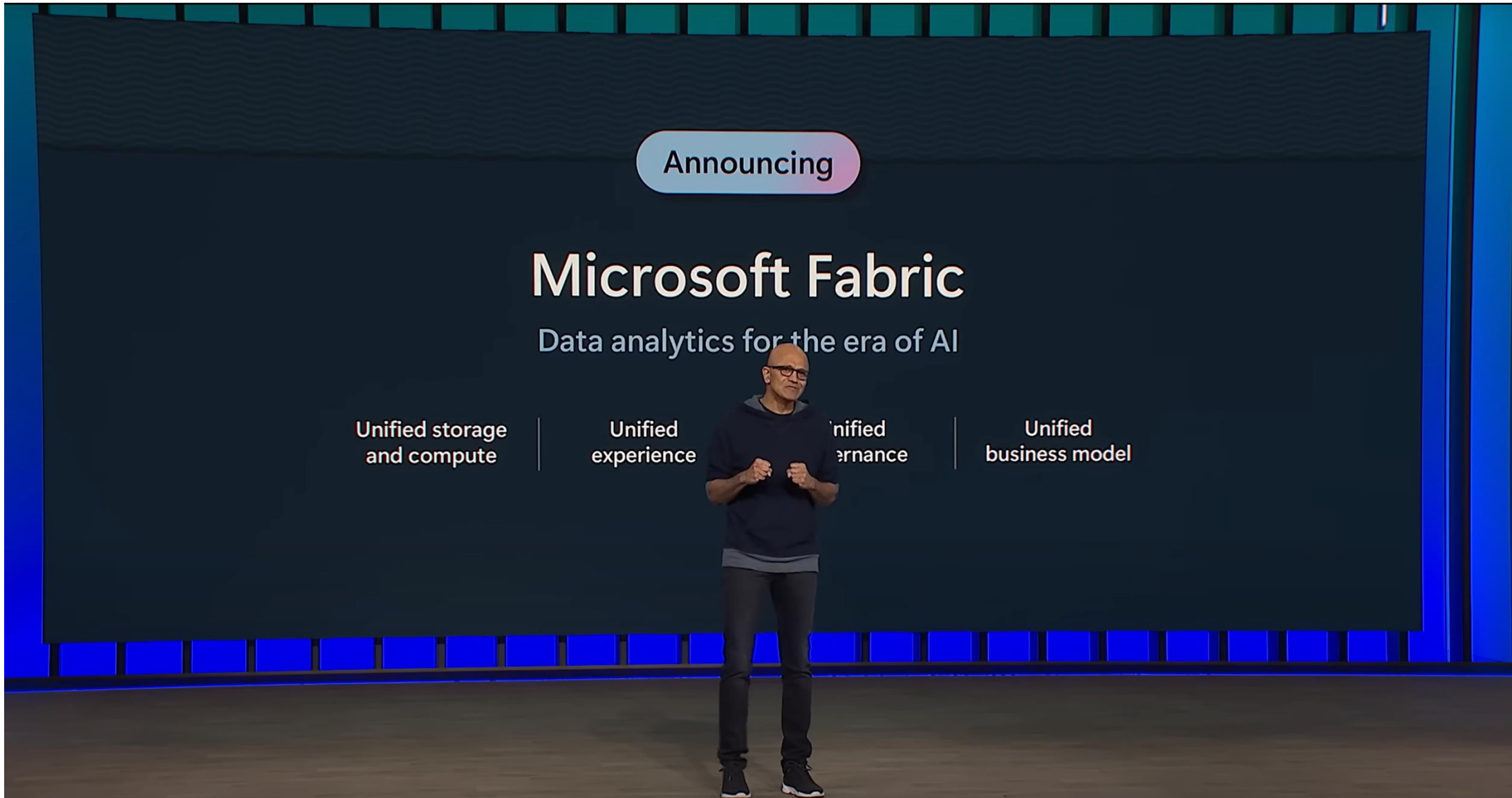
#SayNoToPieCharts



Before we go..

"It is the perhaps the biggest launch of a Data Product for Microsoft since SQL Server"

Satya Nadella – May 23rd 2023 @ Microsoft Build Keynote



[Full Keynote | Satya Nadella at Microsoft Build 2023 - YouTube](#)

ALWAYS keep this in mind

It is okay to feel overwhelmed with all the new information about Microsoft Fabric. Product development has never been moving at a faster pace.

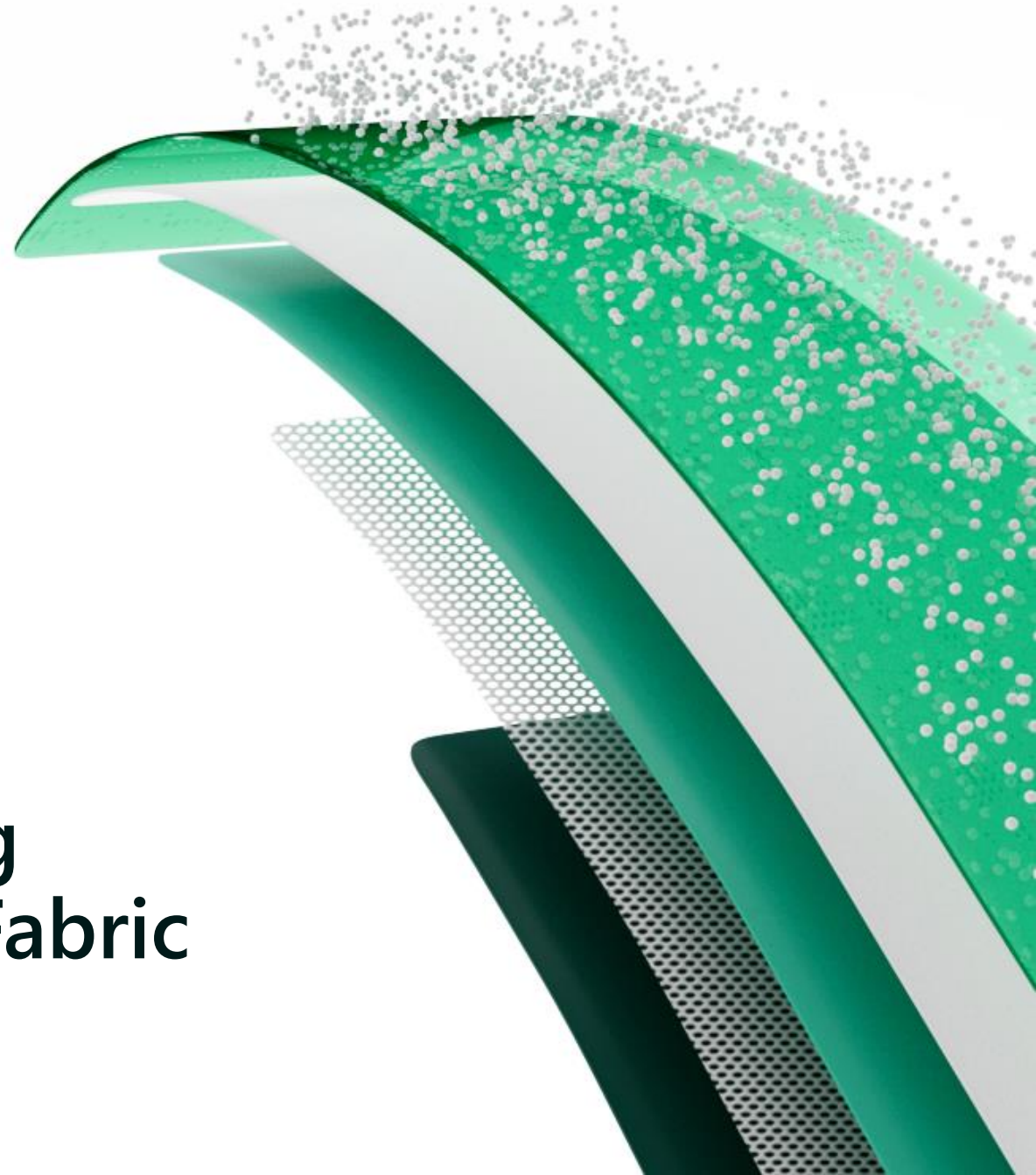
Take it one chunk at a time and focus on what is most important (for you).

That random guy on a stage in Newcastle – September 2023

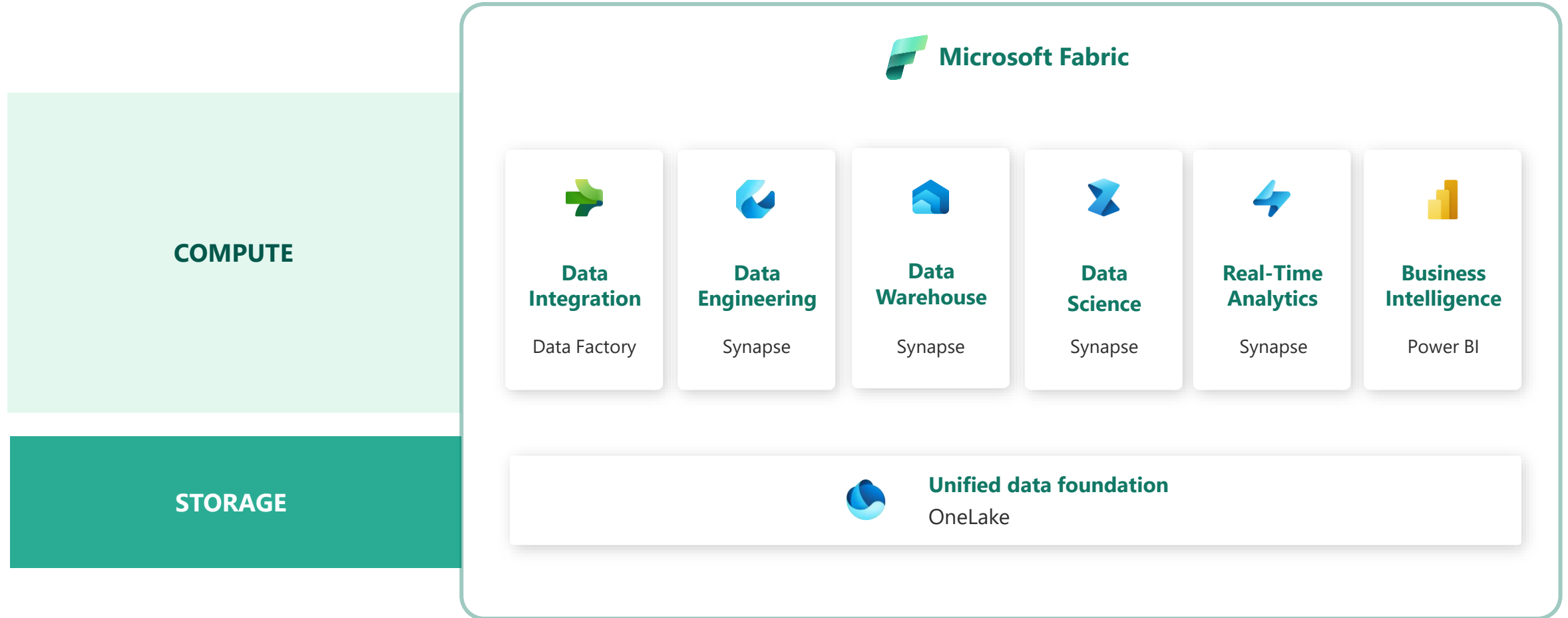


1

Introducing Microsoft Fabric



Introducing Microsoft Fabric



2

Understanding
key aspects



What is actually changing (or not)?

aka “It’s not that bad”

- “SaaSification” of the Data Platform
 - Data Analytics driven from the Business, governed by IT
- Power BI is now a part of Fabric
- Fabric Items always require a capacity
- Core concepts of the Power BI Service still apply
 - Tenant
 - Capacities
 - Workspaces
- Admins do not need to be an expert on all workloads
 - Key skill will be interpreting the Capacity Metrics App
- Most significant change will be culture, not technology
 - Send that gift basket to your friendly neighbourhood M365 Admin

How to govern creation of Fabric items

- Creation of Fabric Items relies on:
 - "Microsoft Fabric (Free)" license (Former: Power BI (Free))
 - "Users can create Fabric items" (public preview)
 - "Users can try Microsoft Fabric paid features"
 - Capacity override option (cannot be disabled)
- Monitor the Activity Log for "Create .." activities

"Microsoft Fabric (Free) License"

The screenshot displays the Microsoft 365 admin center interface. On the left is a navigation pane with options like Home, Users, Teams & groups, Billing, and Setup. The main content area shows the user profile for 'Benni De Jagere (March 2023)' with a blue circular profile picture containing the initials 'BD'. Below the profile picture are links for 'Reset password', 'Block sign-in', and 'Delete user'. A horizontal menu below these links includes 'Account', 'Devices', 'Licenses and apps' (which is highlighted with a red box), 'Mail', and 'OneDrive'. Under the 'Licenses and apps' tab, there is a 'Select location' dropdown set to 'Belgium'. Below that, the 'Licenses (1)' section is highlighted with a red box. It contains two license entries: 'Microsoft 365 E5 Developer (without Windows and Audio Conferencing)' with 7 of 25 licenses available, and 'Microsoft Fabric (Free)' with unlimited licenses available. A red arrow points to the 'Microsoft Fabric (Free)' entry. Below the licenses section is the 'Apps (1)' section. On the left side of the main content area, there is a 'Microsoft Teams' section titled 'Support remote workers with Teams' with a list of status items: 'Teams is on for your organization', 'Check setup status for new Teams users', 'Guest access is on', and 'Try new Teams Premium for more personalized, intelligent and secure meeting'.

Microsoft 365 admin center

Dashboard view Add user Reset

Home Users Teams & groups Billing Setup Show all

BD Benni De Jagere (March 2023)

Reset password Block sign-in Delete user

Account Devices Licenses and apps Mail OneDrive

Select location *
Belgium

Licenses (1)

- ☐ Microsoft 365 E5 Developer (without Windows and Audio Conferencing)
7 of 25 licenses available
- ☒ Microsoft Fabric (Free)
Unlimited licenses available

Apps (1)

Microsoft Teams

Support remote workers with Teams

Learn how to manage Teams for remote work, with step-by-step guidance, short videos, and tips.

- ✓ Teams is on for your organization
- i Check setup status for new Teams users
- ✓ Guest access is on
- i Try new Teams Premium for more personalized, intelligent and secure meeting

Tenant Setting: "Users can create Fabric items"

Admin portal

Tenant settings

Usage metrics

Users

Premium Per User

Audit logs

Domains (preview) New

Capacity settings

Refresh summary

Embed Codes

Organizational visuals

Azure connections

Workspaces

Custom branding

Protection metrics

Featured content

Microsoft Fabric (Preview)

Users can create Fabric items (public preview)

Enabled for the entire organization

Users can create Fabric items with new capabilities in Microsoft Fabric. This setting can be managed at both the tenant and the capacity levels. By using Microsoft Fabric, you accept the [Preview Terms of Use](#). [Learn More](#)

☒ Enabled

Apply to:

☒ The entire organization

☐ Specific security groups

☐ Except specific security groups

Delegate setting to other admins

☒ Capacity admins can enable/disable

Apply

Cancel

Tenant Setting: “Users can try Microsoft Fabric paid features”

Microsoft Fabric

Search

Admin portal

Tenant settings

Usage metrics

Users

Premium Per User

Audit logs

Domains (preview) New

Capacity settings

Refresh summary

Embed Codes

Organizational visuals

Azure connections

Workspaces

Custom branding

Protection metrics

Featured content

Microsoft Fabric (Preview)

Users can create Fabric items (public preview)

Enabled for the entire organization

Enable Trident (Private Preview)

Enabled for the entire organization

Help and support settings

Publish "Get Help" information

Enabled for the entire organization

Receive email notifications for service outages or incidents

Disabled for the entire organization

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

Capacity Override

Microsoft Fabric

Search

Admin portal

Tenant settings

Usage metrics

Users

Premium Per User

Audit logs

Domains (preview) New

Capacity settings

Refresh summary

Embed Codes

Organizational visuals

Azure connections

Workspaces

Custom branding

Protection metrics

Featured content

Power BI Premium > CAT_Premium_Europe

Detail Delegated tenant settings

Microsoft Fabric (Preview)

Users can create Fabric items (public preview)

Enabled for all users in capacity

Users can create Fabric items with new capabilities in Microsoft Fabric. This setting can be managed at both the tenant and the capacity levels. By using Microsoft Fabric, you accept the [Preview Terms of Use](#). [Learn More](#)

☒ Override tenant admin selection

☒ Enabled

Apply to:

☒ All the users in capacity

☐ Specific security groups

☐ Except specific security groups

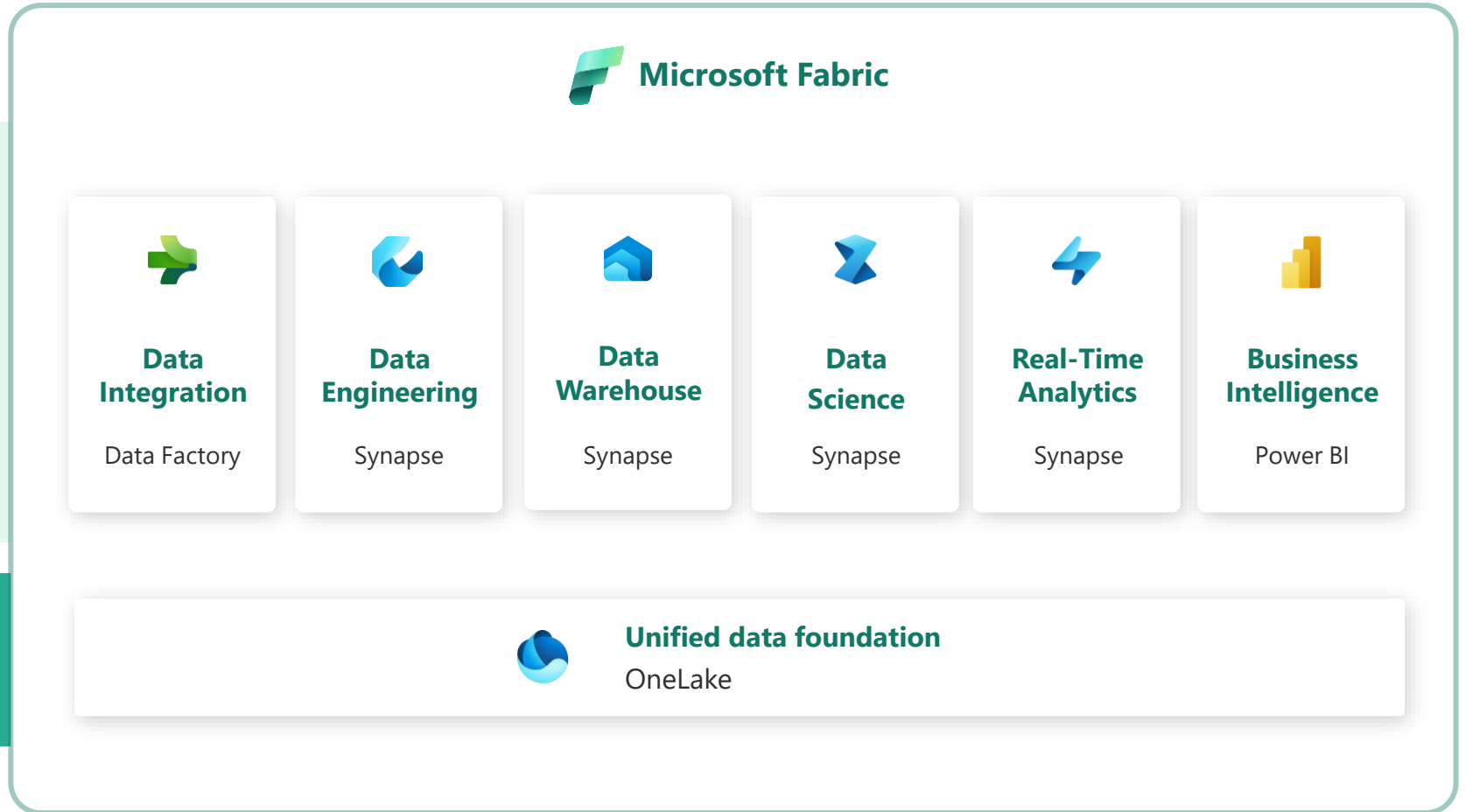
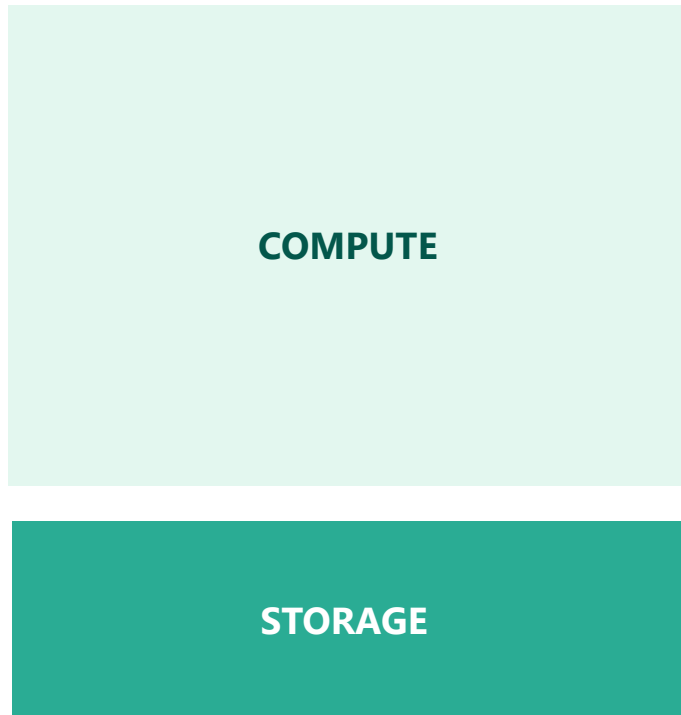
Apply

Cancel

What is the cost?

- During preview, Fabric is free! (Until it's not)
- Preview workloads are not drawing consumption (Capacity Units)
 - This will start on October 1st 2023
- Capacity Metrics App shows consumption for a few new workloads
- Azure F SKU still needs to be paid
- For free testing use:
 - A trial capacity (FT1)
 - An existing Premium (P) SKU

Understanding cost



Capacity Options

P SKU	F SKU	FT SKU	? SKU (TBA)
Power BI Premium	Fabric	Fabric Trial	Reserved Instance
Montly/Yearly commitment	Pay as you Go	No payment method needed	1 or 3 year commitment
Office (M365) Billing	Azure Billing	No Billing	Azure Billing
Full range of Fabric options	Full range of Fabric options	Full range of Fabric options	Full range of Fabric options
Free PBI read-only consumption	Free PBI read-only consumption (Starting at F64)	No free PBI read-only consumption	Free PBI read-only consumption (Starting at P1 equivalent)

FT SKUs will automagically extend until GA, then counts down to 60 days (if kept active)

A/EM SKUs do not offer Fabric capabilities

<https://learn.microsoft.com/en-us/fabric/enterprise/licenses>

<https://learn.microsoft.com/en-us/fabric/get-started/fabric-trial#end-a-fabric-preview-trial>

<https://data-witches.com/2023/01/24/m365-developer-license-fabric/>

Fabric Capacity Metrics App

- New experience, drastically simplified
 - Found in the AppSource (Get Apps)
- Shows a clear indication of which consumptions are preview
 - More workloads to show up by October 1st
- Which operations are background/interactive?
 - Stay tuned (or interpret the Metrics App)
- Interpreting this is key to understanding Fabric consumption (and cost)

[What is the utilization and metrics app? - Microsoft Fabric | Microsoft Learn](#)

[Understand the metrics app overview page - Microsoft Fabric | Microsoft Learn](#)

[Understand the metrics app timepoint page - Microsoft Fabric | Microsoft Learn](#)

[Power BI Premium capacity load, overload, and autoscale - Power BI | Microsoft Learn](#)

[Power BI Premium CPU smoothing. - Power BI | Microsoft Learn](#)

[Interactive and background operations in Power BI - Power BI | Microsoft Learn](#)

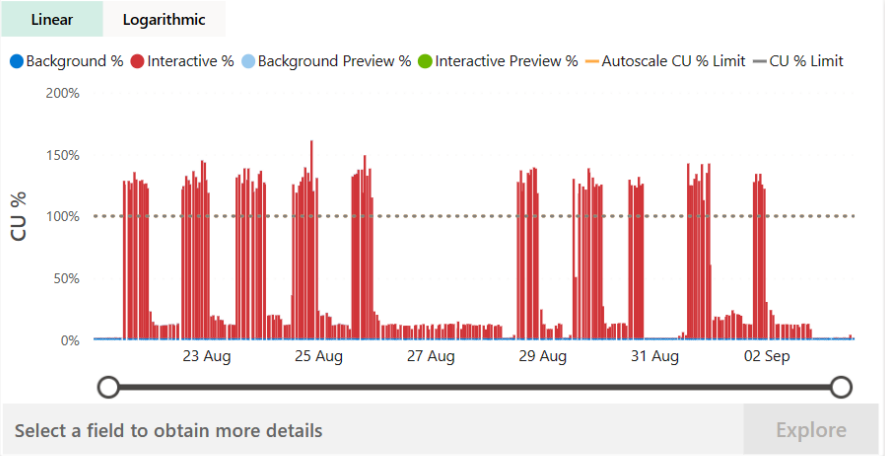
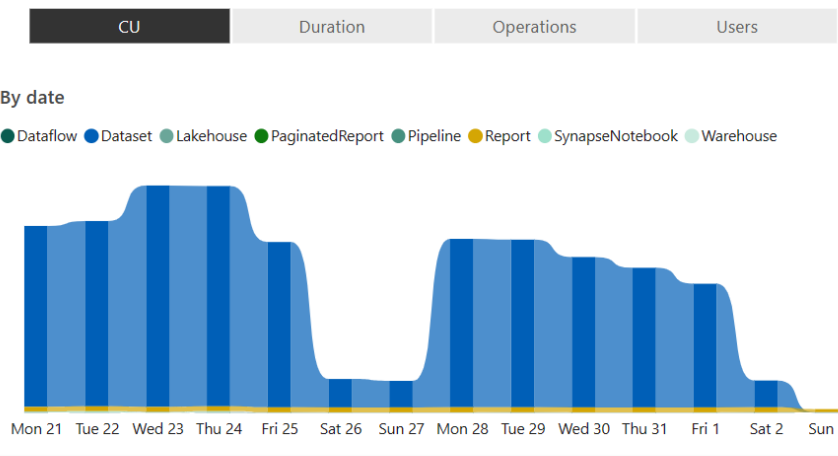
Fabric Capacity Metrics Preview

Overview Help

Capacity Name

CAT_Premium_Europe

Pick a capacity to review in the Capacity Name picker. All visuals on the page will refresh each time a capacity is picked. Your selection will apply to other pages as well. Learn how to use this page by clicking the "info" button.



	Dataflow	Dataset	Lakehouse	PaginatedReport	Pipeline	Report	SynapseNotebook	
Items (14 days)								
Item	CU(s)		Duration (s)	Users	Item Size (GB)	Overloaded minutes	Performance delta	Preview Status
⊞ Phils test dataset_YR_Max \ Dataset \ LoadTest	25,631,167.84		1,784,413.37	2	0.39	4,183.50	-1	False
⊞ Life expectancy \ Report \ CSA PT	914,400.00		17,428.47	1				False
⊞ Capacity Metrics Analysis \ Dataset \ Premium Capacity Utilization And Metrics 5/23/2023 3:56:...	48,907.18		36,815.99	3	0.08	111.00	-7	False
⊞ DW1 report \ Report \ Lars	42,800.00		1,435.93	1				False
⊞ PBI - Activity Monitor - Dataflow \ Dataflow \ PBI Monitor - PBICAT	31,602.53		1,820.57	1				False
⊞ Life expectancy \ Dataset \ CSA PT	25,631.25		5,317.24	5	0.16	94.00	-2	False
⊞ Contoso \ Dataflow \ Dataflows	19,296.50		1,039.32	1				False
⊞ WWI \ Dataflow \ Dataflows	18,001.57		588.89	1				False
⊞ Notebook 1 \ SynapseNotebook \ BDJ_NYCCitibikeDL	15,281.82		3,820.43	1				True
⊞ Usage Metrics Report \ Dataset \ LoadTest	9,685.58		527.83	2	0.05		0	False
⊞ Notebook 1 \ SynapseNotebook \ Security Test Workspace A	9,112.37		2,278.08	1				True
⊞ Notebook 1 \ SynapseNotebook \ Sempy2	7,181.89		1,795.46	1				True
⊞ WWI - Sales \ Dataset \ WWI	6,117.01		322.98	2	0.02	8.50	0	False
Total	26,816,672.96		32,868,54...	5				False

3

Structuring Content



Workspace Management & Access Control

- Creation of Workspaces is bound to Tenant Settings
 - "Create workspaces (new workspace experience)"
- New Fabric items **require** a capacity (P, FT, or F)
 - For Power BI items, Shared Capacity is still an option
 - Region of the capacity determines where the data will reside
- Workspace roles still apply
 - Anything above viewer permissions make configured data security obsolete
 - A viewer role adds the implicit ReadAll to all items
 - Consider using Apps, and only providing permissions that what's needed to consume a report

Microsoft Fabric workspace roles

Capability	Admin	Member	Contributor	Viewer
Update and delete the workspace.	✓			
Add or remove people, including other admins.	✓			
Add members or others with lower permissions.	✓	✓		
Allow others to reshare items. ¹	✓	✓		
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 ² through SQL endpoints.	✓	✓	✓	_ ³
Read Lakehouse and Data warehouse data and shortcuts ² through OneLake APIs and Spark.	✓	✓	✓	-
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.	✓	✓	✓	✓
Schedule data refreshes via the on-premises gateway. ⁴	✓	✓	✓	
Modify gateway connection settings. ⁴	✓	✓	✓	

¹ Contributors and Viewers can also share items in a workspace, if they have Reshare permissions.

² Additional permissions are needed to read data from shortcut destination. Learn more about [shortcut security model](#).

³ Admins, Members, and Contributors can grant viewers granular SQL permissions to read Lakehouse and Data warehouse data through SQL endpoints.

⁴ Keep in mind that you also need permissions on the gateway. Those permissions are managed elsewhere, independent of workspace roles and permissions.

Introducing Domains

- Mesh inspired mechanism to logically group workspaces
 - Group by whatever makes sense for your organisation
 - 1 workspace can be assigned to 0 .. 1 domains
- OneLake Data Hub allows you to refine search to a Domain
- Introducing Tenant Setting Delegation
 - Currently only for Certification
- Over time, we'll see interesting new options appear..

Admin portal

Tenant settings

Usage metrics

Users

Premium Per User

Audit logs

Domains (preview) New

Capacity settings

Refresh summary

Embed Codes

Organizational visuals

Azure connections

Workspaces

Custom branding

Domains

Create domains that match your org's key business segments and assign relevant workspaces. [Learn more](#)

+ Create new domain

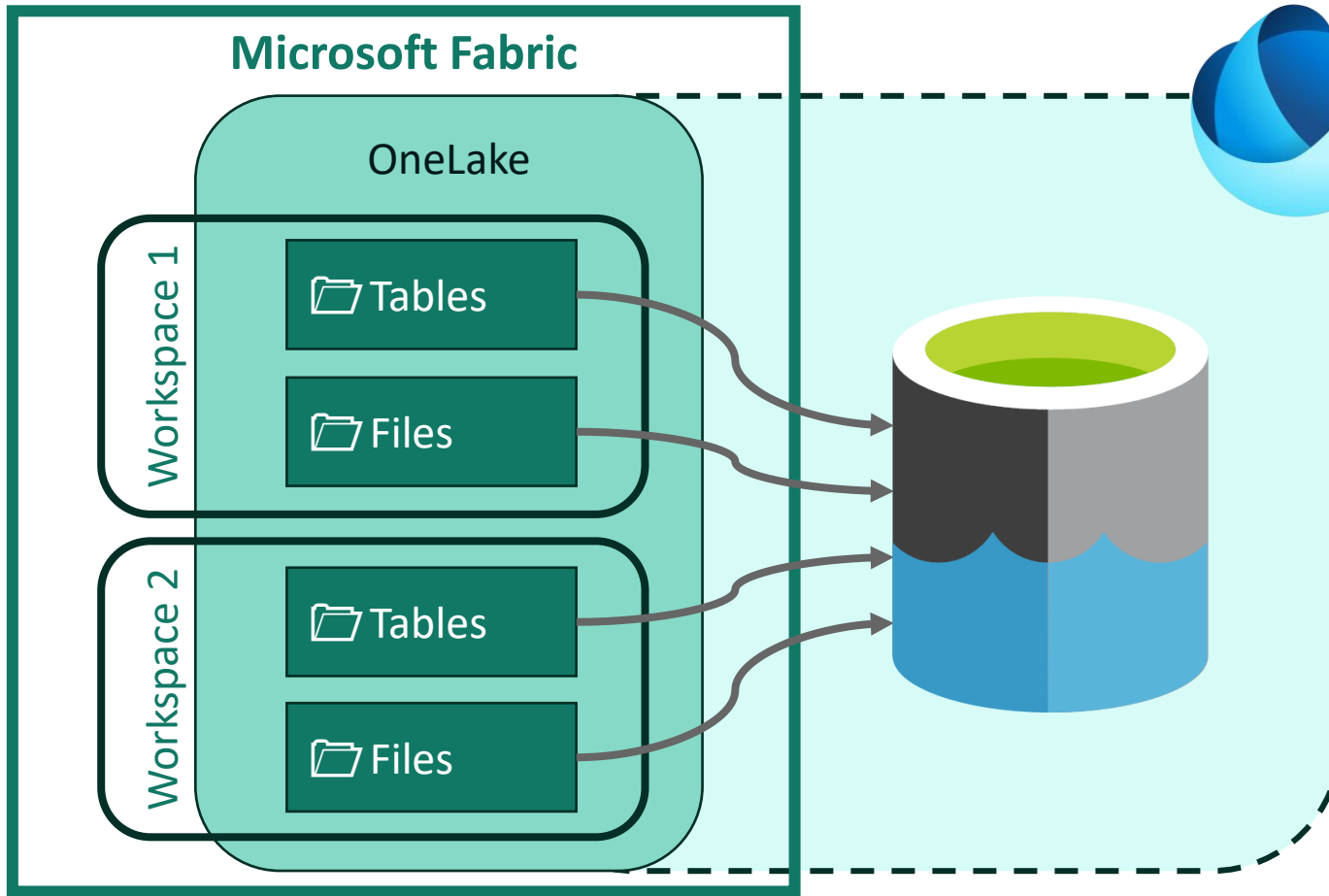
Name	Description	Domain admins
Domain CAT1	-	Lars Andersen
Retail Sale	This domain contains data for retail sale function.	-
Benni's Demo	-	Benni De Jagere

4

Understanding OneLake

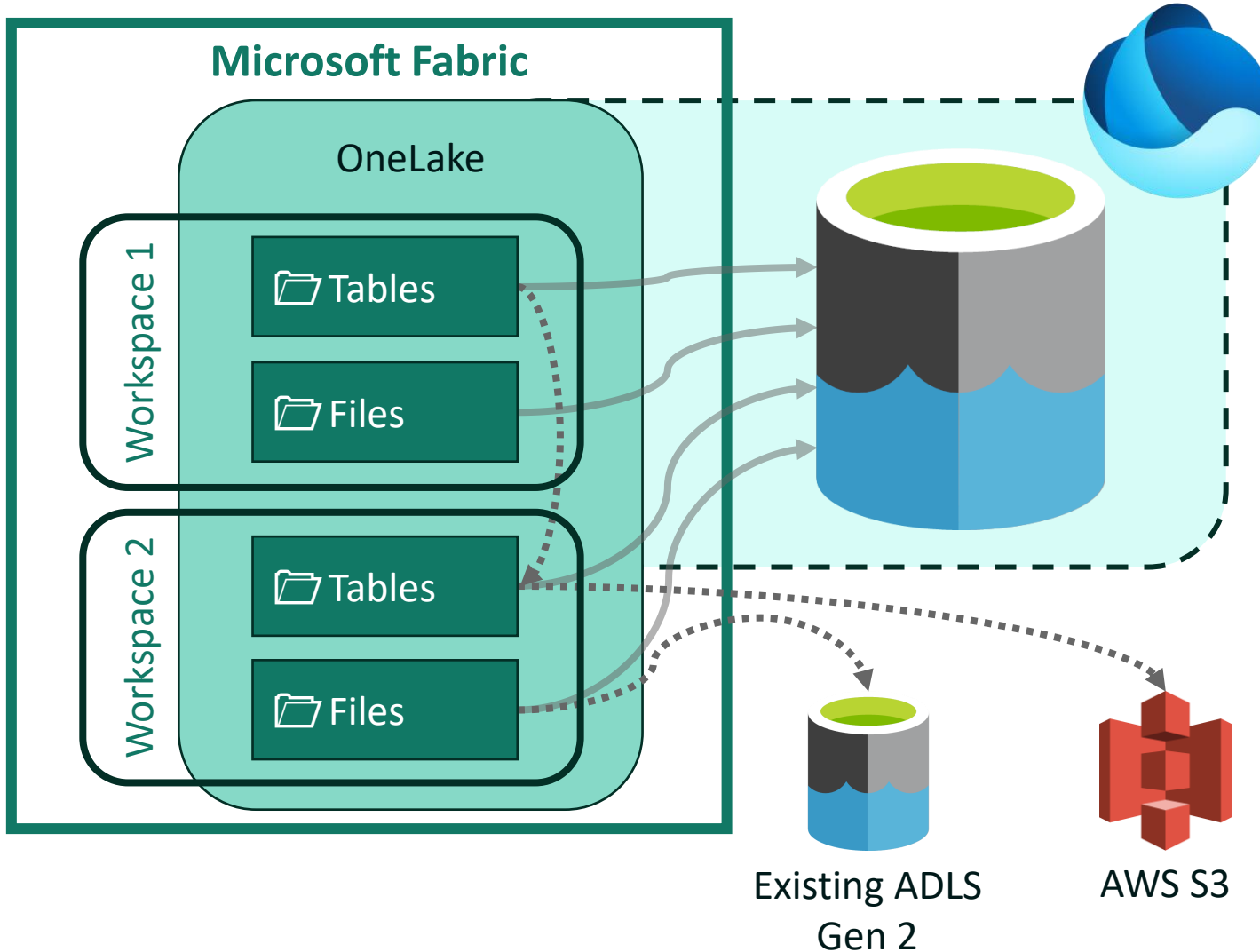


OneLake Structure and Architecture



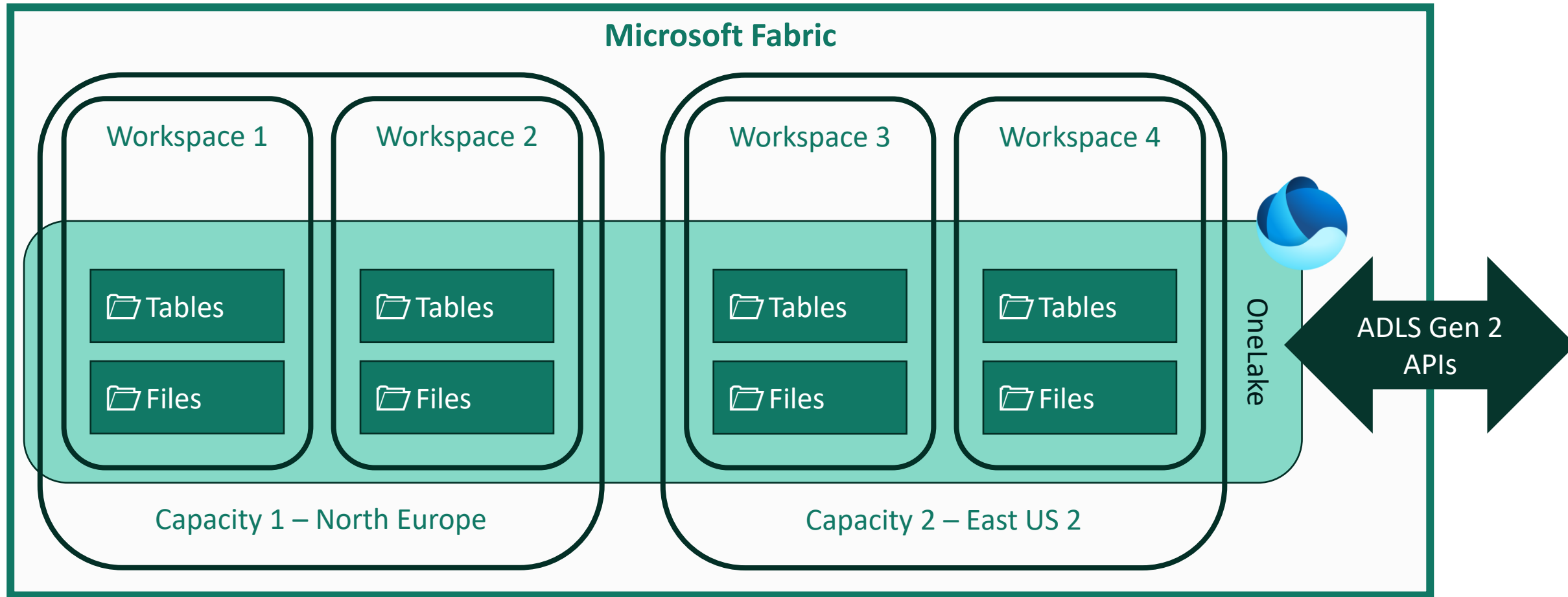
- OneLake built on-top of ADLS Gen 2
- Each workspace may be one or many ADLS Gen 2 account
- Underlying ADLS Gen 2 accounts are not exposed to you as a user*

OneLake Shortcuts



- Creates a virtual connection (Windows Shortcut, Unix Symlink)
- Shortcuts can be created to other Workspaces
- Shortcuts can be created to ADLS Gen 2 and AWS S3 accounts (& GCP soon)
- Shortcuts can work at the Files or Table level.

OneLake Overview



5

New options for the Admin



Admin Monitoring Workspace

- One stop Shop for Admin needs
 - Read-only workspace
 - Only accessible with Admin permissions + Power BI Pro subscription
 - First user to open will configure the scheduled refresh
 - Be careful with temporary accounts
- Feature Usage and Adoption
 - Activity Log data with 30 days retention
- Purview Hub
 - Data about certification, endorsement, MIP, ..



Home



Create



Browse



OneLake
data hub



Apps



Metrics



Monitoring
hub



Deployment
pipelines



Learn



Workspaces



Admin
monitoring

Workspaces

Admin monitoring

My workspace

All

BDJ_DirectLake

BDJ_NYCCitibike_BQ

BDJ_NYCCitibikeDL

BDJ_NYCCitibikeDQ

BDJ_TrialWorkspaceTest

Direct Lake Blueprint (dev)

Emissions Impact Dashboard

Emissions Impact Dashboar...

Lars

Microsoft Fabric Capacity M...

PBI Monitor - PBICAT

Premium Capacity Utilizatio...



Admin monitoring

Admin monitoring



Manage access



Workspace settings

	Name	Type	Owner	Refreshed
	Feature Usage and Adoption	Report	Admin monitoring	8/22/23, 2:21:57 PM
	Feature Usage and Adoption	Dataset	Admin Monitoring	8/22/23, 2:21:57 PM
	Purview Hub	Report	Admin monitoring	8/22/23, 2:21:45 PM
	Purview Hub	Dataset	Admin Monitoring	8/22/23, 2:21:45 PM

Monitoring Hub

- Target audience is business users, but it can help admins
- Operational overview of refreshes for different item types
- Will only show items you have **Read** permissions to
- A LOT of useful information
 - Use "Filters" and "Column Options"
- But does it export to Excel? ☹️



Home



Create



Browse

OneLake
data hub

Apps



Metrics

Monitoring
hubDeployment
pipelines

Learn



Workspaces

Admin
monitoring

Monitoring hub

Monitoring hub is a station to view and track active activities across different products.

Refresh

Filter by keyword

Filter (1) ▾

Column Options ▾

benni@powerbicat.net (me) ✕ Reset to default

Activity name	Status	Item type	Start time	Submitter	Location	Duration	Capacity	Allocated Resource	Job type
00_NYC_Citibike_BQ_DQ	✓ Completed	Dataset	6:49 PM, 9/3/23	Benni De Jagere	BDJ_NYCCitibike...	1s	CAT_Premium_Europe		
Data protection metrics (automatically generated)	✓ Completed	Dataset	9:36 AM, 9/3/23	Benni De Jagere	My workspace	1s	CAT_Premium_Europe		
Fabric Capacity Metrics Preview	✓ Completed	Dataset	12:03 AM, 9/3/23	Benni De Jagere	Microsoft Fabric C...	14m 53s	Shared On Premium - ...		
Capacity Metrics Analysis	✓ Completed	Dataset	12:02 AM, 9/3/23	Benni De Jagere	Premium Capacity...	6m 30s	Shared On Premium - ...		
df_Framing	✓ Completed	Dataflow Gen2	5:38 PM, 8/24/23	Benni De Jagere	BDJ_NYCCitibikeD...	28s	CAT_Premium_Europe		
Notebook 1_2cebc23e-a7c9-4b01-9a0d-818aa4...	✓ Completed	Notebook	5:22 PM, 8/24/23	Benni De Jagere	BDJ_NYCCitibikeD...	41m 7s			Spark sessi
00_NYCCitibike_DL	✓ Completed	Dataset	4:59 PM, 8/24/23	Benni De Jagere	BDJ_NYCCitibikeD...	1m 10s	CAT_Premium_Europe		
Notebook 1_de8da96a-6940-49fb-b714-31a7ed...	✓ Completed	Notebook	10:36 PM, 8/23/23	Benni De Jagere	BDJ_NYCCitibikeD...	22m 49s		1 executors, 8 cores	Spark sessi
pipe_Facts	✓ Completed	Data pipeline	7:53 PM, 8/23/23	Benni De Jagere	BDJ_NYCCitibikeD...	41m 30s			
pipe_FactsXL	✓ Completed	Data pipeline	6:24 PM, 8/17/23	Benni De Jagere	BDJ_NYCCitibikeD...	6h 19m 3s			
df_Dimensions	✓ Completed	Dataflow Gen2	10:25 PM, 8/16/23	Benni De Jagere	BDJ_NYCCitibikeD...	3m 12s	CAT_Premium_Europe		

Get Tenant Settings API

- Documented API to extract tenant setting configurations
- Well suited to document Tenant Setting configurations
- Advised to do this regularly, and compare changes
 - Activity Log contains entries for a changed setting to know who changed something (and when)
 - Or set up Alerts ([link](#))

[Tenants - Get Tenant Settings - REST API \(Fabric REST APIs\) | Microsoft Learn](#)


<https://www.linkedin.com/pulse/microsoft-fabrics-monitoring-tenant-settings-romain-casteres/>

[Managing Tenant Settings in the Power BI Service — Coates Data Strategies](#)

Response Code: 200

Headers

HTTP

 Copy

```
cache-control: no-store, must-revalidate, no-cache
content-length: 4133
content-type: application/json; charset=utf-8
pragma: no-cache
requestid: 03229615-d71b-4779-83a2-dd6706f629f3
```

Body

JSON




 Copy

```
{
  "tenantSettings": [
    {
      "settingName": "AllowServicePrincipalsUseReadAdminAPIs",
      "title": "Allow service principals to use read-only admin APIs",
      "enabled": true,
      "canSpecifySecurityGroups": true,
      "enabledSecurityGroups": [
        {
          "graphId": "04065eb6-2039-4495-a553-df184bb9ec4d",
          "name": "PBISettings-ServicePrincipalsAdmin"
        },
        {
          "graphId": "88b098b1-1af6-4875-967d-348d9a774c75",
          "name": "dbrowne_sp_group"
        }
      ],
      "tenantSettingGroup": "Admin API settings"
    },
    {
      "settingName": "AdminApisIncludeDetailedMetadata",
      "title": "Enhance admin APIs responses with detailed metadata",
      "enabled": true,
      "canSpecifySecurityGroups": true,
      "tenantSettingGroup": "Admin API settings"
    },
    {
      "settingName": "AdminApisIncludeExpressions",
      "title": "Enhance admin APIs responses with DAX and mashup expressions",
      "enabled": true,
      "canSpecifySecurityGroups": true,
      "tenantSettingGroup": "Admin API settings"
    }
  ],
}
```

Before you go

Introducing Shareable Cloud Connections

- Released on September 1st 2023
- Support multiple connections to the same data source
 - Set up different connection strings with the same user!
- Centrally configure and manage data sources
- Share connections with other users
- Lower the overhead of maintaining data connections and credentials

	GoogleBQ_NYCCitibike	...	Google BigQuery	Benni De Jagere	
	GoogleBQ_SCCTest		Google BigQuery	Benni De Jagere	

Settings

Currently, these cloud connections are only supported for Data Pipelines and Kusto. In the future, other artifacts can also make use of the cloud connections. To create personal cloud connections in Datasets, Datamarts, and Dataflows, use the Power Query Online experience in "Get data".

On-premises

Virtual network

Cloud

Connection name *

GoogleBQ_NYCCitibike

Connection type

Google BigQuery

Data source path

GoogleBigQuery

Authentication

Authentication method *

OAuth 2.0

[Edit credentials](#)

General

Encrypted connection *

Not encrypted

Privacy level *

Organizational

☐ Allow this connection to be used with on-premises data gateways.

Save

Close

General

Dashboards

Datasets

Workbooks

Dataflows

Datamarts (Preview)

App

00_NYC_Citibike_BQ_DQ

Settings for 00_NYC_Citibike_BQ_DQ

[View dataset](#) 

This dataset has been configured by benni@powerbicat.net.

Last refresh succeeded: 9/3/2023, 6:49:32 PM

Next refresh: 9/3/2023, 7:49:32 PM

[Refresh history](#)

▸ Dataset description

▾ Gateway and cloud connections

You don't need a gateway for this dataset, because all of its data sources are in the cloud, but you can use a gateway for enhanced control over how you connect. [Learn more](#)

Gateway connections

Use an On-premises or VNet data gateway

☐ Off

Cloud connections

Data sources included in this dataset:

✓ Extension{"extensionDataSourceKind":"GoogleBigQuery","extensionDataSourcePath":"GoogleBigQuery"}

Apply

Discard

Maps to:

GoogleBQ_NYCCitibike ▼

GoogleBQ_NYCCitibike
GoogleBQ_SCCTest
Personal Cloud Connection
Create a connection

▾ Data source credentials

GoogleBigQuery

Managed by connection GoogleBQ_NYCCitibike [Show in lineage view](#) 

▸ Sensitivity label

Power BI Adoption planning framework

- “Power BI”, yet **very applicable** to Microsoft Fabric as a whole
- Covers a lot of core concepts about governance (not just the admin stuff)
- When planning a serious implementation, this helps you through preparation

Slides can be found at :

https://github.com/BenniDeJagere/Presentations/{Year}/{Date}_{Event}

