

# **Fabric : ¿Cuánto me cobra el portero?**

Laura Galea – Cloud & AI Solutions Specialist



# Fabric: Cuánto me cobra el portero?



# Laura Galea



**Cloud & AI Solutions  
Specialist at Microsoft**

[laura.galea@microsoft.com](mailto:laura.galea@microsoft.com)

[www.linkedin.com/laura-galea](https://www.linkedin.com/laura-galea)

# Agenda

- Fabric by the numbers
- Power BI licencing
- Power BI evolution
- Fabric
- Fabric licencing
- Fabric compute Deep dive
- Fabric SKU sizing
- Migrating Power BI Premium to Fabric
- Q&A

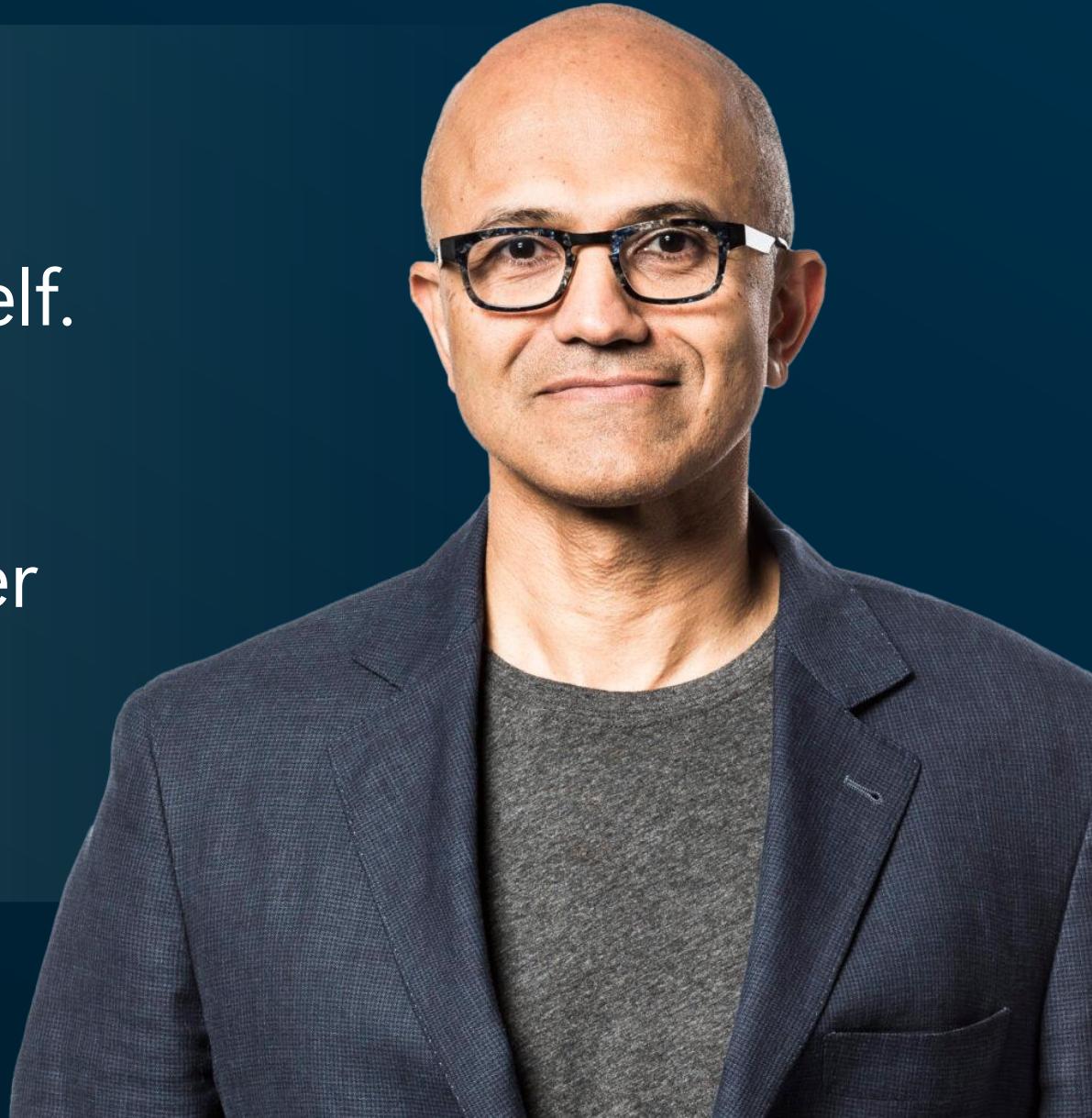


Fabric by the numbers

“

The momentum speaks for itself.  
Fabric is already **the fastest  
growing analytics product**  
in Microsoft's history, with over  
**25,000 paid customers.**

- Satya Nadella





# Microsoft Fabric

La Plataforma de datos unificada para la AI



Data  
Factory



Analytics



Databases



Real-Time  
Intelligence



Power BI

Fabric Platform



Copilot



OneLake



Governance

550K+

Power BI customers

7.3M+

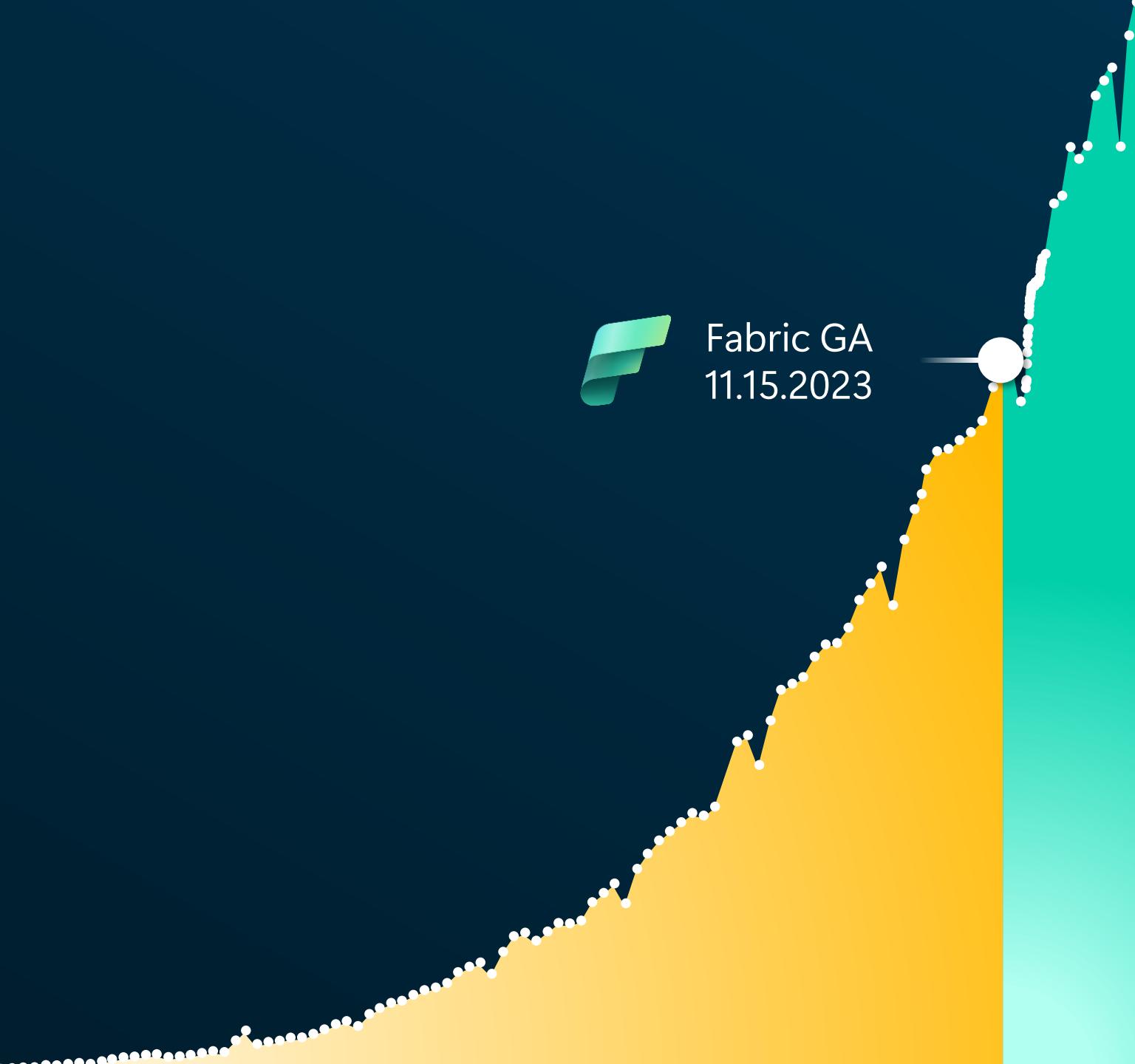
Power BI developers

34M+

Power BI users



Fabric GA  
11.15.2023



25K+

Fabric paid customers

80K+

(+52% YoY)

Fabric Monthly Active Customers

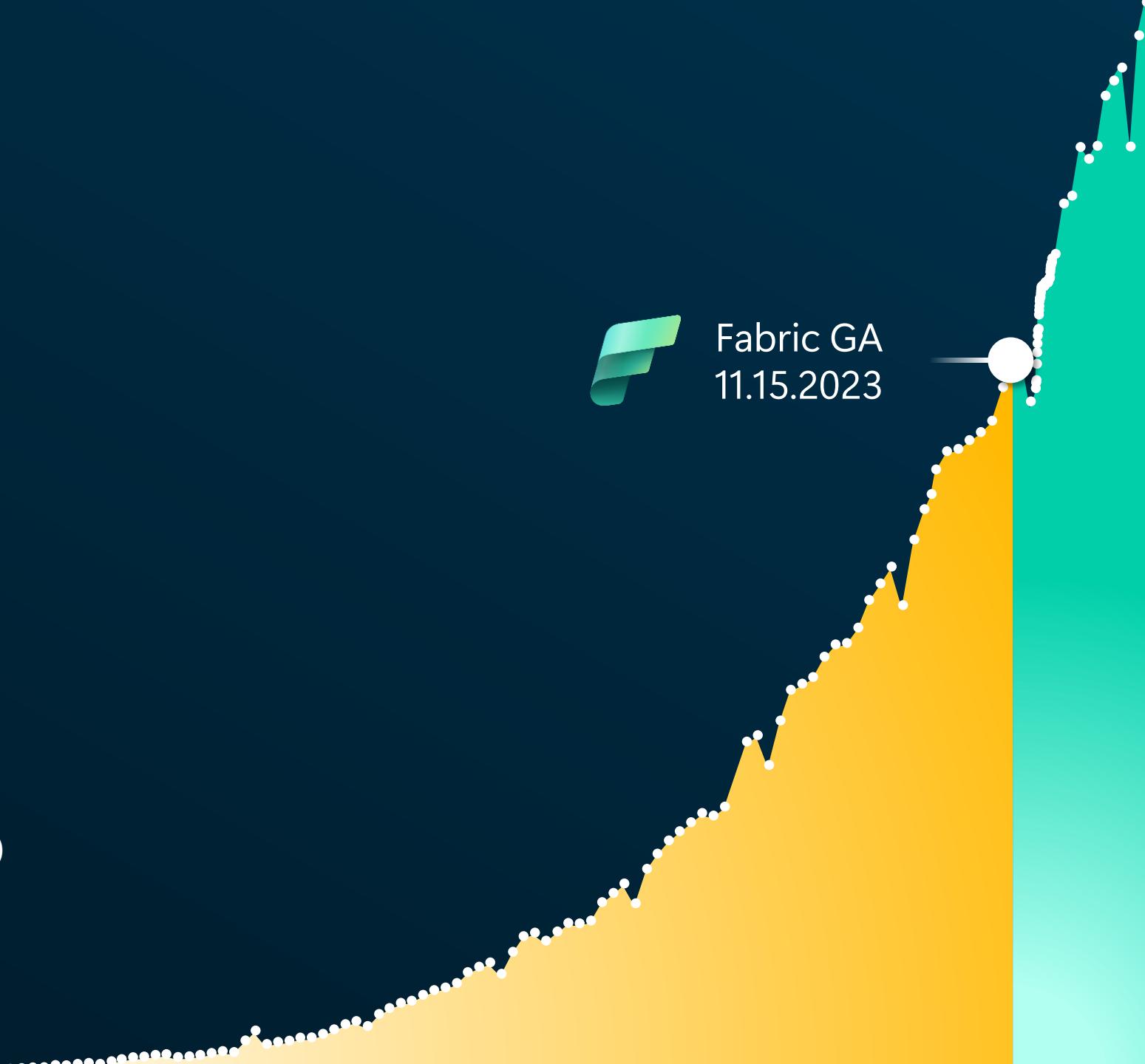
960PB+

(+29% YoY)

OneLake Data



Fabric GA  
11.15.2023





Y no es solo  
la tecnología



Es nuestra comunidad

**292K**

Miembros de la comunidad

**345**

User Groups

**79**

Paises

[aka.ms/FabricCommunity](http://aka.ms/FabricCommunity)



Una comunidad que se  
ayuda mutuamente

Cada  
100 segundos

Alguien responde una pregunta en los foros

# Una comunidad que aprende constantemente

2 certificaciones de mayor  
crecimiento  
en la historia de Microsoft

DP-600 Fabric  
Analytics Engineer

DP-700 Fabric  
Data Engineer

Microsoft  
Certified  
Associate



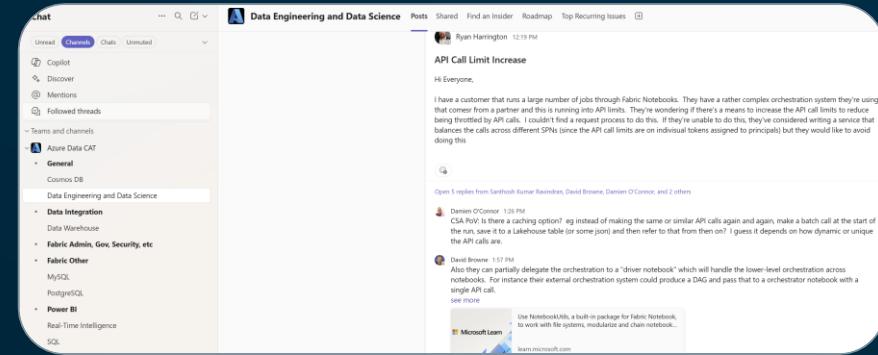
50,000

Certificaciones de Fabric

# Estamos para ayudar

## Contáctanos

- Inicia una conversación con Azure Data Customer Advisory Team (CAT Team) at: <https://aka.ms/AzureDataCAT>
- La comunidad del CAT consiste en 9K+ Microsoft miembros; y responde ~40-50 preguntas/día, todas en menos de 2 horas.
- Usa "CAT AI Assistant" para respuestas inmediatas en el canal
- Explora el Menú para información sobre Roadmap, Top Recurring Issues, y más



## Conecta con expertos locales

- Encuentra un expert en : <https://aka.ms/FieldLocalExperts>
- Cada expert tiene una especialidad (RTI, Security, etc.) y tiene acceso directo al grupo de producto para escalación y feedback de product.

A screenshot of the 'Find an Insider' tool. It shows a grid of experts with columns for 'Insider', 'Org', 'Role', 'Operating Unit', 'Primary Track', 'Secondary Tracks', 'Draft an Email', and 'Start a Teams Chat'. The 'Primary Track' section shows counts for various categories: Data Engineering/Platform (15), Data Integration (10), Data Warehouse (3), Power BI (3), Real-Time Intelligence (1), SQL DB (7), General (5), and Security (4). The 'INSIDERS' section lists individuals like Alexey Khalysko, Andre Essing, Andreas Riederer, Anja Eberhart, Berit Syanek, and Charlie Kerthu Vergheze, along with their roles and tracks.

## Escala problemas técnicos

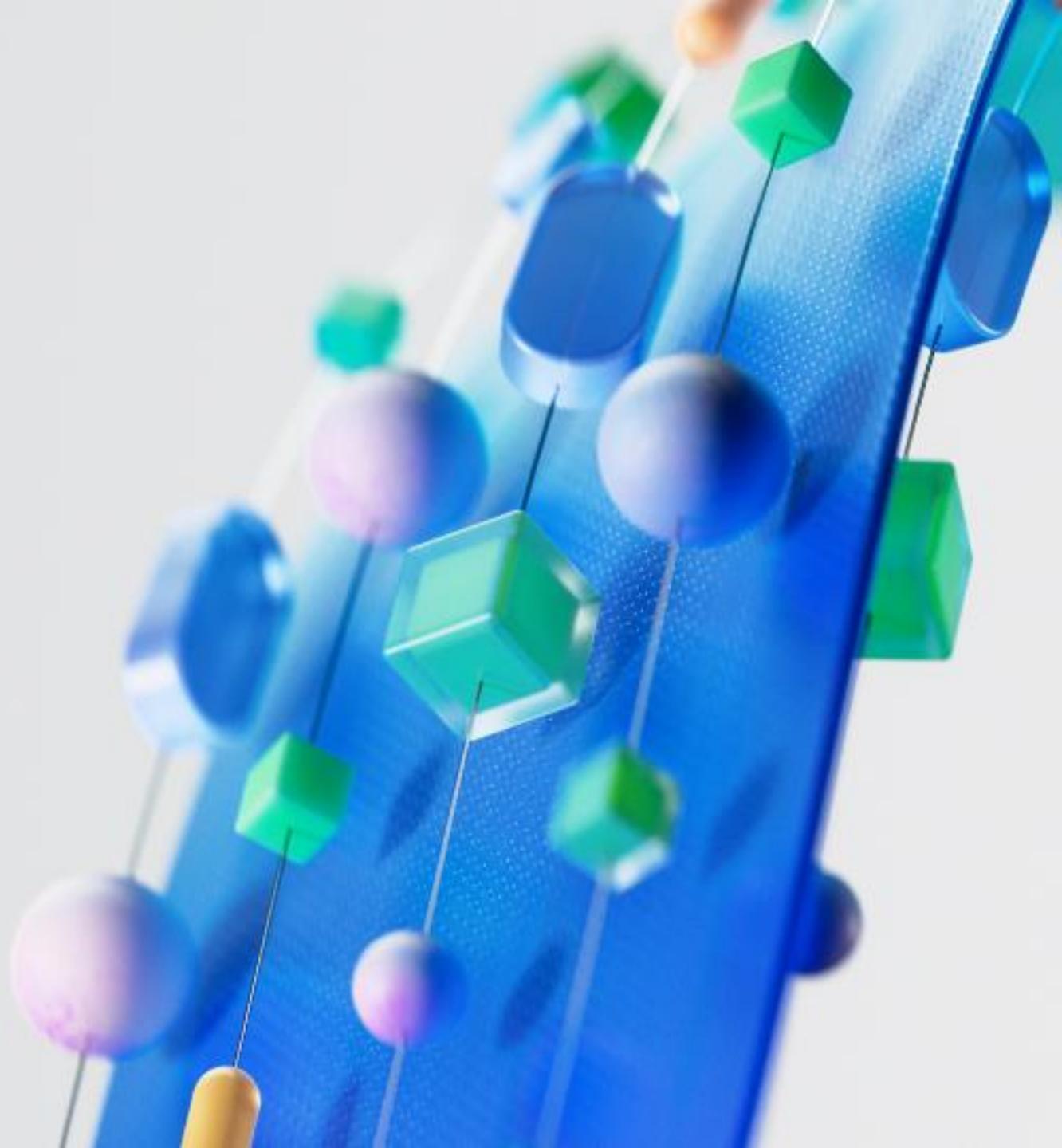
- Contacta con el equipo de escalaciones técnicas en : <https://aka.ms/AzureDataEscalation>

## Azure Data Escalation Request

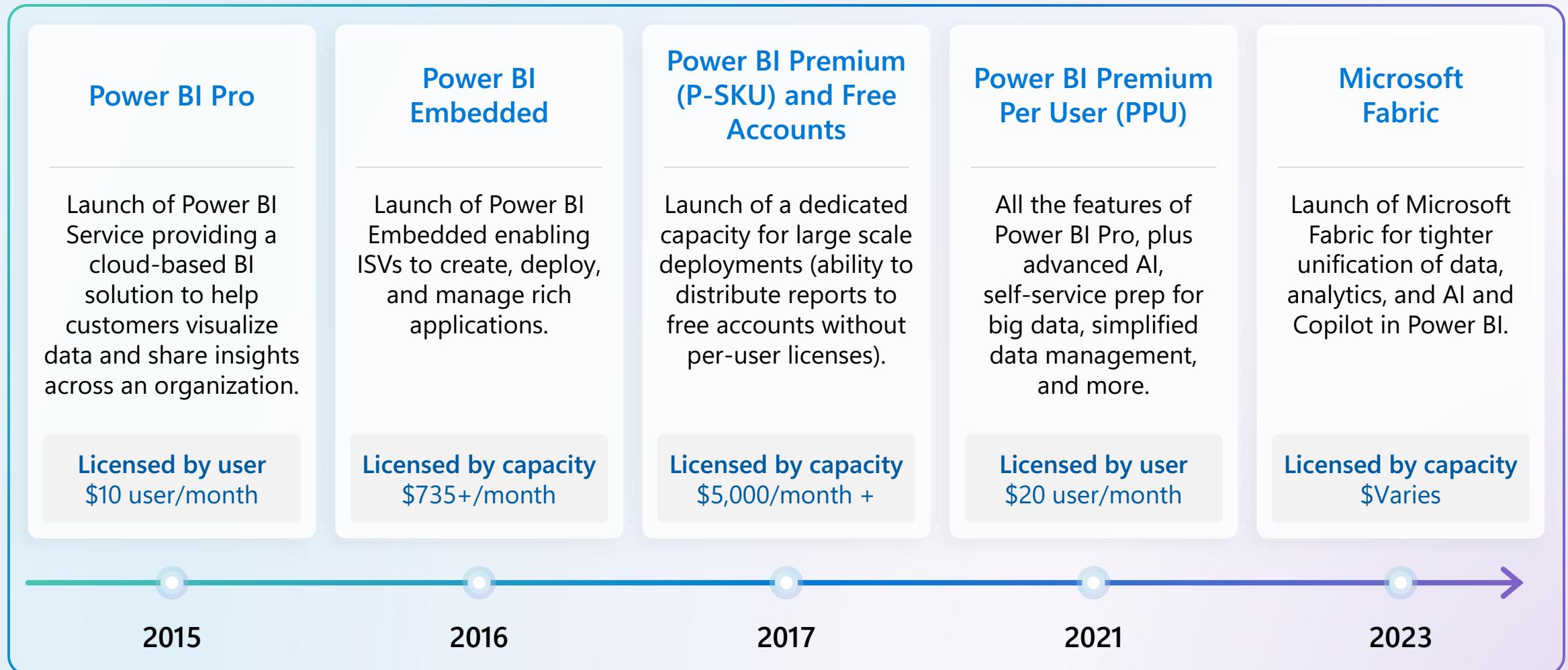
### Form goal

The purpose of this form is to help capture the necessary information needed for the CAT and Engineering teams to engage meaningfully and effectively. This is the same set of information that we would request if contacted via email, Teams or any other communication method. Submission of this form will increase the speed at which we are able to assist.

# Power BI licensing

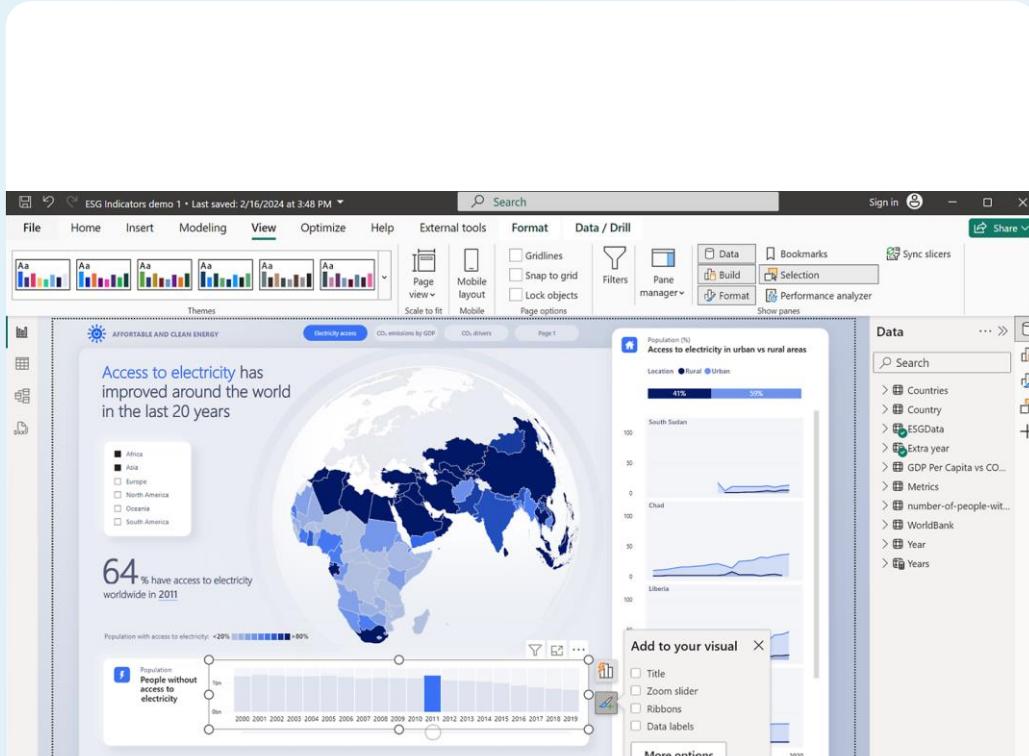


# Power BI License Portfolio



**Note:** For more information, see the [Microsoft Power BI pricing page](#)

# What comes free with Power BI?



## Free Account

- Grants access to My Workspace within the Power BI cloud service.
- Is used to grant access to Power BI content hosted in Fabric capacity.



## Power BI Desktop

- Create and access PBIX using Power BI Desktop without requiring any Power BI license.
- Can publish to My Workspace with Power BI Free license.



## Blocks

- Cannot publish content to workspaces without a Pro or Premium Per User license.

# What is Power BI Pro?



## Overview

- Per user license required for publishing/sharing Power BI content within the Power BI cloud service.
- Users can share content and collaborate with other Power BI Pro users.
- A Pro license is required to view other content on Pro workspaces (not hosted on PPU, Premium or Fabric workspace).



## Pricing

- Available as a stand-alone SKU @ \$14 per user/month.
- Included in Office 365 E5 and Microsoft 365 E5.



## Designed for

- Report creators.
- Report consumers (if no Fabric/Premium).

# What is Power BI Premium per user?

ProductKey	SKU	Product	Standard Cost	Color	List Price
531	FR-M21B...	LL Mountain Frame - Black, 42	136.785	Black	249.79
532	FR-M21B...	LL Mountain Frame - Black, 44	136.785	Black	249.79
533	FR-M21B...	LL Mountain Frame - Black, 48	136.785	Black	249.79
534	FR-M21B...	LL Mountain Frame - Black, 52	136.785	Black	249.79
550	FR-M21B...	LL Mountain Frame - Black, 40	136.785	Black	249.79
556	CS-479	LL Crankset	77.9176	Black	175.49
557	CS-658	ML Crankset	113.6816	Black	256.49
558	CS-918	HL Crankset	179.6156	Black	404.99
584	BK-R19B-58	Road-750 Black, 58	343.6496	Black	539.99
596	BK-M18B...	Mountain-500 Black, 40	294.5797	Black	399.99
597	BK-M18B...	Mountain-500 Black, 42	294.5797	Black	399.99



## Overview

- Has all the capabilities Power BI Pro.
- Unlocks access to features found in Fabric/Power BI Premium like: Larger model sizes (100 GBs), higher refresh rates (48/day), more storage (100 TB), datamarts, XMLA endpoint read/write, advanced data flows and more.
- To share content in a PPU workspace, all users must have a PPU license.



## Pricing

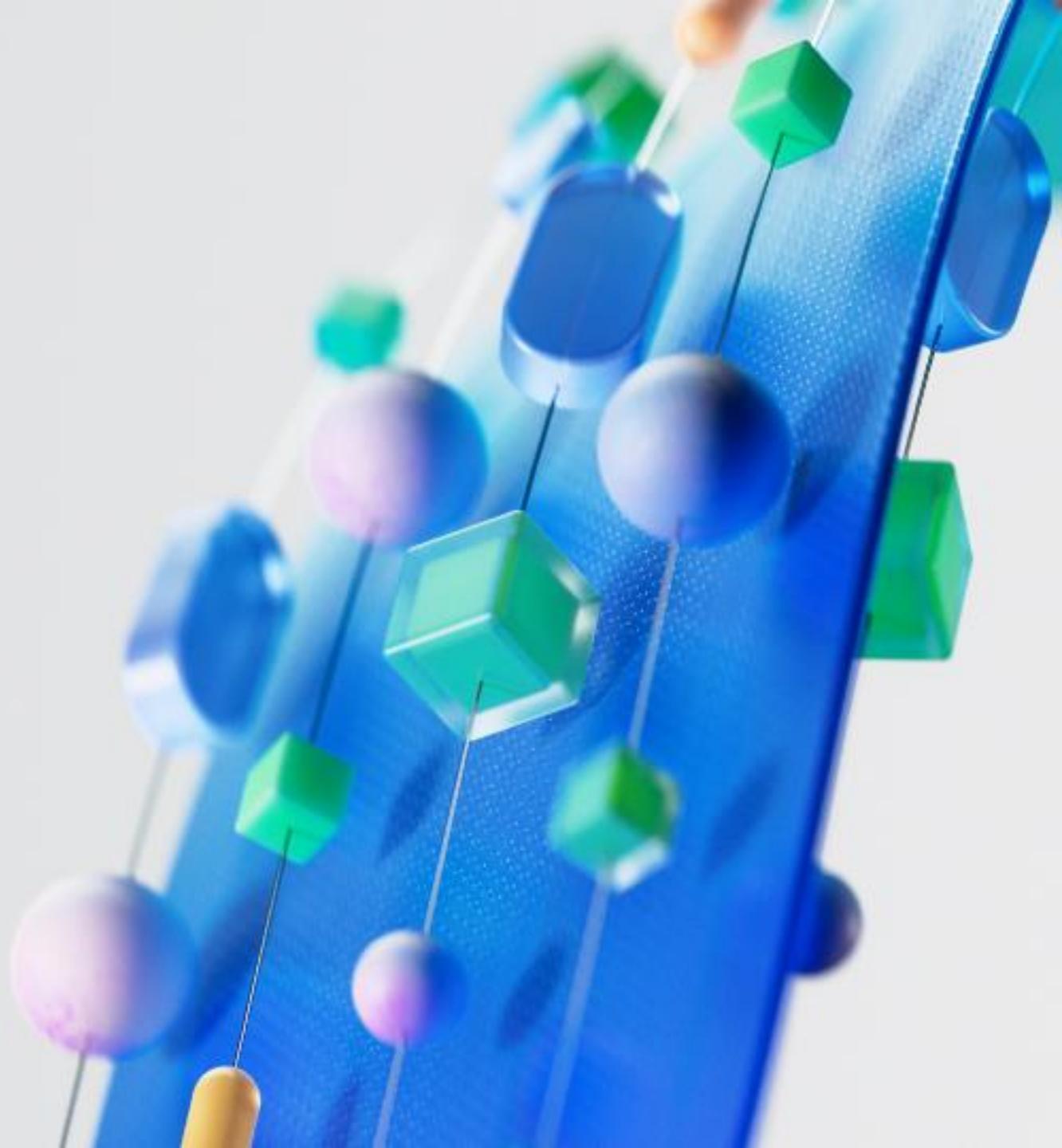
- Available as a stand-alone SKU @ \$24 per user/month.
- Can be offered as a \$10 add on to Office 365 E5 and Microsoft 365 E5 licenses.



## Designed for

- Designed for data analysts and data professionals in small businesses or businesses with E5.

# Power BI evolution

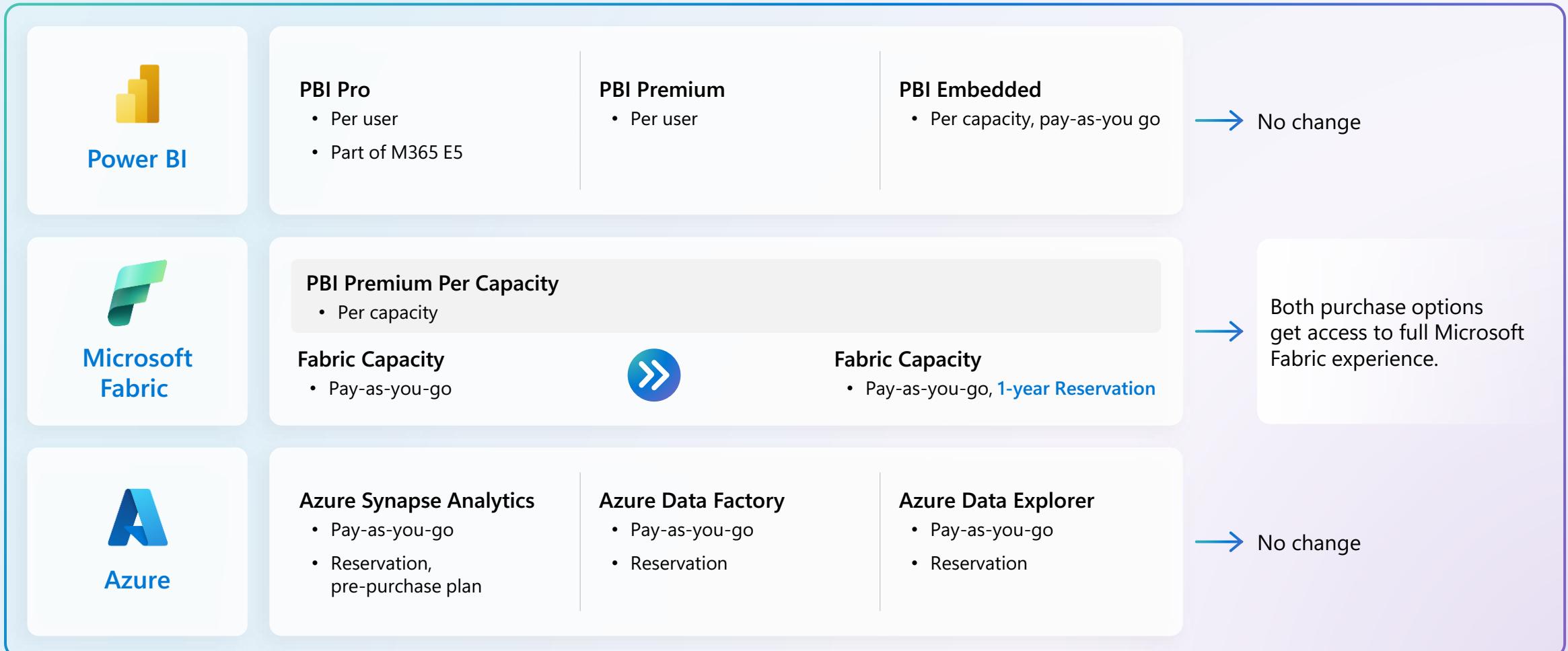


# Licensing evolution

Microsoft Fabric Public Preview



Microsoft Fabric Generally Available



# Consuming shared content with Fabric and PPU

Users with this license type can view/access the content			
	Pro	Free account	Premium Per User
If you create/share BI content in this type of workspace	Pro	Yes	No
	Fabric	Yes	Yes
	Premium Per User	No	No



In a Pro workspace, users with Power BI Pro license can collaborate with other users with Power BI Pro and Premium Per User licenses.

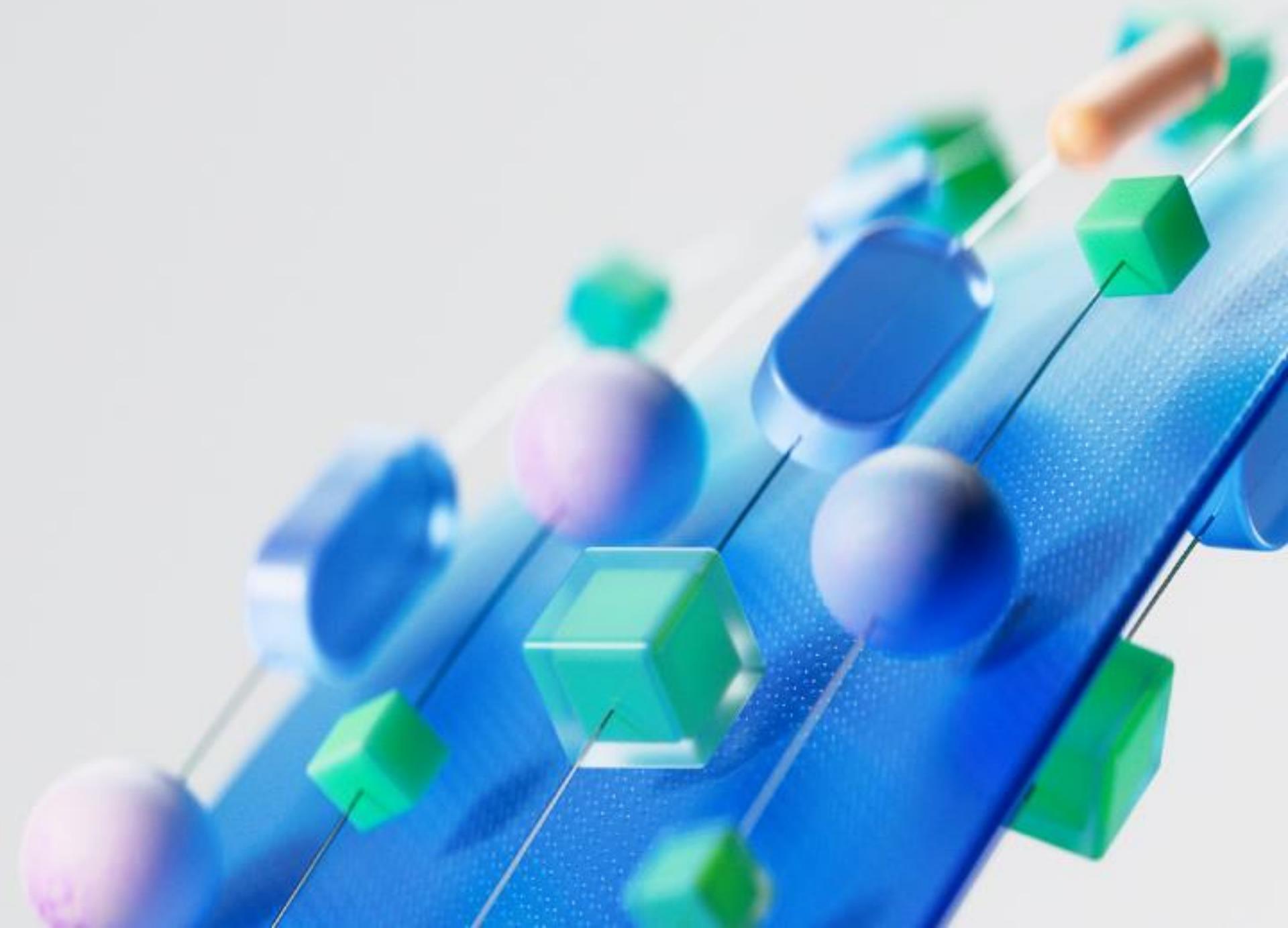


To view content in a Premium Per User workspace, a user must have a Premium Per User license. The content created by a Premium Per User licensed user can only be shared with other users that have a Premium Per User license, unless that content is specifically put on a workspace hosted on a Fabric capacity.



When workspaces are in Fabric capacity, users with Power BI Pro or Premium Per User may distribute content to users who don't have a per user license.

# Fabric



# Microsoft Fabric

The unified data platform for AI transformation



Data Factory



Analytics



Databases



Real-Time  
Intelligence



Power BI



AI



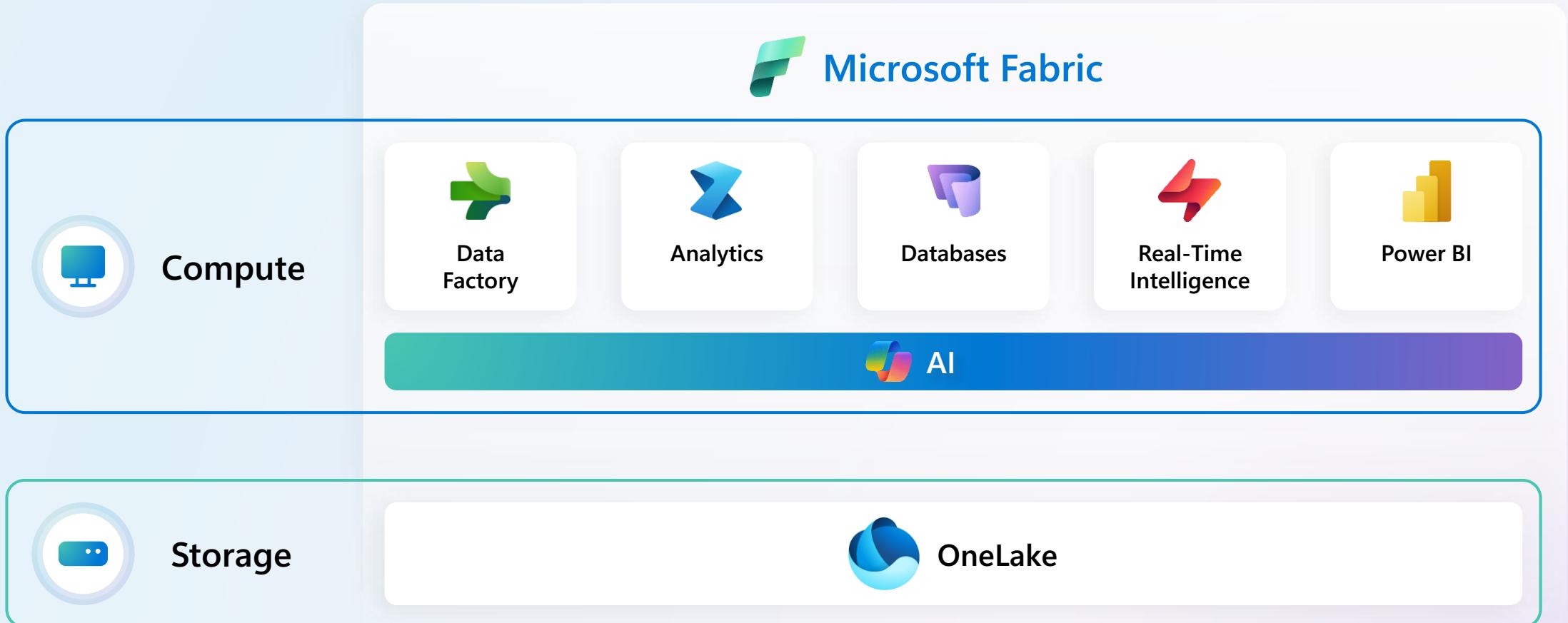
OneLake



Security & Governance

Fabric Platform

# Microsoft Fabric business model overview



# The simplified Microsoft Fabric capacity model

Rather than provisioning and managing separate compute for each workload, your bill is determined by two variables: The amount of compute you provision and the amount of storage you use.



## Compute

A shared pool of capacity that powers all capabilities in Microsoft Fabric.

Pay-as-you-go and 1-year Reservation.

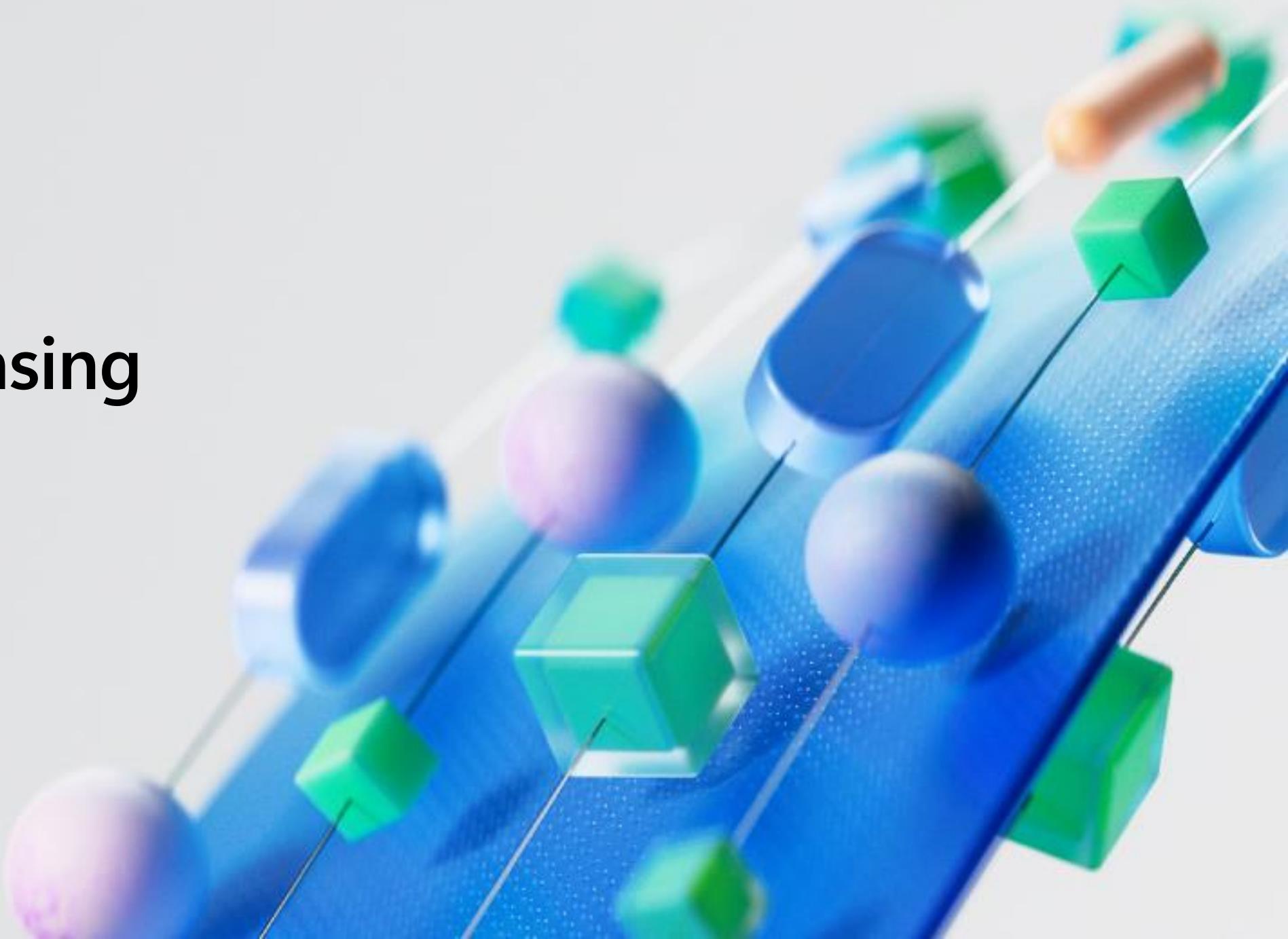


## Storage

A single place to store all data.

Pay-as-you-go (\$ per GB/month).

# Fabric Licensing



# Fabric Trial

Fabric ofrece una prueba gratuita de 60 días de F4 (ampliable a 64 CUs)

[Capacidad de prueba de Fabric - Microsoft Fabric | Microsoft Learn](#)

## Inlcuye

Acceso a todos los worloads de Fabric  
(Data Factory, Synapse Data Engineering, Real-Time Analytics, Power BI)

Create semantic models, pipelines, notebooks, reports and more.

Colaborar en workspaces y monitor con Fabric Capacity Metrics App.

1TB de almacenamiento en OneLake

## No Inlcuye

Copilot

Acceso confinable a áreas de trabajo

Funciones AI, servicios AI y Data agents

Private Link

•**Note:** Al finalizar la prueba, los contenidos permanecen en OneLake durante 7 días y pueden reactivarse asignando la capacidad de pago. [Capacidad de prueba de Fabric - Microsoft Fabric | Microsoft Learn](#)

# Fabric capacity pricing

Fabric capacity is priced uniquely across regions. The following table shows the pricing at US West 2 for reference. Fabric capacity can be purchased at Azure portal. Visit [Fabric pricing page](#) for more details.

1 CU pay-as-you-go price at US West 2 \$0.18/hour

SKU	Capacity unit (CU)	Pay-as-you-go (monthly)	Reservation (monthly) ~40.5% saving over Pay-as-you-go
F 2	2	\$262.8	\$156.334
F 4	4	\$525.6	\$312.667
F 8	8	\$1,051.2	\$625.334
F 16	16	\$2,102.4	\$1,250.667
F 32	32	\$4,204.8	\$2,501.334
F 64	64	\$8,409.6	\$5,002.667
F 128	128	\$16,819.2	\$10,005.334
F 256	256	\$33,638.4	\$20,010.667
F 512	512	\$67,276.8	\$40,021.334
F 1,024	1,024	\$134,553.6	\$80,042.667
F 2,048	2,048	\$269,107.2	\$160,085.334

## Note:

- 1 CU PAYGO monthly rate calculation:  $\$0.18 * 730 = \$131.4$ . F2 =  $\$131.4 * 2 = \$262.8$
- 1 CU RI monthly rate calculation: Round  $(\$0.18 * (1 - 0.405) * 730 * 12,0) / 12 = \sim \$78.166$ . F2 RI =  $\sim \$78.166 * 2 = \sim \$156.334$

- Power BI Pro license is required for all Power BI Premium ("P") and Fabric Capacity ("F") SKUs to publish Power BI content to Microsoft Fabric. Enabling content consumers to review and interact with Power BI reports without additional paid per-user licenses is available at P1 and above (and F64 and above).

# Fabric OneLake pricing

OneLake is a data lake built into Microsoft Fabric and provides a single place to store all organizational data. Data storage is charged at a rate of \$ per GB per month and priced uniquely across regions.



## Data Storage

Type	Pay-as-you-go price at West US 2
OneLake storage	\$0.023 per GB/month
OneLake BCDR storage	\$0.0414 per GB/month
OneLake cache	\$0.2 per GB/month

## Data Transfer & Internet Egress

Cross-region data transfer network charges may apply based on source/destination of each storage access.



Learn more at the [Bandwidth Pricing](#).

**Note:** OneLake cache is billed for KQL cache storage and Data Activator data retained.

**Note:** Power BI native storage is separate from OneLake storage and continues to be free up to the maximum storage correlated with your Power BI plan—10 GB per user for Power BI Pro plans and 100 TB for Power BI Premium per user. Data stored in OneLake for Power BI import semantic models is included in the price of your Power BI licensing.

# Free Mirroring storage

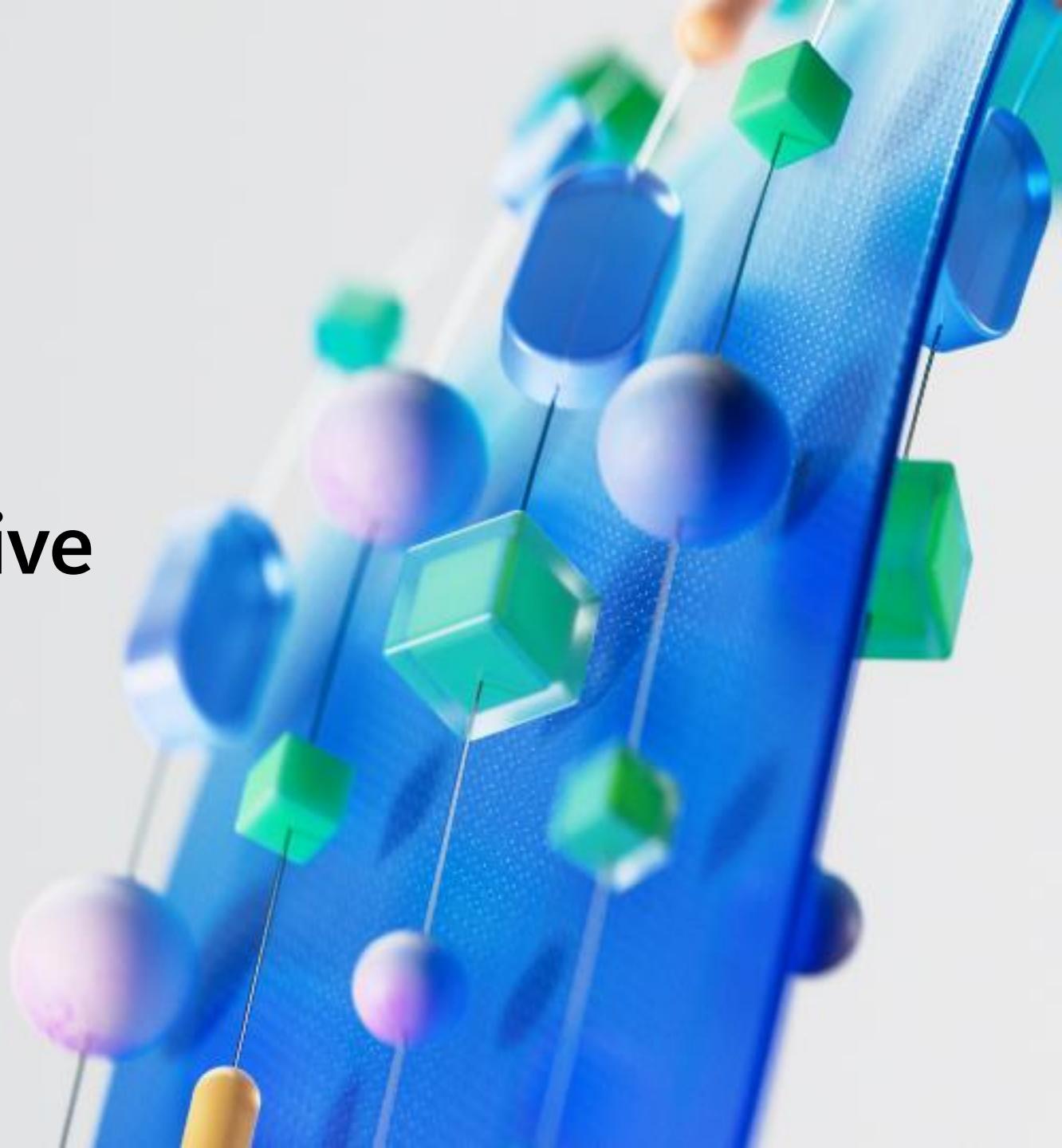
A zero-ETL way of accessing and ingesting data seamlessly in near-real time from any database into OneLake.

Get a free terabyte of Mirroring storage for every capacity unit (CU) you've purchased and provisioned.

SKU	Terabytes of free mirroring storage
F 2	2 TBs
F 4	4 TBs
F 8	8 TBs
F 16	16 TBs
F 32	32 TBs
F 64	64 TBs
F 128	128 TBs
F 256	256 TBs
F 512	512 TBs
F 1,024	1,024 TBs
F 2,048	2,048 TBs

**Note:** For more information, see the [Microsoft Fabric pricing page](#)

# Fabric compute deep dive



# How it works

## Capacity units (CUs) = Compute power

Capacity units (CUs) are units of measure that represent a pool of compute power needed. Compute power is required to run queries, jobs, or tasks.

## CU Consumption

The CU consumption is highly correlated to the underlying compute effort needed for the tasks performed by the capability during the processing time.

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Each capability, such as Power BI, Spark, Data Warehouse, with the associated queries, jobs, or tasks has a unique consumption rate.

# Great performance and simplified management with bursting and smoothing



## Bursting

Bursting allows you to consume extra compute resources beyond what you've purchased to speed the execution of a workload. For example, instead of running a job on 64 CU in 60 seconds, bursting could use 256 CUs to complete in 15 seconds.



## Smoothing

Fabric runs smoothing on all capacities when small usage bursts occur, flattening compute usage over time to help you avoid being penalized with additional cost.

- **Interactive jobs:** Demand is typically smoothed over 5 minutes.
- **Scheduled/background jobs:** Demand is spread over 24 hours.

# Throttling

## Overview

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- Throttling occurs when a tenant's capacity consumes more capacity resources than it has purchased.
- Throttling only impact new requests (In-flight operations aren't throttled).
- **Throttling example:** You purchase 10 CUs and use 50 CUs per min, then you would get throttled after 2.5 minutes (stage 2).

**Stage 0:** CU is at full potential, no throttling is applied.

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**Stage 1:** A capacity has consumed all CU for the next 10 minutes and new interactive jobs are delayed by 20 seconds.

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**Stage 2:** A capacity has consumed all CU for the next hour. New interactive jobs are rejected, but new background jobs are allowed to start.

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**Stage 4:** A capacity has consumed all CU for the next 24 hours. All new jobs are rejected until the usage is paid off.

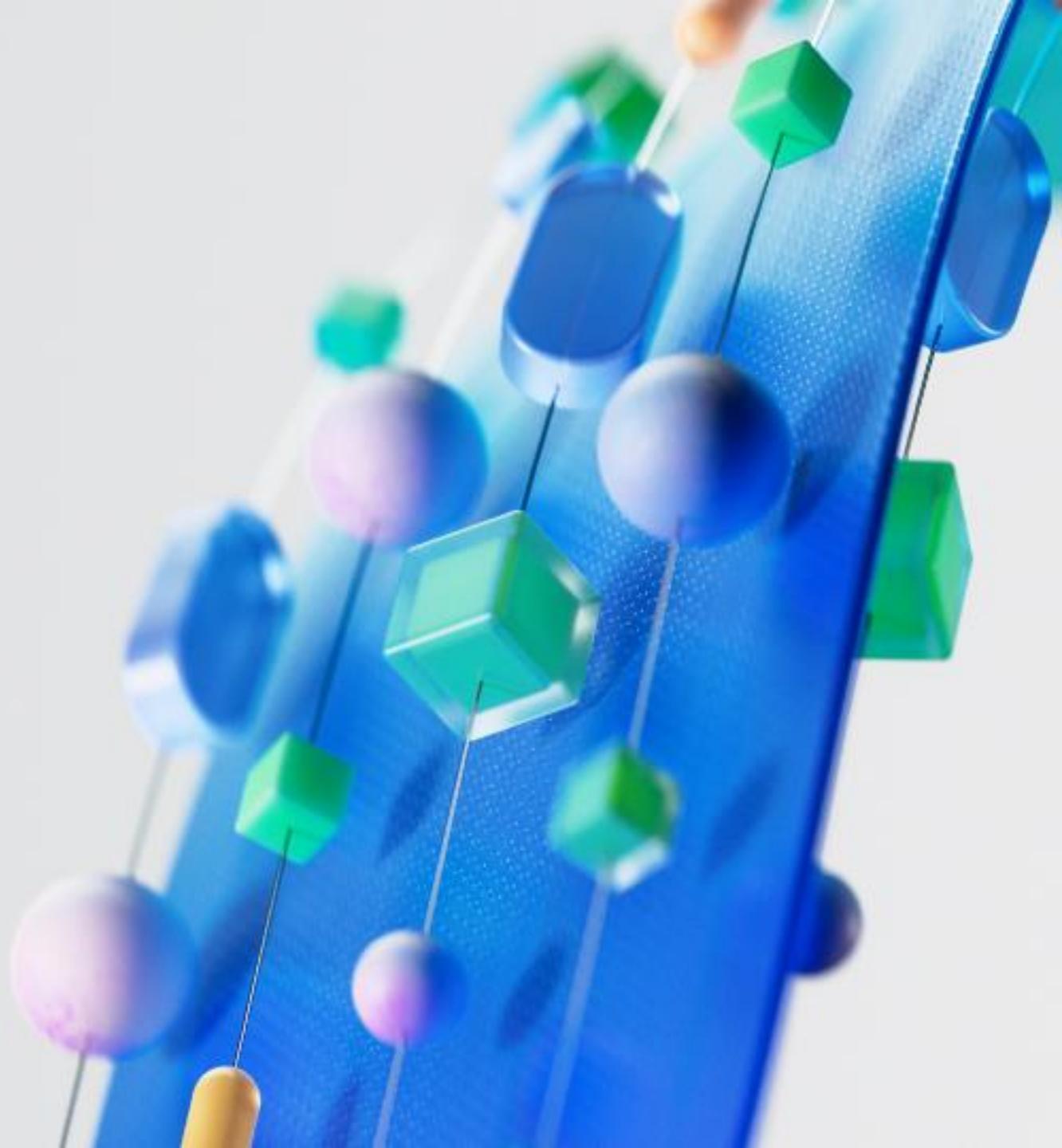


## Surge Protection

Protects capacities from unexpected surges in background workload consumption.

Admins can set limits on background activity consumption, preventing background jobs from starting when limit is reached.

# Fabric SKU sizing



# How to identify the right Fabric capacity size for your needs



## NEW Online SKU Estimator

High level estimator designed to help customers and partners accurately estimate their capacity requirements and identify the appropriate SKU for their needs.



## Trial + Capacity Metrics App

Try Fabric out via the free trial and use the capacity metrics app to monitor and evaluate current usage. The app provides insights into consumption patterns and helps identify peak usage times.



## Work with Your Microsoft Reps and Partners

Microsoft sellers and partners have access to a highly granular tool to provide customers with a highly accurate SKU recommendation.

# Copilot in Microsoft Fabric

You can simply count Copilot usage against your existing Fabric or Power BI Premium capacity just like any other Fabric capability.

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Copilot in Fabric usage is charged at a rate of 100 Capacity Units seconds per 1,000 input tokens and 400 Capacity Units seconds per 1,000 output tokens.

See full details here:  
<https://aka.ms/Copilot-Billing-Docs>.

# Making Copilot in Fabric and data agents more accessible



## Expanding access to all users

**Expanding Copilot to all F-SKUs:** Copilot and AI capabilities will be enabled for all paid SKUs in Fabric.

**Rate reduction:** We've reduced the Copilot in Fabric consumption rate by ~70% since launch.

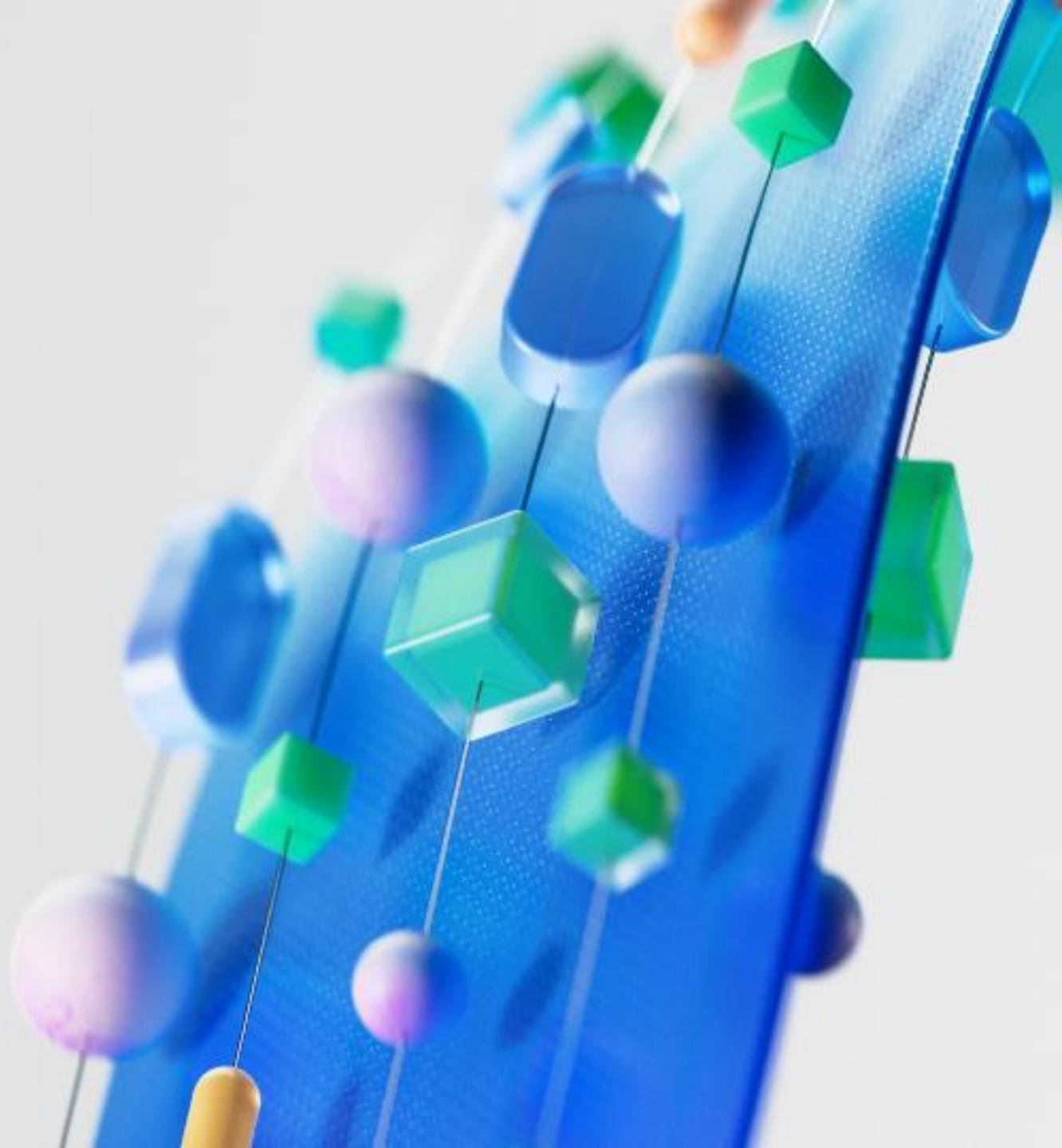


## New Copilot capacity

Organizations with multiple capacities can direct Copilot consumption and billing to a specific capacity, no matter where the usage takes place.

Admins can assign specific users to a specific capacity for all their Copilot requests, ensuring their requests don't impact priority jobs.

# Migrating Power BI Premium to Fabric



# Translating Power BI Premium to Microsoft Fabric SKUs

Power BI Premium per capacity SKUs	
SKU	PBI vCore
P1	8
P2	16
P3	32
P4	64
P5	128



Microsoft Fabric SKUs	
SKU	CU
F 2-F 32	2-32
F 64	64
F 128	128
F 256	256
F 512	512
F 1,024	1,024



Power BI Premium P-SKUs get access to the full Fabric capabilities.



8 CUs provide the same compute power of 1 Power BI Premium v-core for Power BI workloads. That is, **F64 provides the equivalent compute power of Power BI Premium P1.**

# Timeline for P-SKU retirement and transition

Power BI Premium Per Capacity SKUs (P-SKUs) are being retired and customers should transition to a Microsoft Fabric SKU at the time of their next renewal. **The Power BI Premium product capabilities will not change and there is no immediate action required for customers.**

End of sales for new customers

Existing customers transition to Fabric

End of Sales

July 1, 2024

End of Renewals

February 1, 2025

End of Life  
(non-EA agreements)

February 1, 2026

End of Life  
(EA agreements)

February 1, 2028

# The benefits of Microsoft Fabric SKUs

## MACC eligibility

Count Fabric usage against your existing Azure consumption commitments

## Pay-as-you-go

Dynamically scale up or scale down and pause capacity as needed

## Smaller starting SKUs

Take advantage of smaller compute SKUs that can start as low as ~\$150/month

## Azure-only features

Gain access to Azure-only features like Managed Private Endpoints for Spark or Trusted Workspace access

## Differences between Fabric and Power BI Premium SKUs

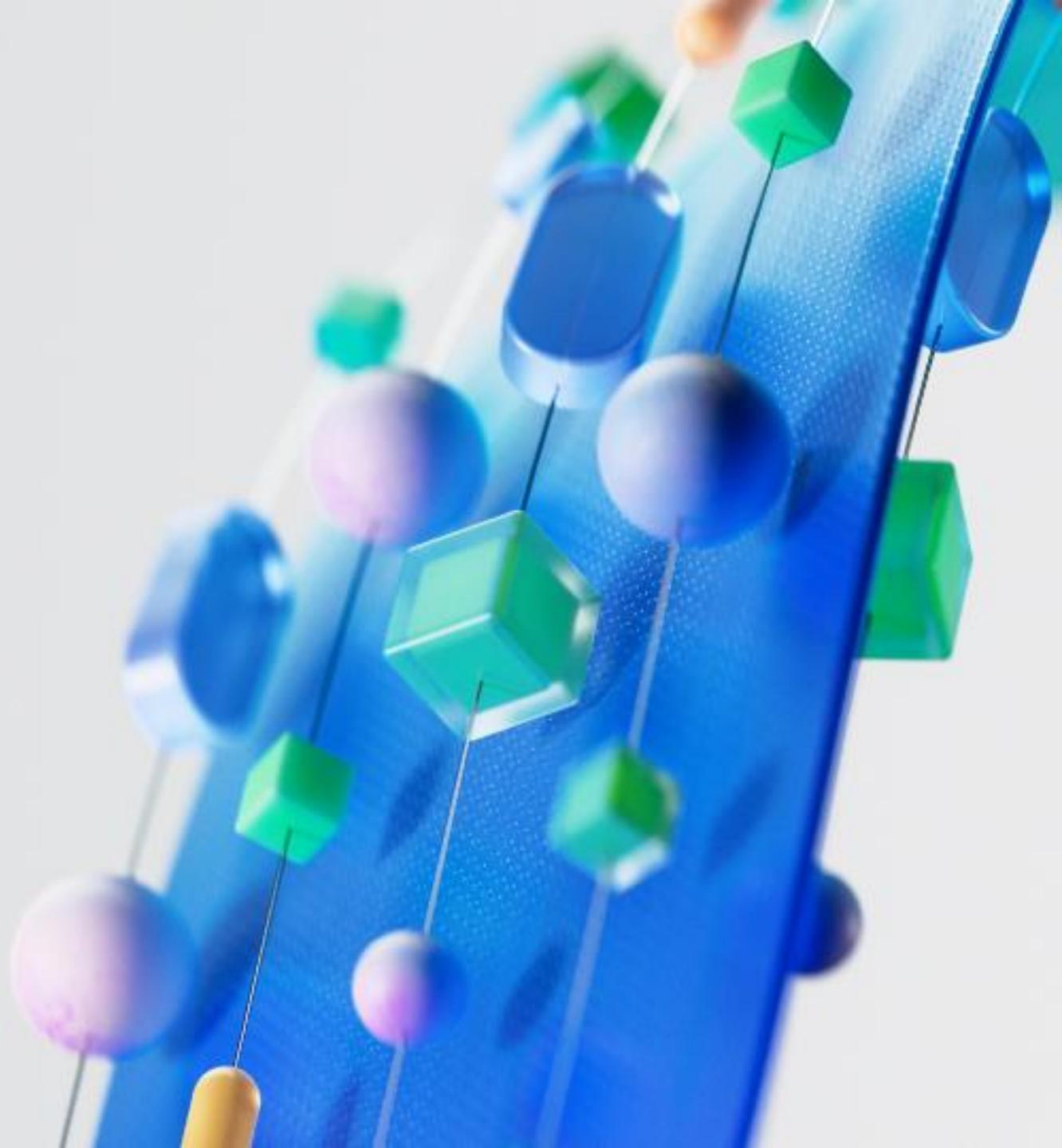
Capabilities	P-SKUs	F-SKUs
Purchase options	Commitment model only	Pay-as-you-go or Reservation commitment model
MACC eligibility	No	Yes
Global/Regional pricing	Global pricing	Regional pricing
Power BI Report Server	Yes	Yes, through F64 and above (additionally acquire through SQL Server Enterprise Edition with Software Assurance)
Power BI Embedded	Yes (acquired though EM-SKUs)	Yes
<b>Azure-only features including:</b> <ul style="list-style-type: none"><li>Trusted Workspace Access to ADLS Gen2</li><li>Managed Private Endpoint for Spark</li><li>Workspace Level Private Links</li><li>Outbound access protection</li><li>CMK at workspace level</li></ul>	No	Yes

**Note:** For more information, see the [P-SKU to F-SKU announcement blog](#)

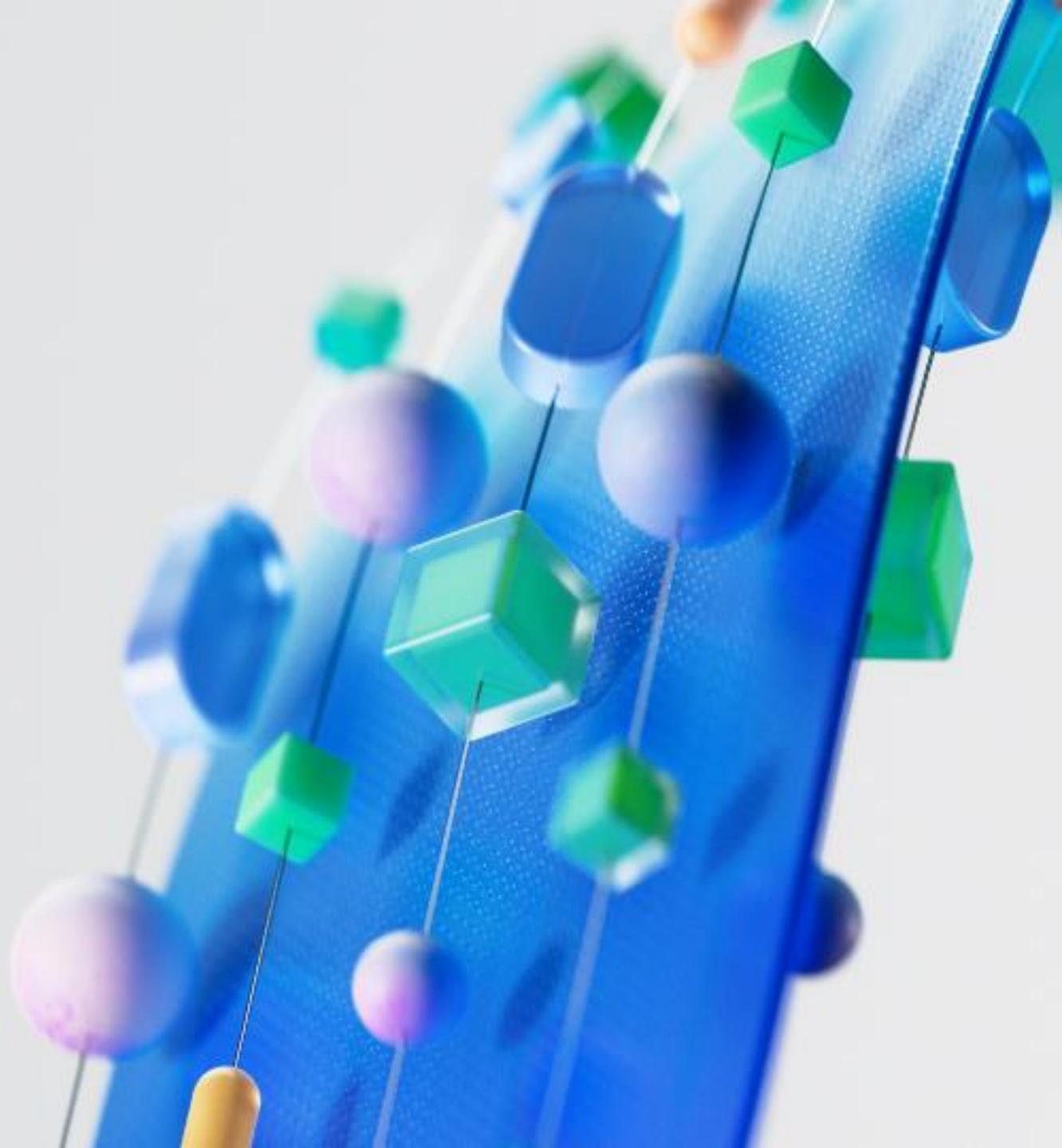
# Fabric: Cuánto me cobra el portero?



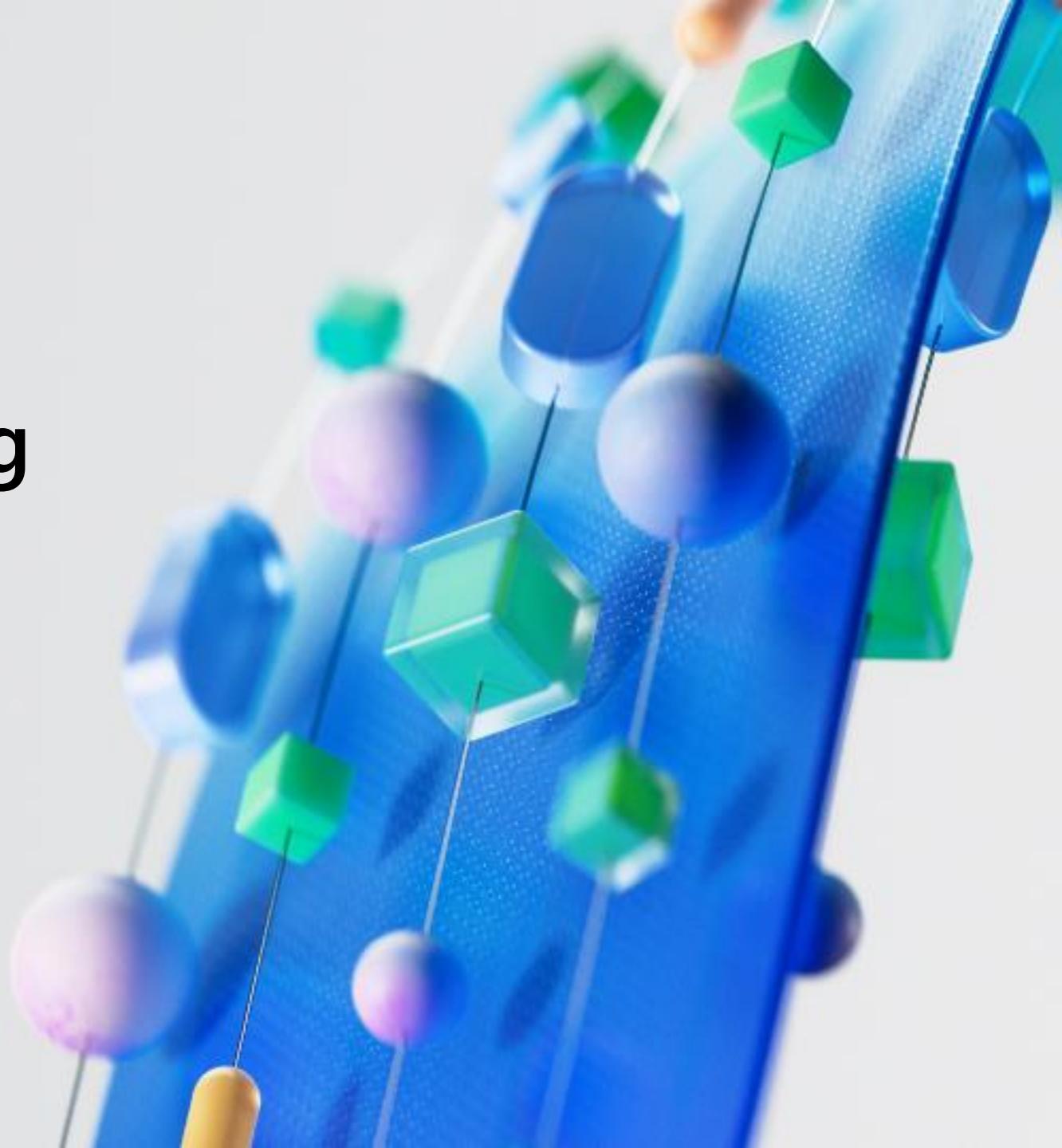
# Depende



# Q&A



# Bursting and smoothing Deep Dive

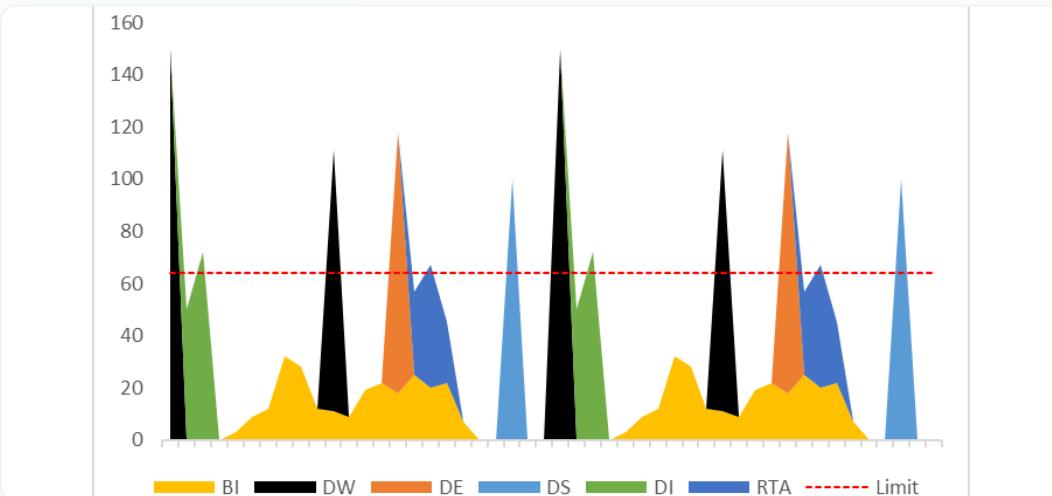


# Bursting and smoothing | before and after

Looking at an example of a 64 CU capacity, running multiple workloads over a couple of days...

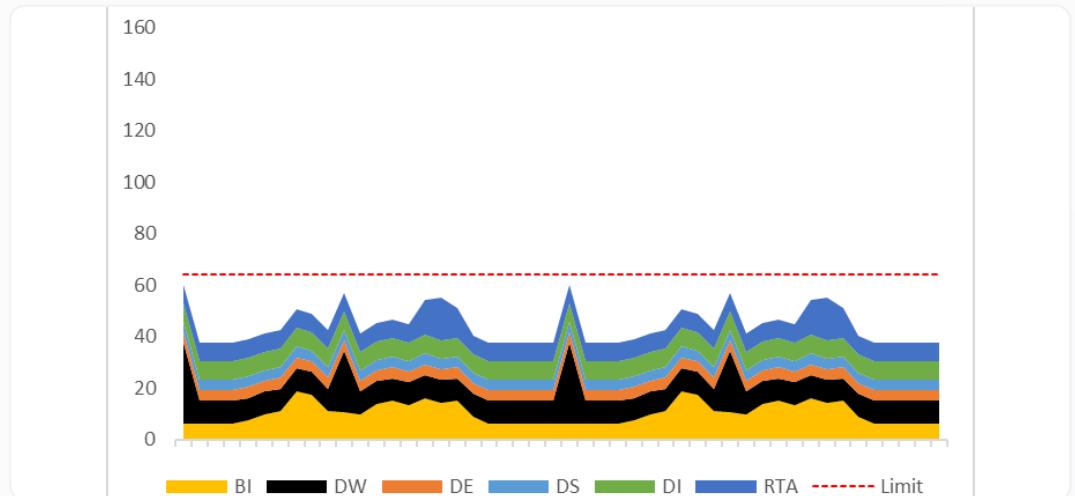
## Before Smoothing

- **Actual** load as executed on the capacity before smoothing
- *Bursting* accelerates jobs execution by resource boosting
- The capacity could be overloaded 25% of the time
- Some of the overloads are more than 2x the limit
- There are periods of no/low usage



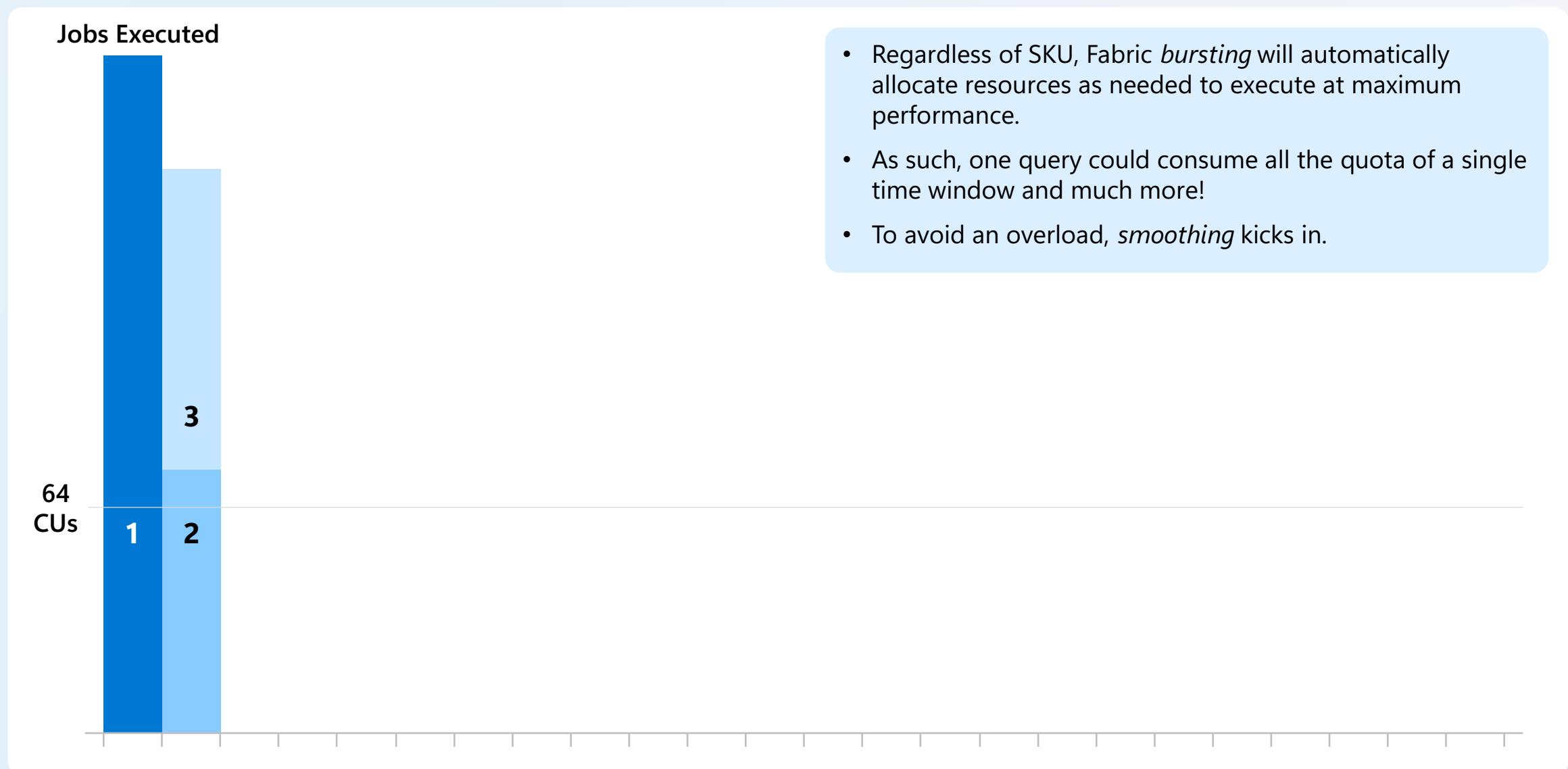
## After Smoothing

- Shows the reported load (not runtime execution) against the capacity limits
- There is NO overload, and consumption is more stable
- The smoothing of usage fills in gaps

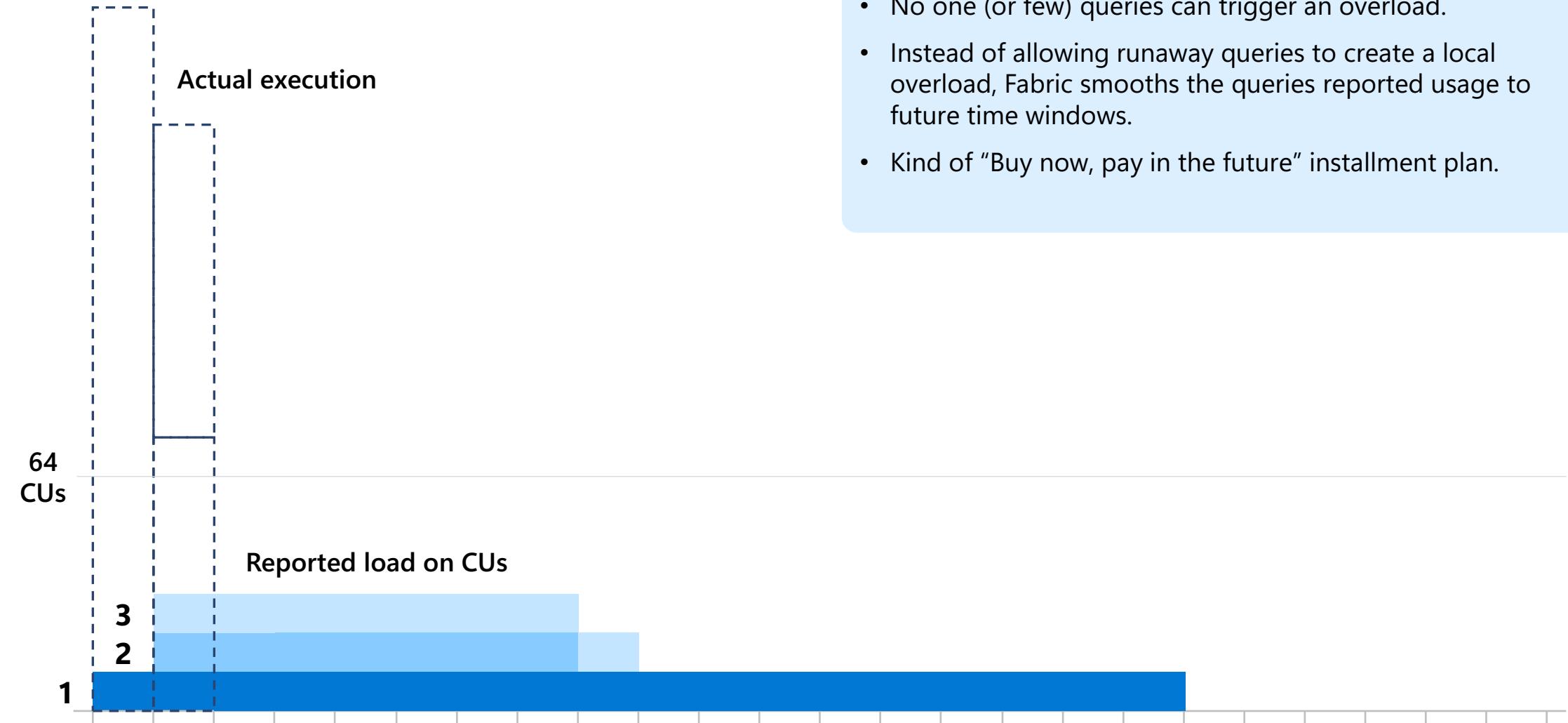


**Note:** For more information, see [Bursting and Smoothing](#)

# Bursting and Smoothing

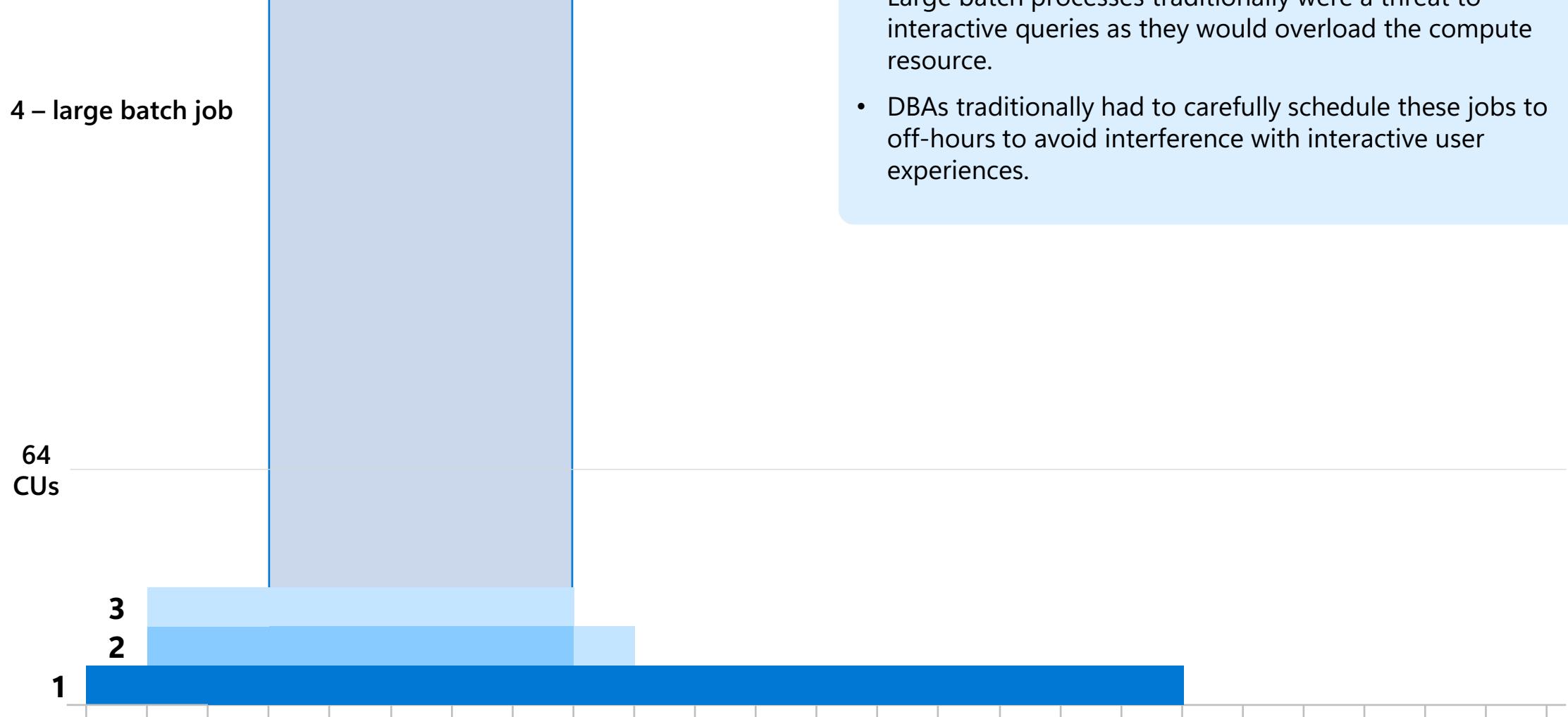


# Bursting and Smoothing

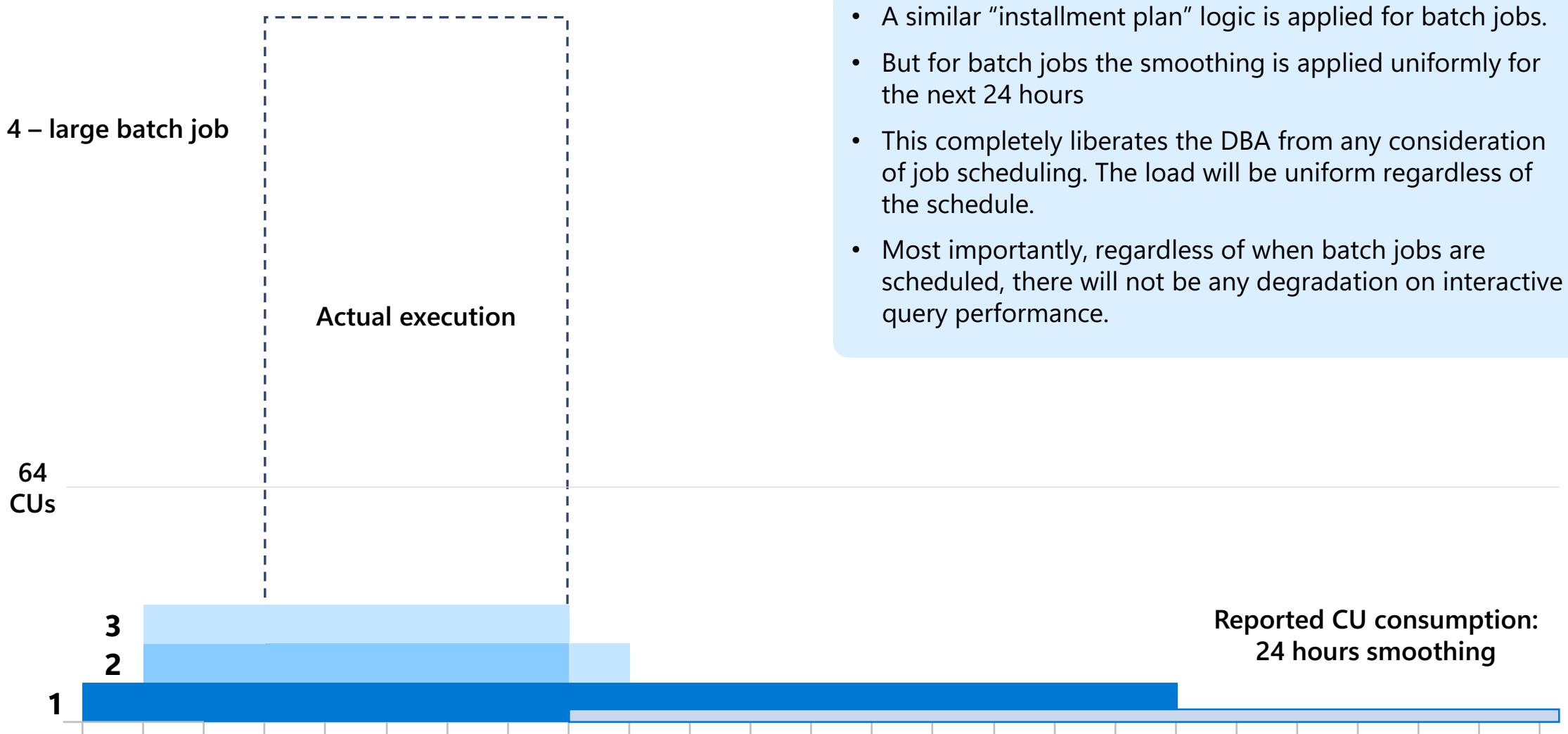


Note: For more information, see [Bursting and Smoothing](#)

# Bursting and Smoothing



# Bursting and Smoothing



Note: For more information, see [Bursting and Smoothing](#)

- A similar “installment plan” logic is applied for batch jobs.
- But for batch jobs the smoothing is applied uniformly for the next 24 hours
- This completely liberates the DBA from any consideration of job scheduling. The load will be uniform regardless of the schedule.
- Most importantly, regardless of when batch jobs are scheduled, there will not be any degradation on interactive query performance.

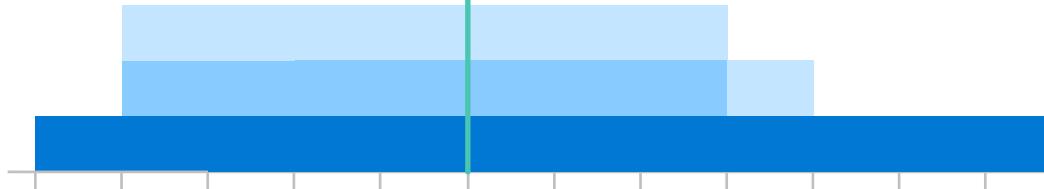
# Smoothing and Paused Capacities

Pause event on Capacity



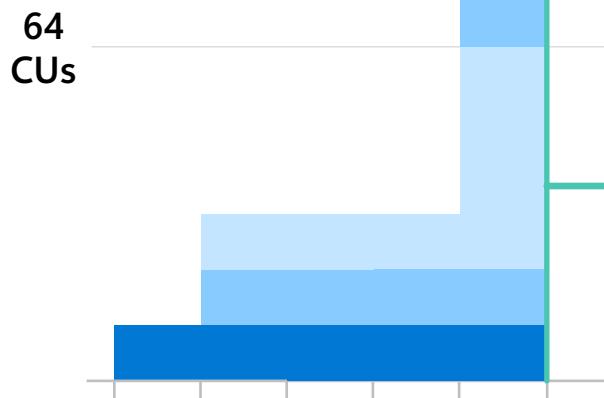
- When a capacity is paused.....

64 CUs



# Smoothing and Paused Capacities

Pause event on Capacity



- When a capacity is paused.....
- Usage that was smoothed into the future will be “reconciled” and charged against the capacity at the timestamp the capacity was paused.
- Reconciled usage will show up as a spike in capacity metrics.



Thank you

