Advanced Copilot Analytics: From Zero to Hero with the Unified Audit Log, Entra ID and Power BI

Tatu Seppälä

⭐ Data security

⭐ Insider risk

Power Platform

Governance

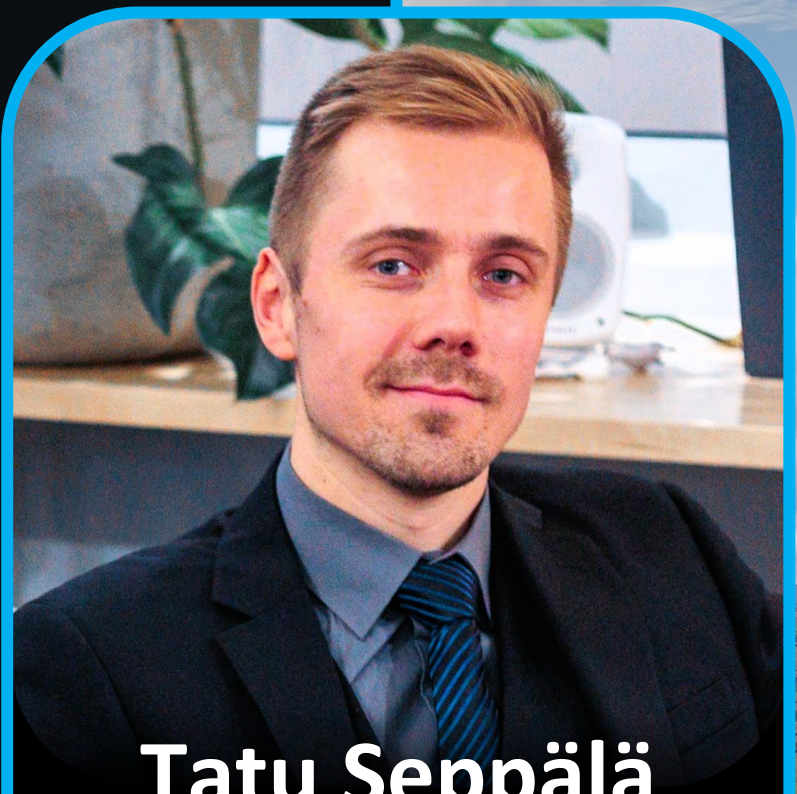
IAM / Entra ID

Generative AI

SULAVA

CREATING BETTER WORKLIFE

The Digital **Neighborhood**



Tatu Seppälä

Security & Compliance Architect

MVP Microsoft® Most Valuable Professional

Agenda

- 🚨 Pain points
- 🤖 Pull Copilot events from the UAL
- 🤜 Grab identity metadata from Entra ID
- 🍲 Bring ‘em together!
- 🔎 Analyze & take action
- ⚡ Automate & expand

Pain points

Enabled users
145

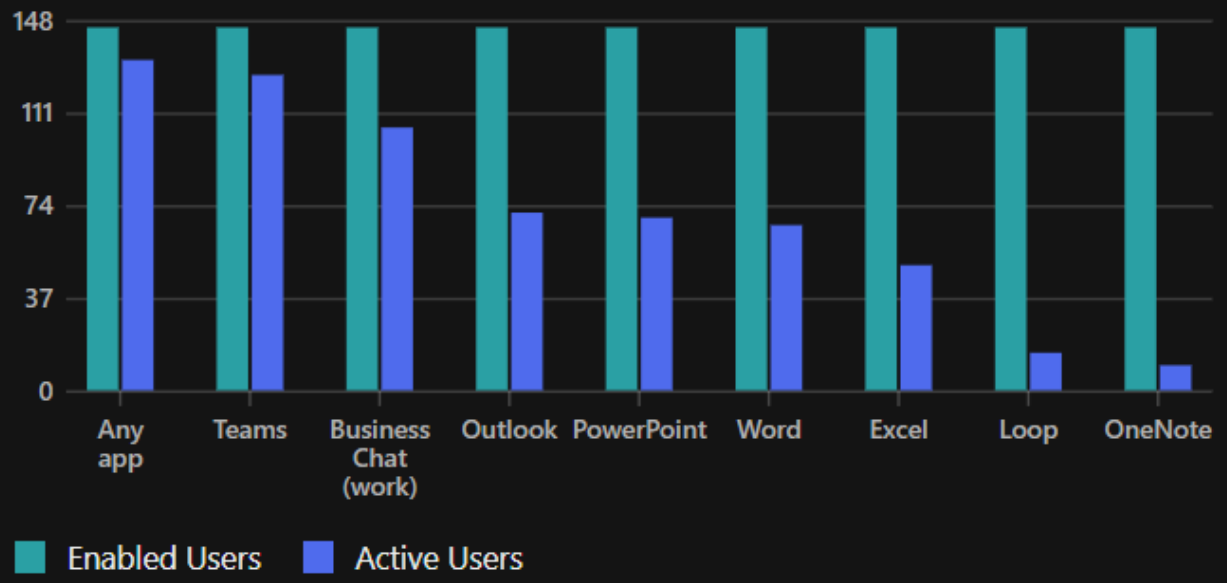
Active users
132

Active users rate
91.0%

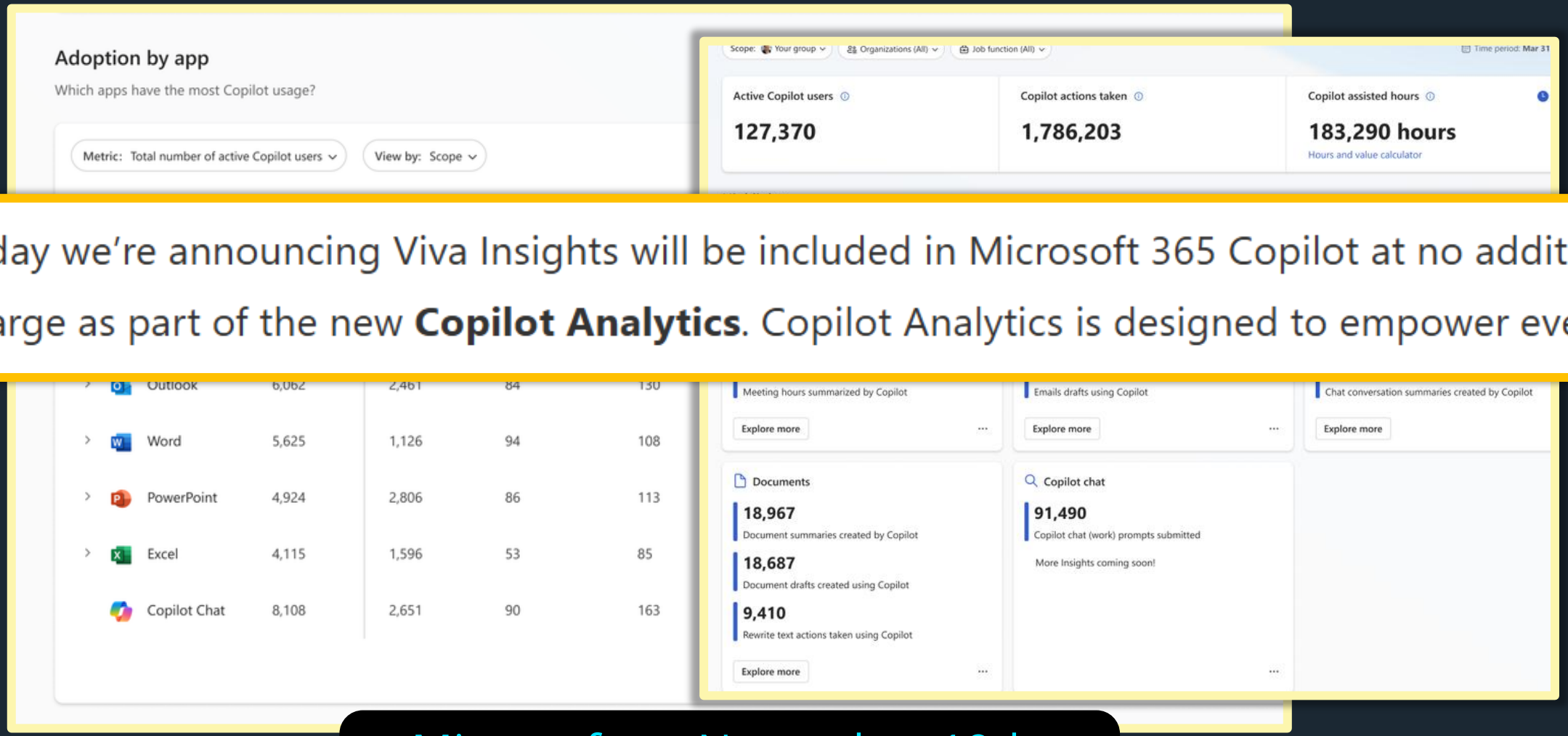
Adoption by app

Summary | Trend

The number of enabled and active users of Microsoft 365 Copilot apps for the selected period See metric definitions

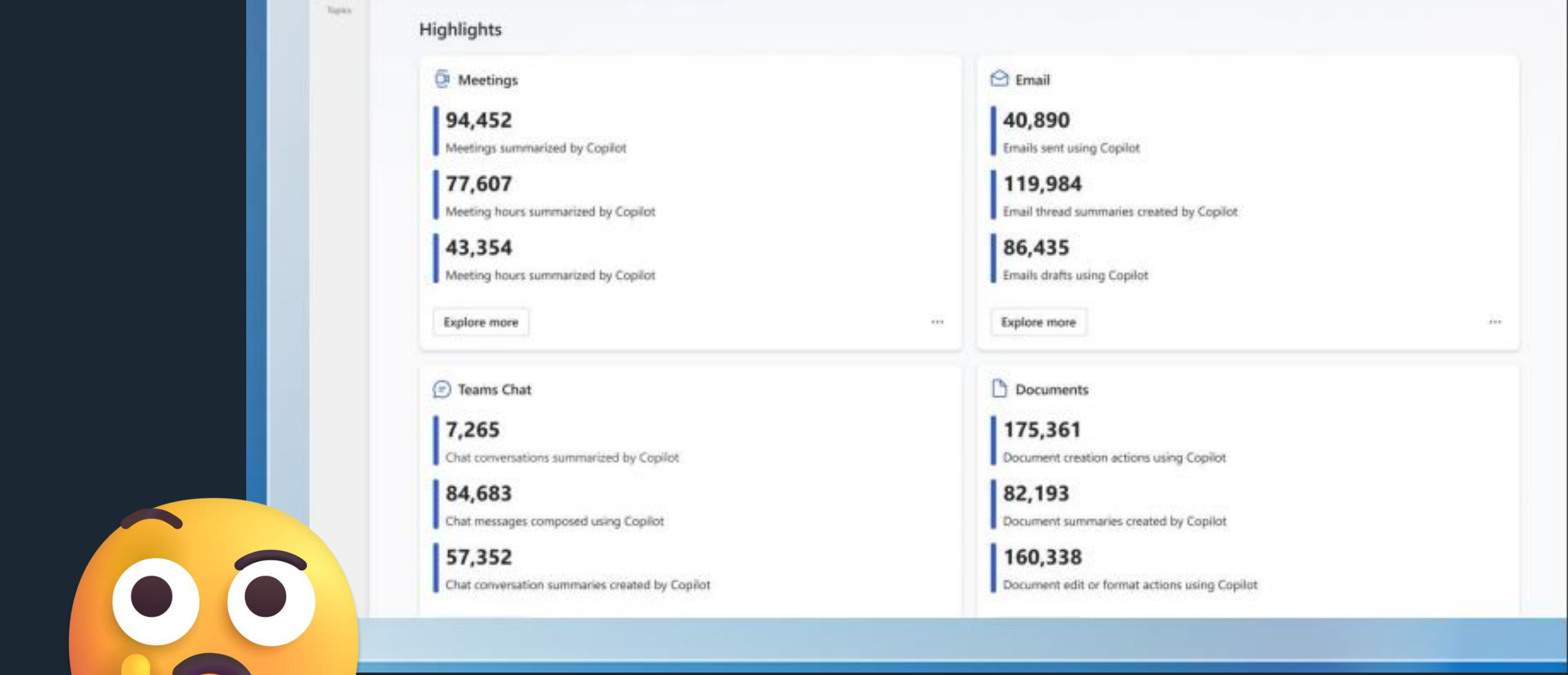


Native Copilot Analytics?



Today we're announcing Viva Insights will be included in Microsoft 365 Copilot at no additional charge as part of the new **Copilot Analytics**. Copilot Analytics is designed to empower every IT

[Microsoft on November 19th, 2024]



Native analytics are slowly getting better..

Things we need to know

- 📊 Roles utilizing specific Copilots the most? Overall?
- 🤖 Underutilized Copilots per role?
- 🌟 Who are the **pioneers**?
- 📚 Effectiveness of trainings?
- 🔄 Licenses ripe for reassignment?

CopilotInteraction events

Copilot audit logging

A bit of history

- **Before May 2024**, M365 Copilot audit logs were very inconsistent 😔
- On **May 1st, 2024,** the **CopilotInteraction** audit log schema finally got corrected and was made consistent 🥳

CopilotInteraction events

- One event saved in the UAL for each **interaction thread**
- Each thread can contain multiple messages – both user prompts *and* Copilot responses
- Most of what you need is in the **AuditData** attribute

RecordID: 99b0a960-13a0-461f-8c5c-cb2
CreationDate: 12/13/2023 17:12
RecordType: 261
Operation: CopilotInteraction
UserID: admin@MODERNCOMMS97518
AuditData: {"CreationTime":"2023-12-13T
cb2316ea273d","Operation":"CopilotInte
84335f0ce512","RecordType":261,"UserK
f8884f3f373e","UserType":0,"Version":1,"
{"AISystemPlugin":[],"AccessedResources
my.sharepoint.com/personal/admin_moc
sourcedoc=%7B9FDE1491-B079-4180-9E
B87F4ACA19F7%7D&file=AboutElephant
[],"Messages":[{"Id":"1715187560311","isP
{"Id":"1715187561014","isPrompt":false}],
nSX2U7tjccgSrtYAoG341@thread.v2"}}

AppHost

- **AppHost** identifies the Copilot scenario / type
- New apps added regularly
- Usually clear. Can be cryptic too.
- One of the key improvements available from May 1st ‘24 onwards

AppHost values:

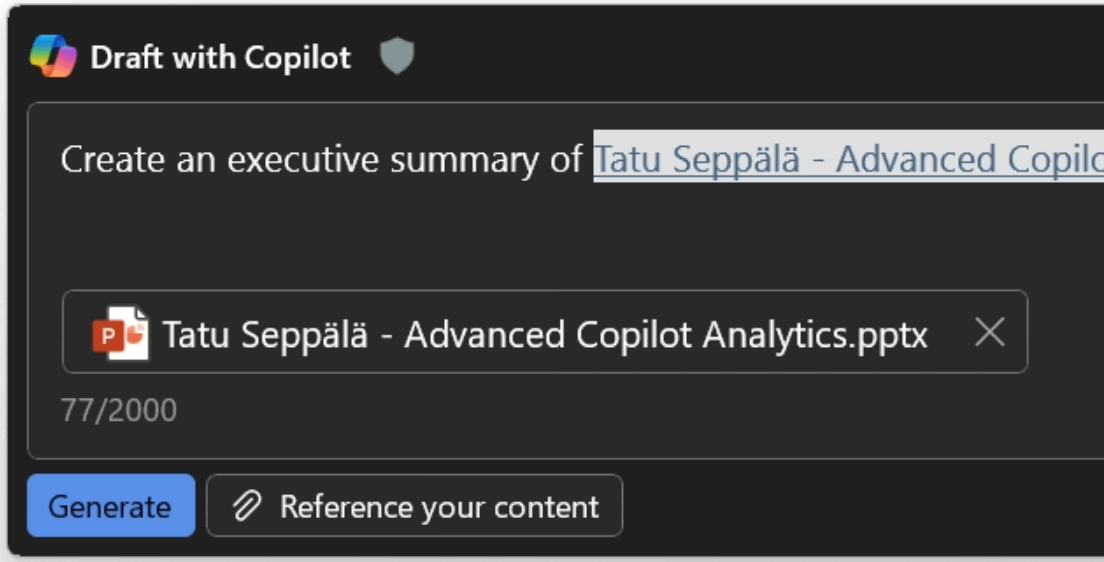
- Bing
- Teams
- Outlook
- Office
- DevUI
- BashTool
- Word
- Excel
- PowerPoint
- OneNote
- SharePoint
- Loop
- Whiteboard
- M365App
- M365AdminCenter
- Planner
- VivaEngage

AppHost values on Jan 30th, 2025

- appchat
- **Bing**
- **Copilot Studio**
- Designer
- Excel
- Forms
- Loop
- **Office *(also Bing!)***
- **M365AdminCenter**
- Microsoft Teams
- OneNote
- Outlook
- Planner
- **Power BI**
- PowerPoint
- SharePoint
- Stream
- Teams
- Whiteboard
- Word

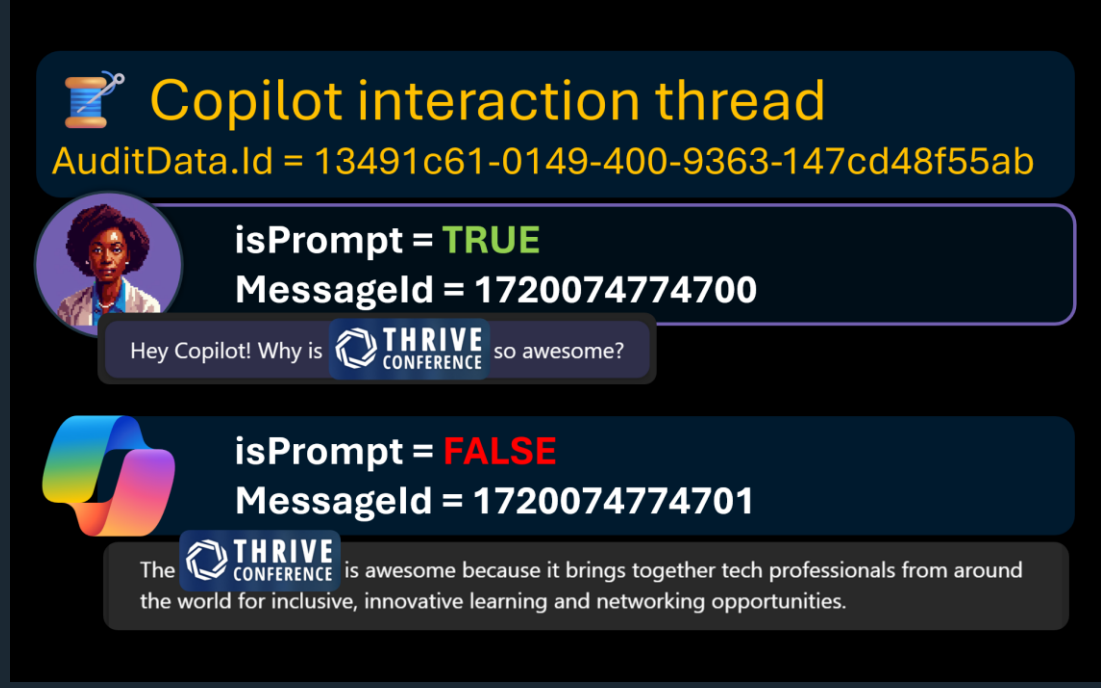
AccessedResources

- Tells us which emails, files and website URLs were referenced during the Copilot interaction
- There’s also information of the sensitivity label of referenced content



Messages

- Each **CopilotInteraction** event captures a single **interaction thread**
- Metadata (not the text itself!) on each user prompt and Copilot reply in the thread is saved separately under the **Messages** attribute



Copilot interaction thread

AuditData.Id = 13491c61-0149-400-9363-

isPrompt = TRUE
MessageId = 17200747747 00

Hey Copilot! Why is THRIVE CONFERENCE so awesome?

isPrompt = FALSE
MessageId = 17200747747 01

The THRIVE CONFERENCE is awesome because it brings together tech professionals from around the world for inclusive, innovative learning and networking opportunities.

What other metadata is available?

🧠 AI model name (ModelTransparencyDetails)

🔌 Plugins used in BizChat interactions

🏷️ The sensitivity label a BizChat interaction inherited from referenced docs

🌍 Public IP address & region of the client

📁 The context the Copilot interaction took place in (open document, Teams Chat or Meeting etc.)

How to get CopilotInteraction events

⚡ Immediate

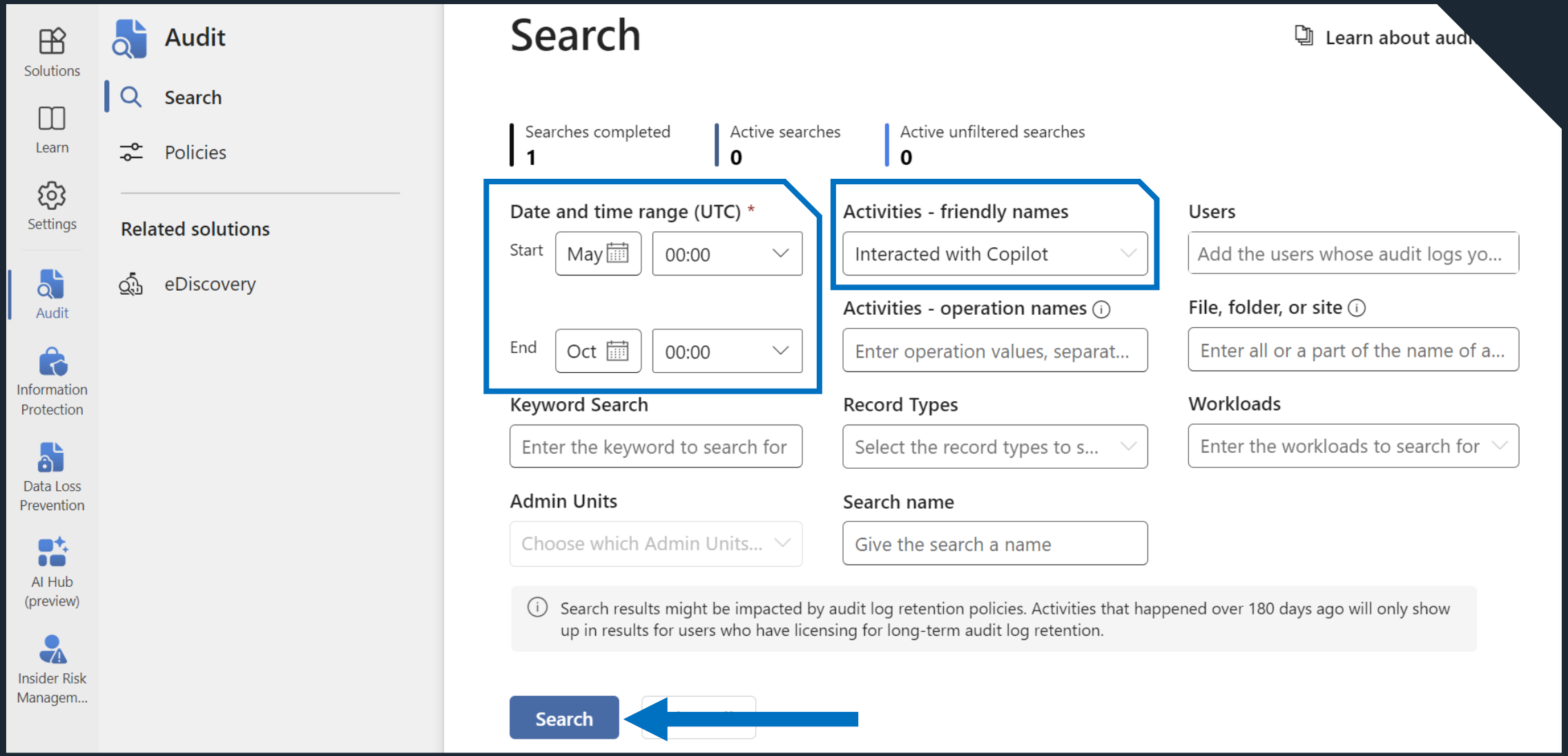
- Advanced Hunting & Log Analytics
  - Table: CloudAppEvents
  - ActionType: CopilotInteraction
  - ⚠️ Requires Defender for Cloud Apps
- Search-UnifiedAuditLog (Security & Compliance PowerShell)

⏳ Asynchronous

- Audit Search (Purview Portal)
- Audit Search (Graph API)
- O365 Management Activity API

Getting the audit logs

Purview Audit Search



Audit Search CSV export has it’s limits, too..

E3 and below:

Up to **~50 000** rows with Audit Standard

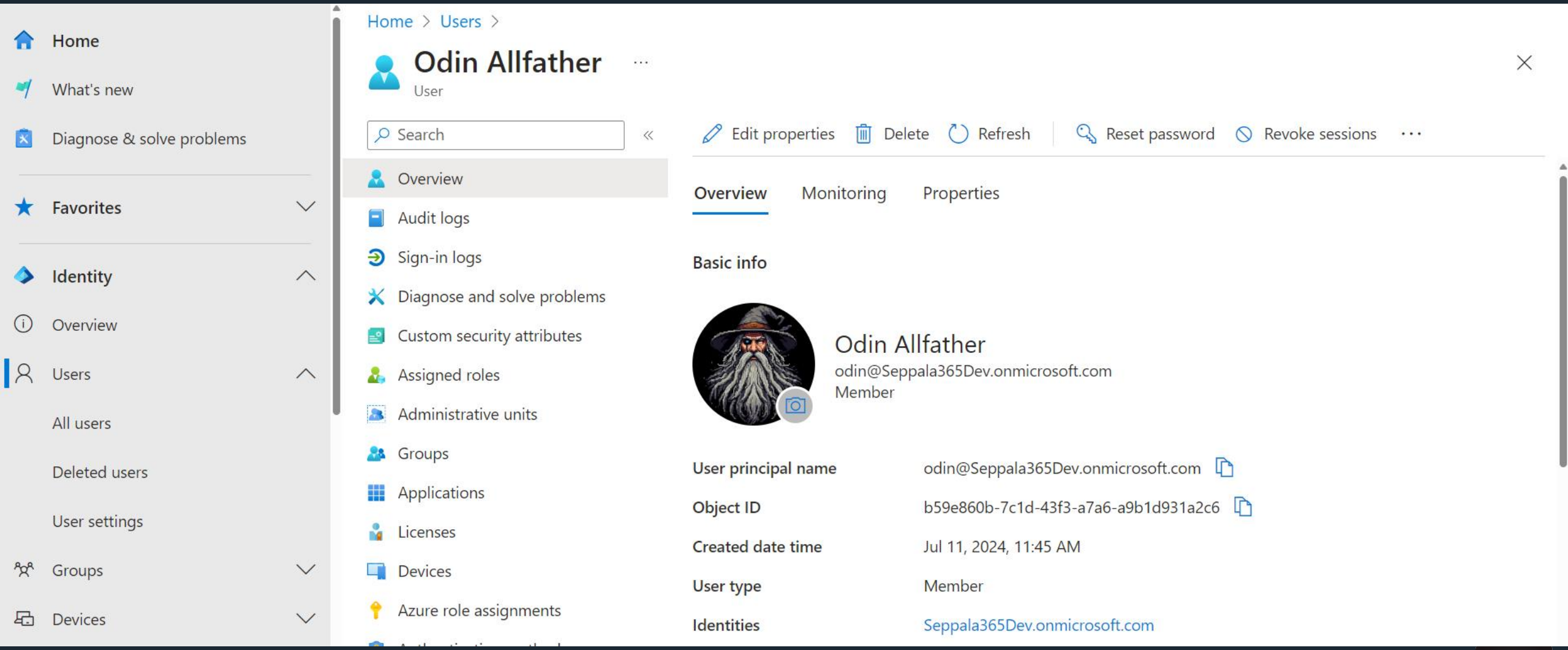
E5 & E5/F5 Compliance:

Up to **~500 000** rows with Audit Premium

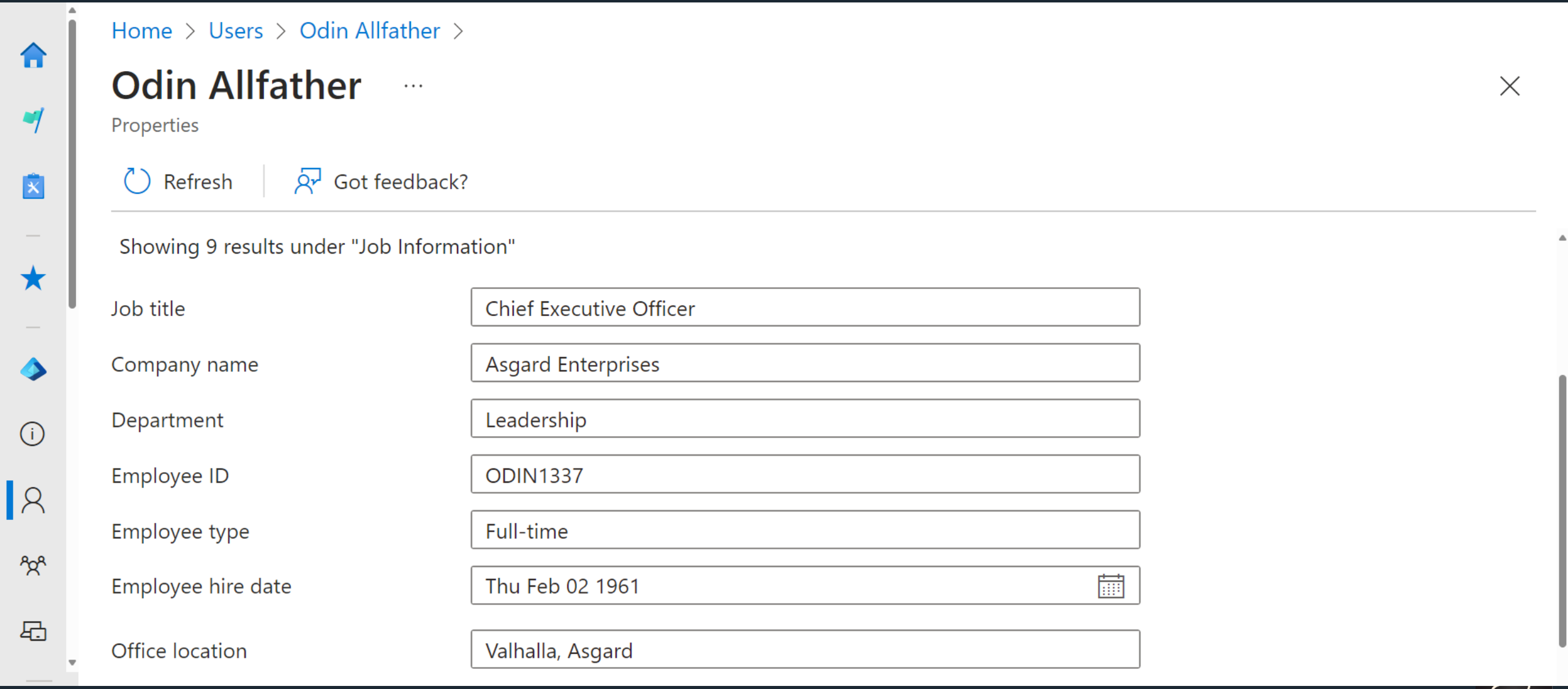
Entra ID metadata

Entra ID metadata

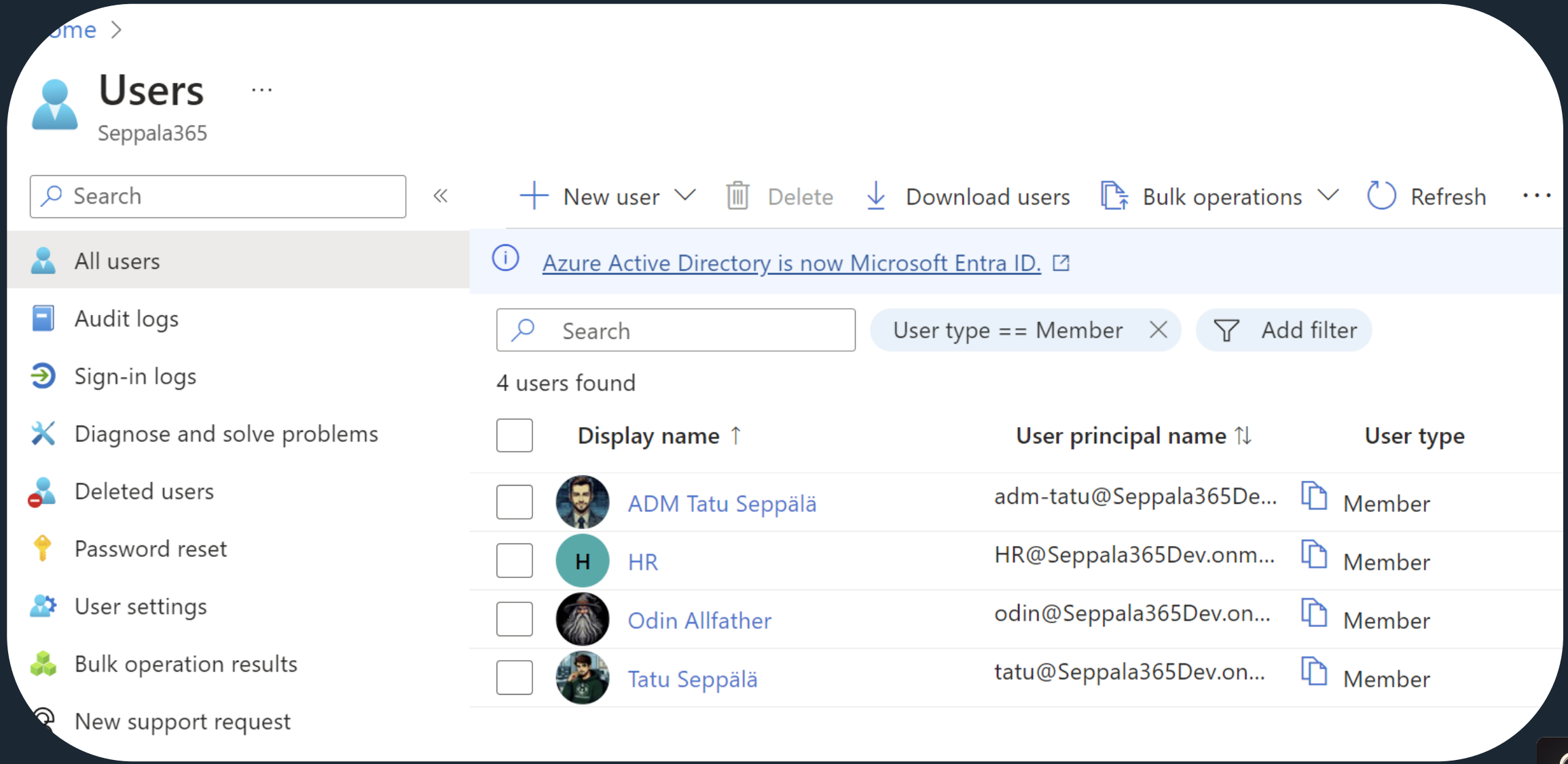
Entra ID is the source of HR metadata



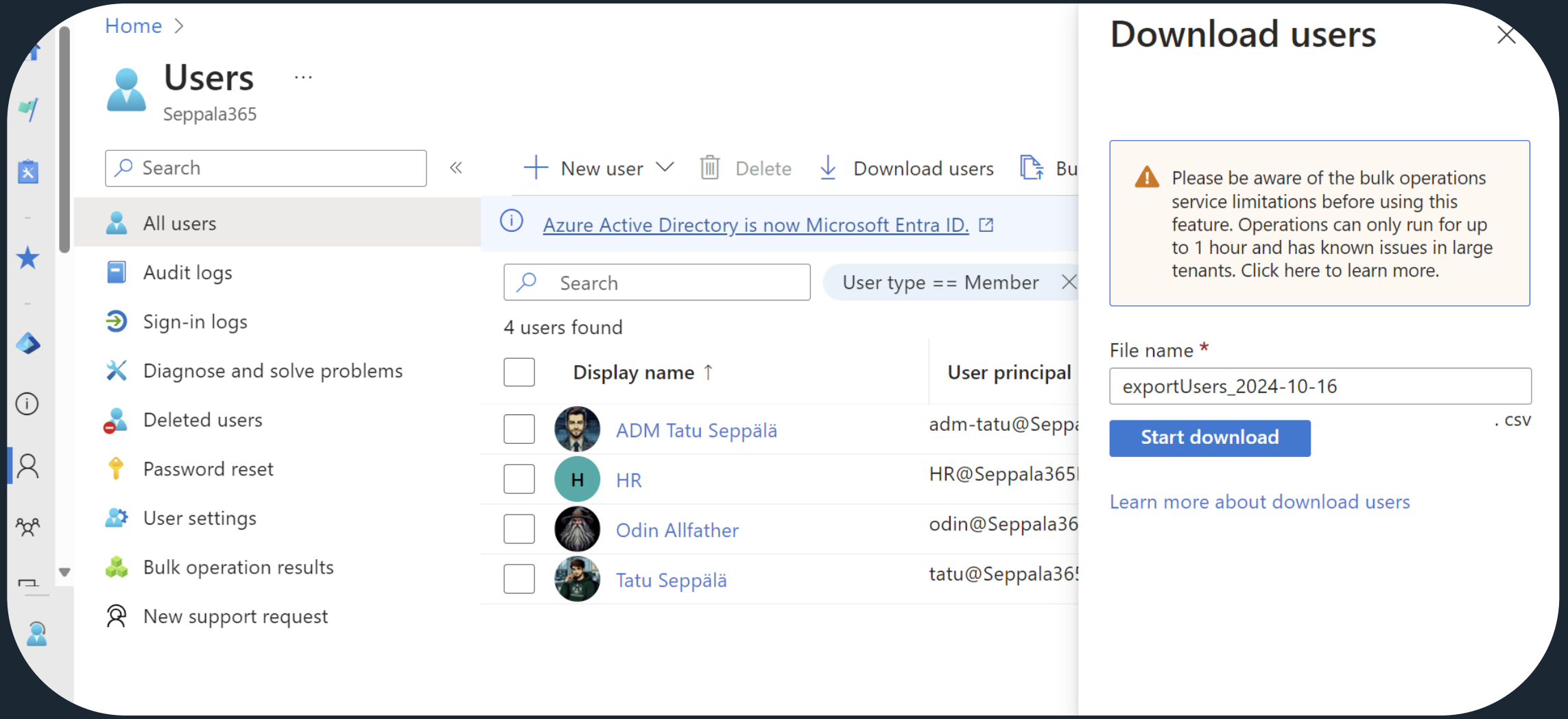
Entra ID is the source of HR metadata



Grab a report of Entra ID member users



Grab a report of Entra ID member users



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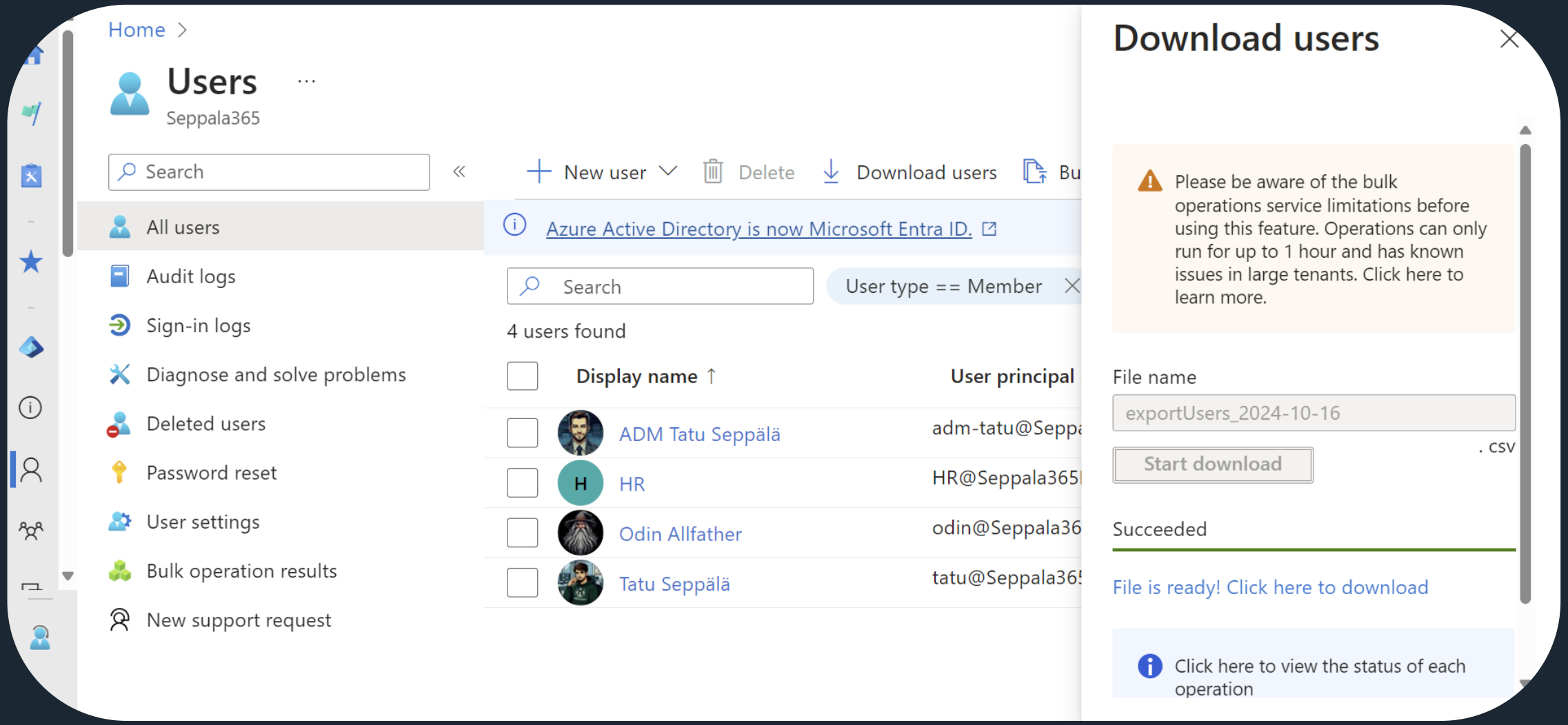
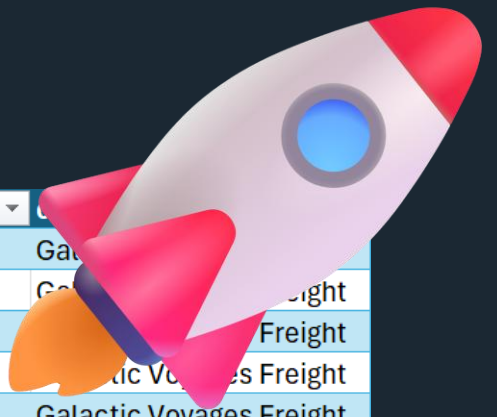


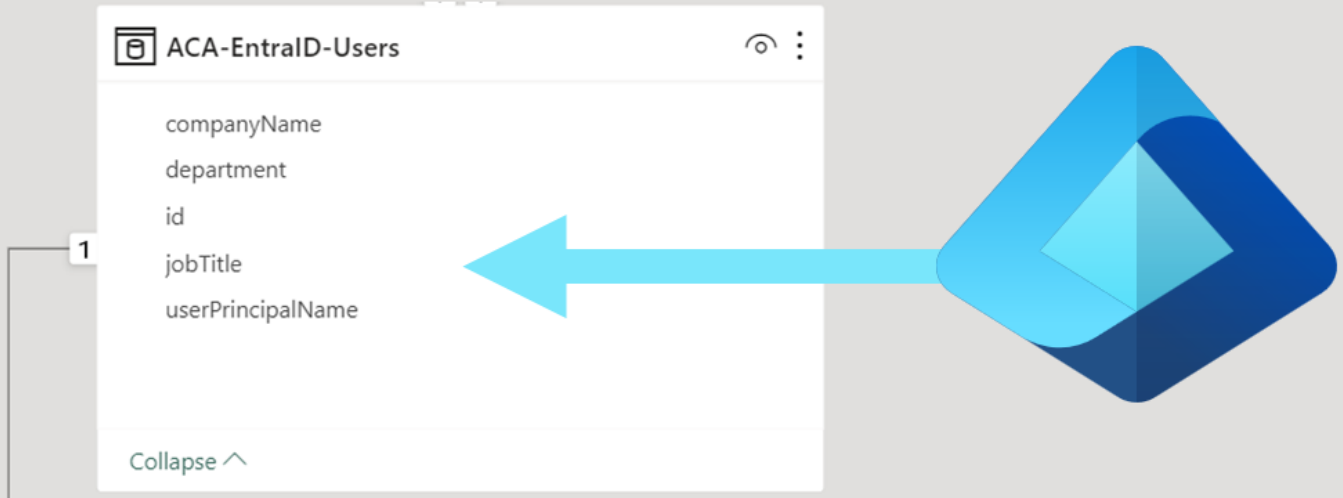
Grab a report of Entra ID member users



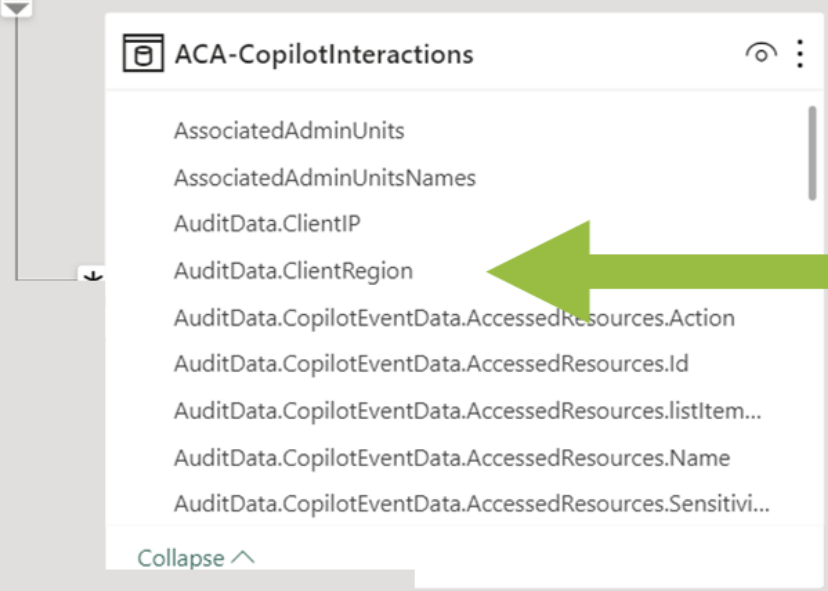
userPrincipalName	id	jobTitle	department	
adele.vance@galacticvoyages.com	0215a438-1da2-4b88-9d65-95a108b65d25	Cargo Handler	Cargo Management	Ga
alex.wilber@galacticvoyages.com	026cfe76-e8c0-4a41-b3ce-3596c7986a50	Cargo Handler	Cargo Management	Ga ight
allan.deyoung@galacticvoyages.com	04a18dad-5fc4-45d7-b67a-2ca2c57eeb6c	Cargo Handler	Cargo Management	Freight
amanda.brady@galacticvoyages.com	04fa3cdc-5122-42af-942e-bc0c81a46e51	Cargo Handler	Cargo Management	tic Vo s Freight
amir.rahimi@galacticvoyages.com	055ce9db-9738-403d-b13a-535946736f4c	Space Freight Coordinator	Cargo Management	Galactic Voyages Freight
ana.trujillo@galacticvoyages.com	057be55a-1e9b-4016-9e56-6cafc3819a49	Space Freight Coordinator	Cargo Management	Galactic Voyages Freight
andy.fitzgerald@galacticvoyages.com	0630b2dd-86b7-4ef6-8af4-d19402a99deb	Space Freight Coordinator	Cargo Management	Galactic Voyages Freight
arvind.kumar@galacticvoyages.com	068baa65-0d1b-4953-a0f3-3397c2c8cb20	Space Freight Coordinator	Cargo Management	Galactic Voyages Freight
ashley.martin@galacticvoyages.com	06f8050c-9c19-4224-8132-4946cdd54bc1	Cargo Operations Assistant	Cargo Management	Galactic Voyages Freight
ben.walters@galacticvoyages.com	0714a63e-d7b1-4805-af81-ecdd8390897b	Cargo Operations Assistant	Cargo Management	Galactic Voyages Freight
beth.melton@galacticvoyages.com	0aaa3ea9-579b-44e8-8060-f25368be16dc	Cargo Handler	Cargo Management	Galactic Voyages Freight
carlos.slattery@galacticvoyages.com	0b3ba966-080e-4052-8ec6-ea535695ed2b	Cargo Handler	Cargo Management	Galactic Voyages Freight
cecil.folk@galacticvoyages.com	0d1d39bd-7e64-49de-a597-d84435eb25e7	Interstellar Load Specialist	Cargo Management	Galactic Voyages Freight
christie.kline@galacticvoyages.com	0d964c8e-6870-4d12-b5f6-c876133937d9	Interstellar Load Specialist	Cargo Management	Galactic Voyages Freight
claudia.lu@galacticvoyages.com	0d9b51f5-03ec-4509-809d-c421f6310dce	Space Route Planner	Route Planning	Galactic Voyages Freight
colin.b@galacticvoyages.com	0dafa86b-abff-4eb7-b0fe-762353268f65	Space Route Planner	Route Planning	Galactic Voyages Freight
ticvoyages.com	0f8e3eb0-73fb-4ae9-a8db-c4eaadf445aa	Space Route Planner	Route Planning	Galactic Voyages Freight
ticvoyages.com	0fe9d756-b119-4301-871c-654353a1a172	Space Route Planner	Route Planning	Galactic Voyages Freight
yages.com	10672165-5bb8-4c76-9a26-4fc48d4d143b	Galactic Navigation Assistant	Route Planning	Galactic Voyages Freight
ges.com	11c00080-b15e-427e-b0be-188ae5a7498b	Orbital Path Coordinator	Route Planning	Galactic Voyages Freight
ages.com	129d3836-fc41-4dbf-82ff-825479dc6048	Spaceway Scheduler	Route Planning	Galactic Voyages Freight
ges.com	12a05ed1-bc83-445a-a296-8a6b3cbc60b7	Spaceway Scheduler	Route Planning	Galactic Voyages Freight
es.com	14b170a0-b14b-4672-92e2-1f9430d54925	Spaceway Scheduler	Route Planning	Galactic Voyages Freight
yages.com	16456818-405c-4f9d-84d1-db5d9bec1113	Spacecraft Technician	Fleet Maintenance	Galactic Voyages Freight
ticvoyages.com	16b261c7-a6d0-4a5c-9686-8638562fb3b3	Spacecraft Technician	Fleet Maintenance	Galactic Voyages Freight

Bring the ingredients together!

Add the ingredients to the stew in Power BI Desktop

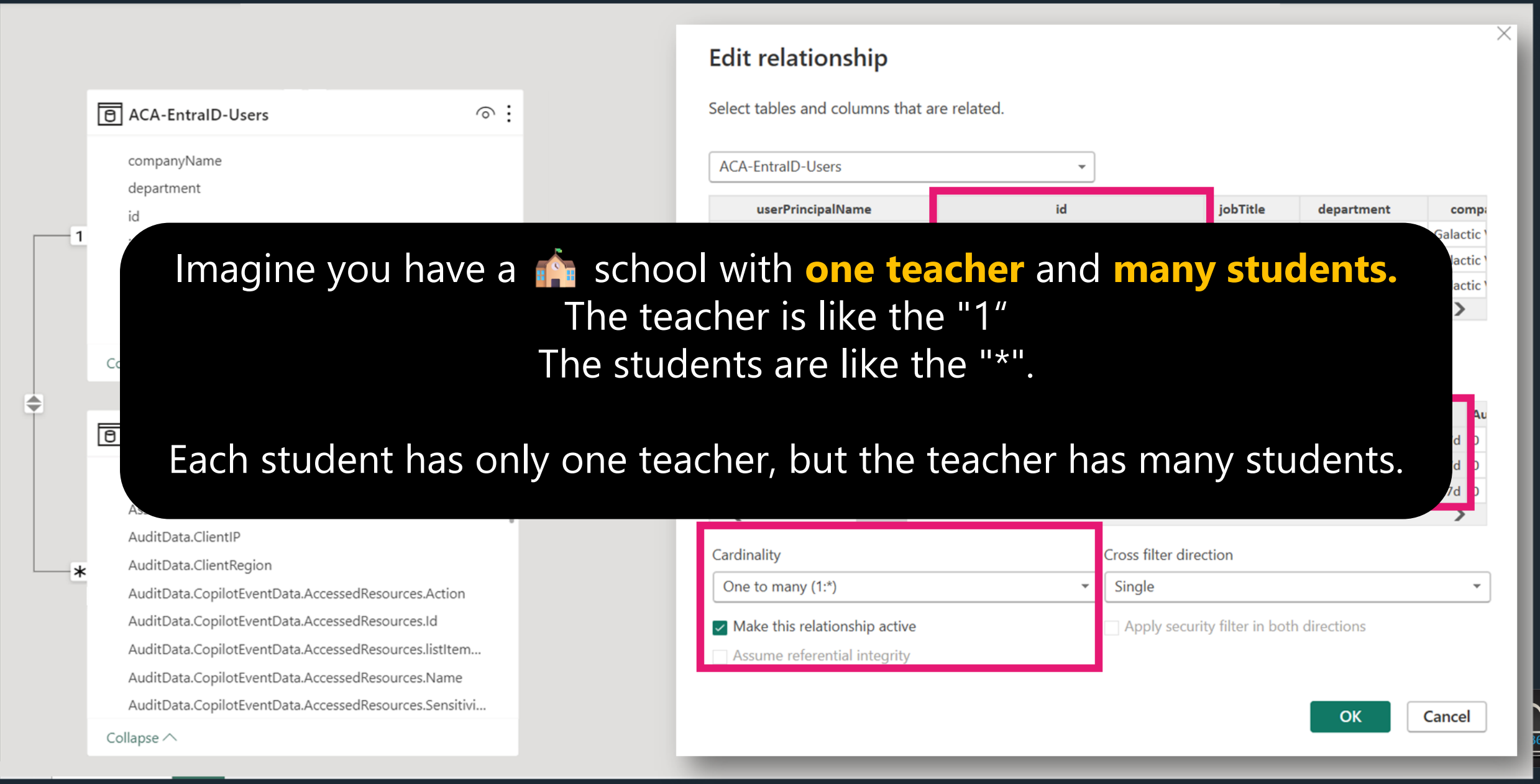


Entra ID users



M365 Copilot events

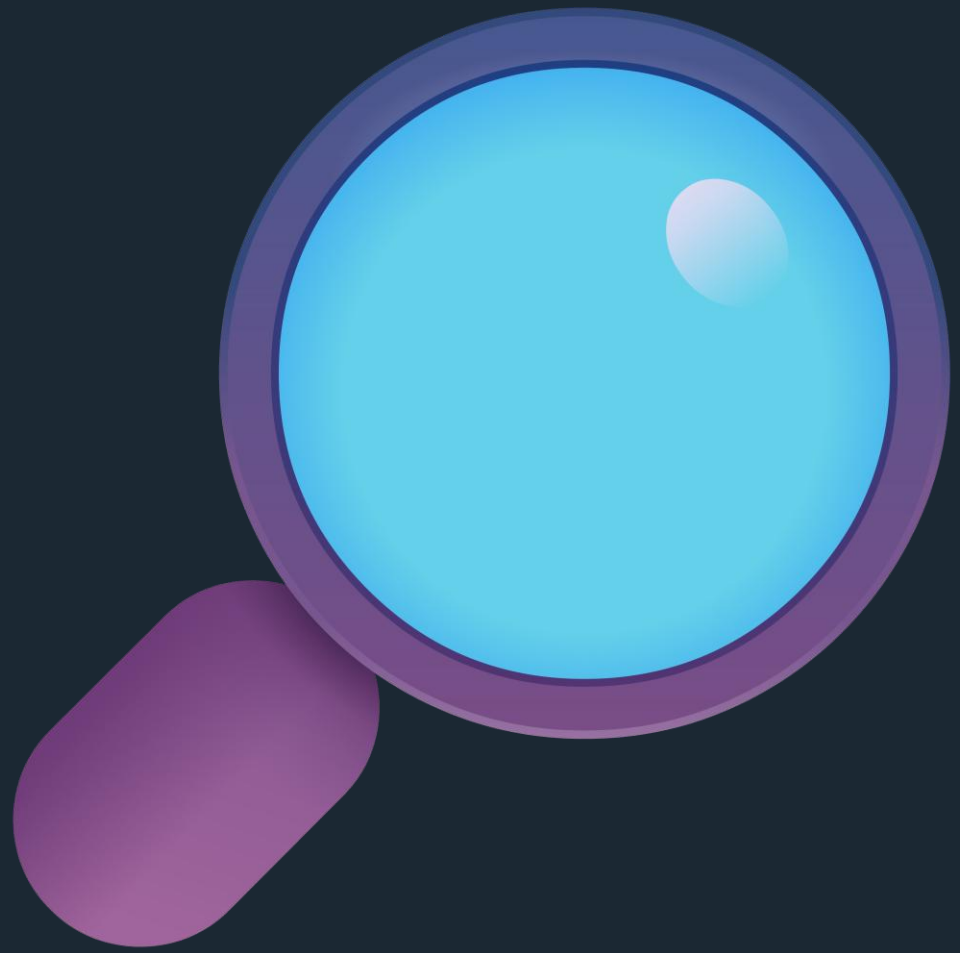
Create 1:* relationship between tables



Imagine you have a 🏫 school with **one teacher** and **many students.**
The teacher is like the "1"
The students are like the "*".

Each student has only one teacher, but the teacher has many students.

Analyze & take action



Copilot adopter: Galactic Voyages

Copilot adopter: Galactic Voyages

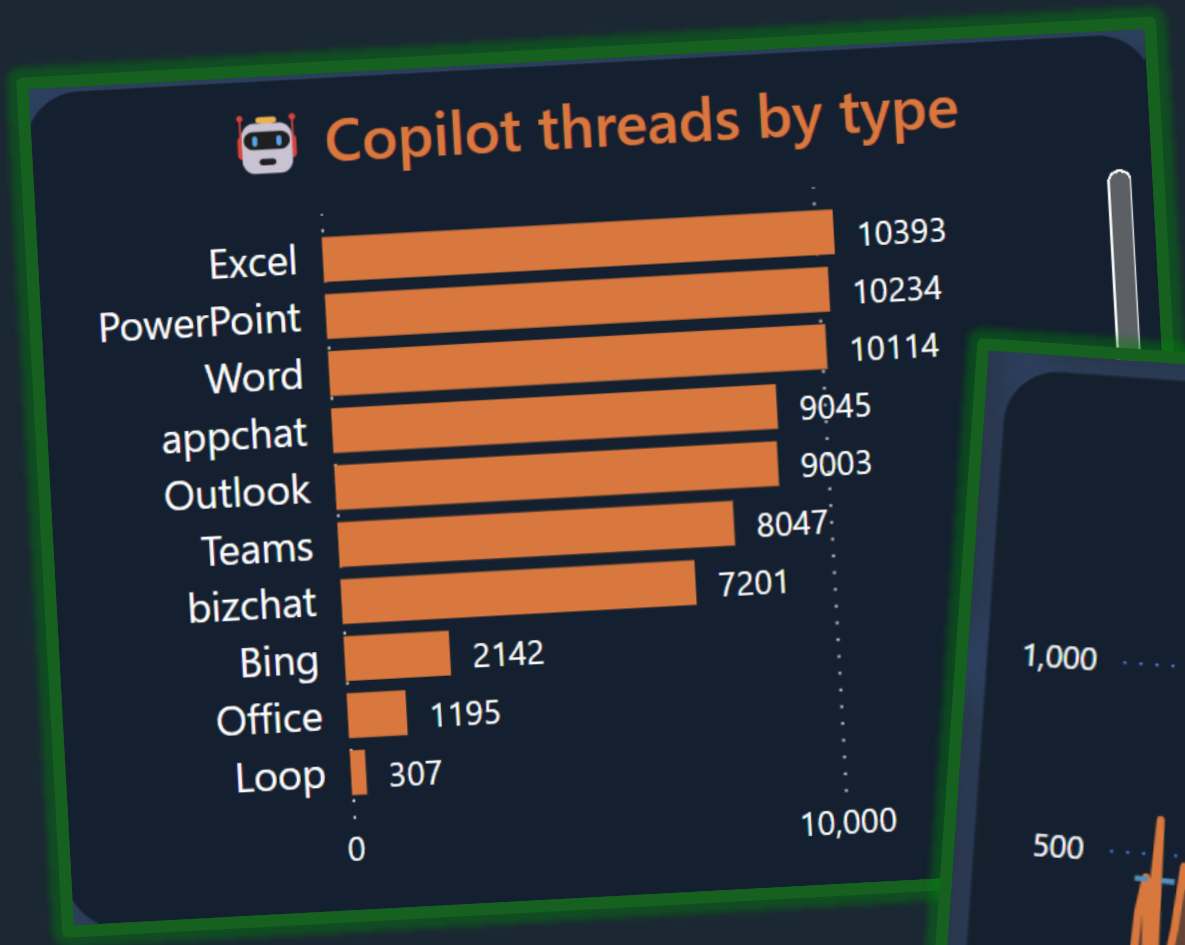
~360 employees

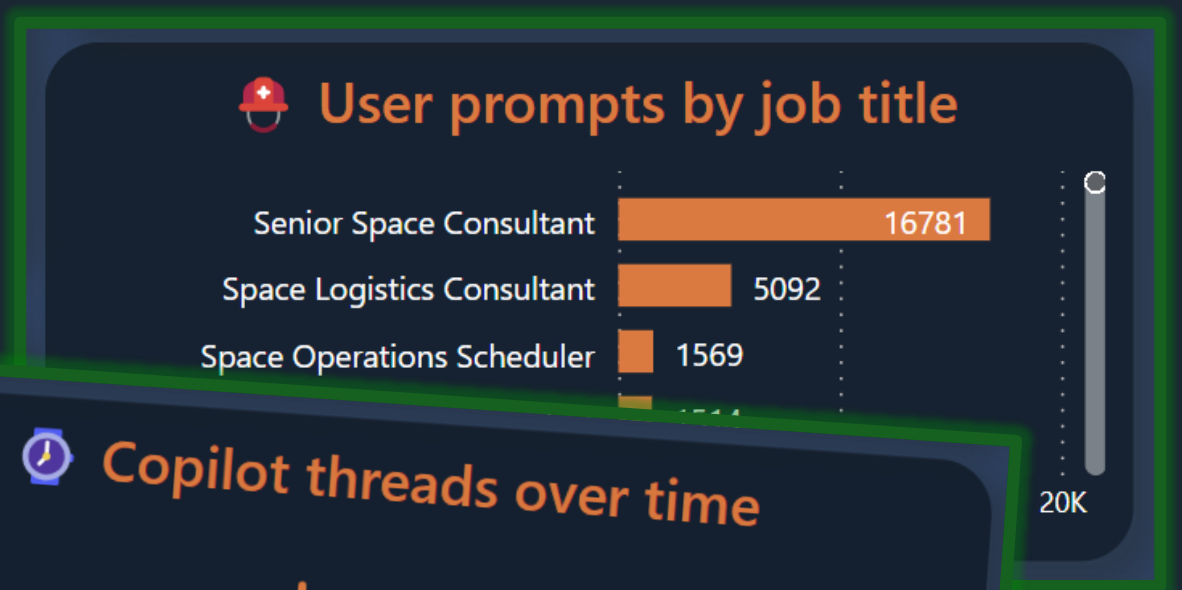
100% M365 Copilot licensed
since **January 2024**

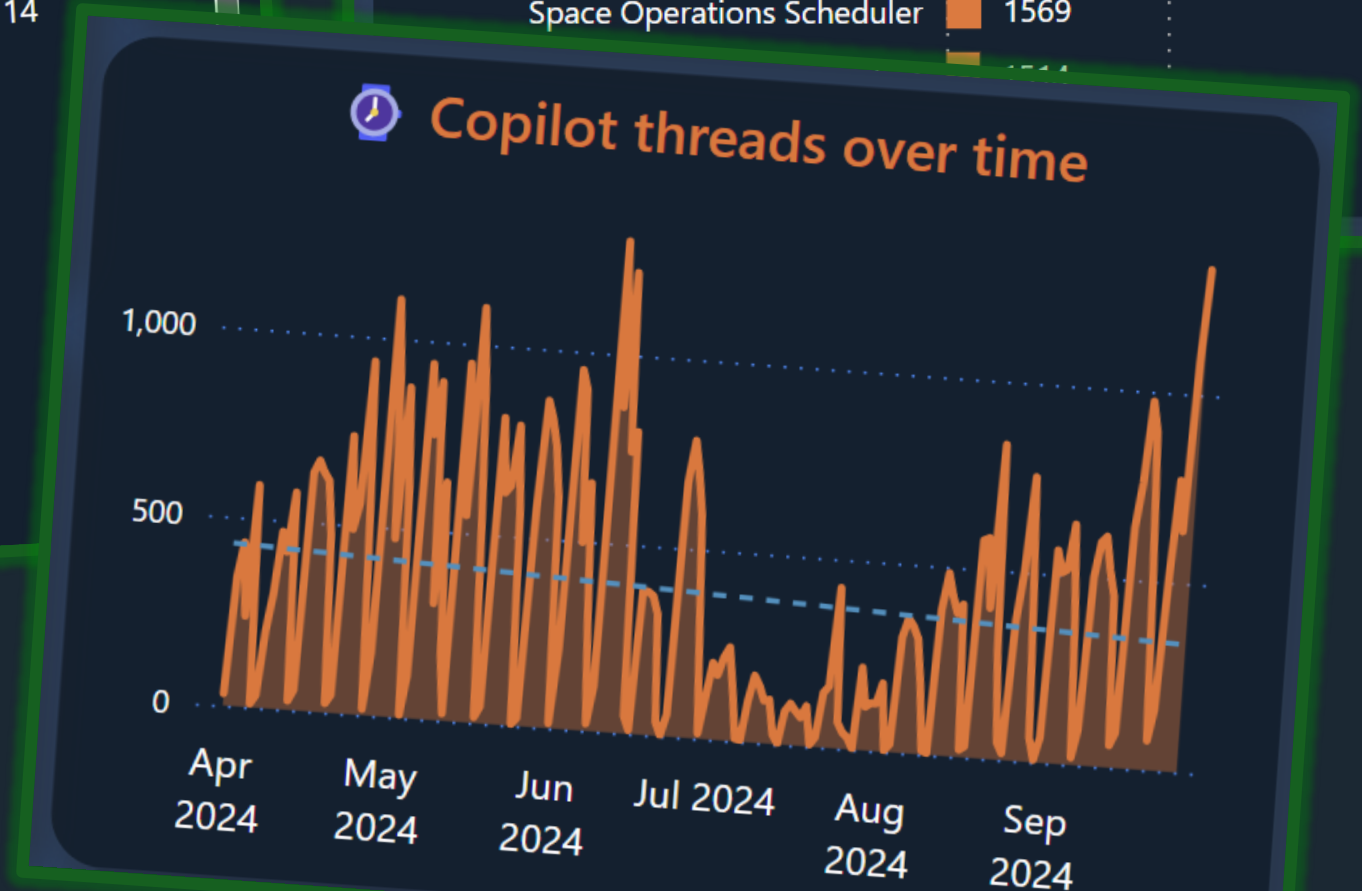
Handles interstellar shipping,
logistics and luxury travel

Power BI!

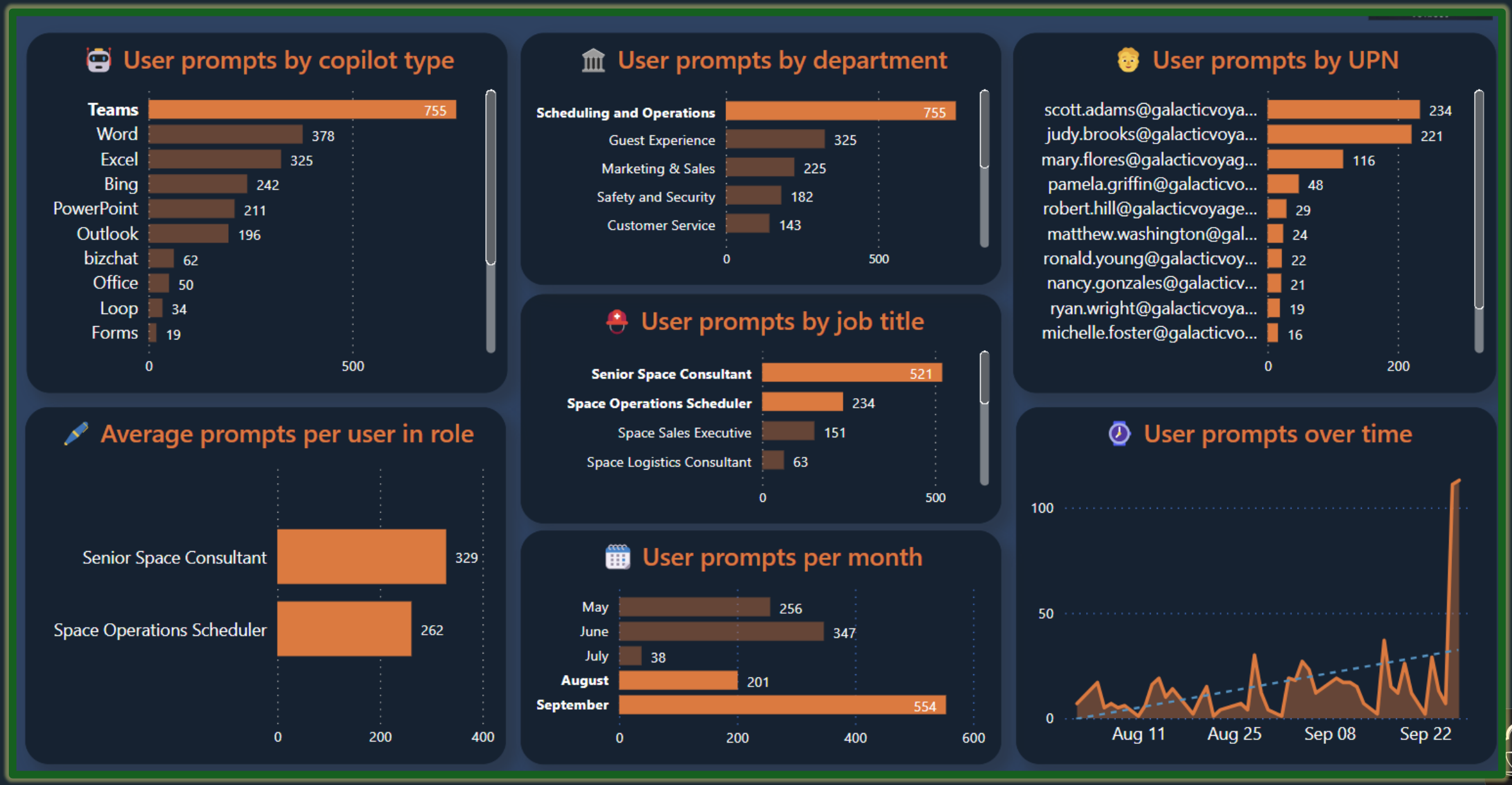
Build some tasty visuals..







..and cross-filter!



Add some custom tables for unique insights

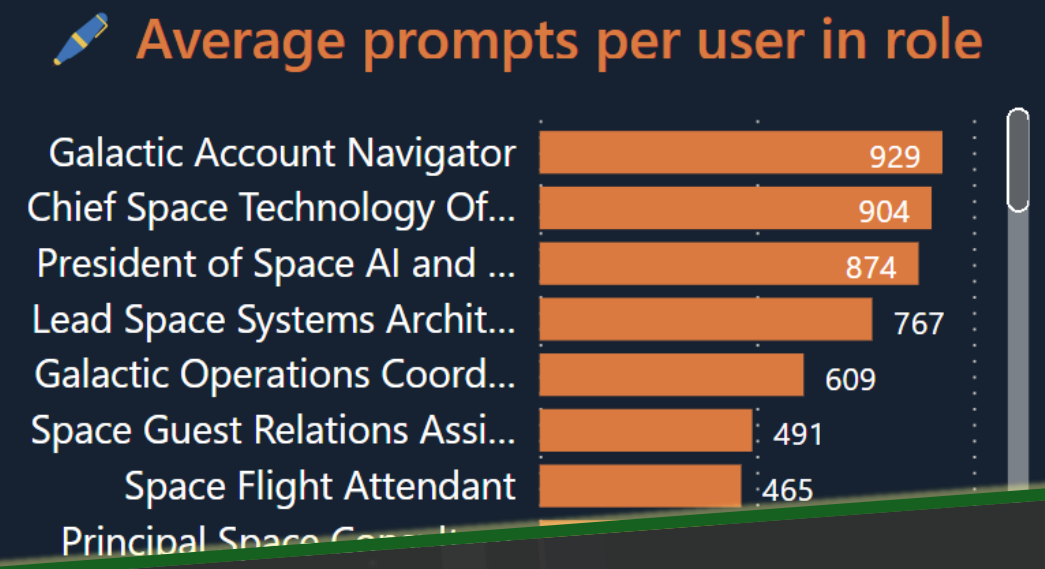
```
1  AveragePromptsPerUser =
2  VAR CurrentJobTitle = 'ACA-UserPromptsPerJobTitle'[jobTitle]
3  RETURN
4      MEDIANX(
5          FILTER(
6              'ACA-UserPromptsPerJobTitle',
7              'ACA-UserPromptsPerJobTitle'[jobTitle] = CurrentJobTitle
8          ),
9          'ACA-UserPromptsPerJobTitle'[TotalUserPrompts] /
   'ACA-UserPromptsPerJobTitle'[UniqueUsers]
```

Collapse

ACA-UserPromptsPerJobTitle

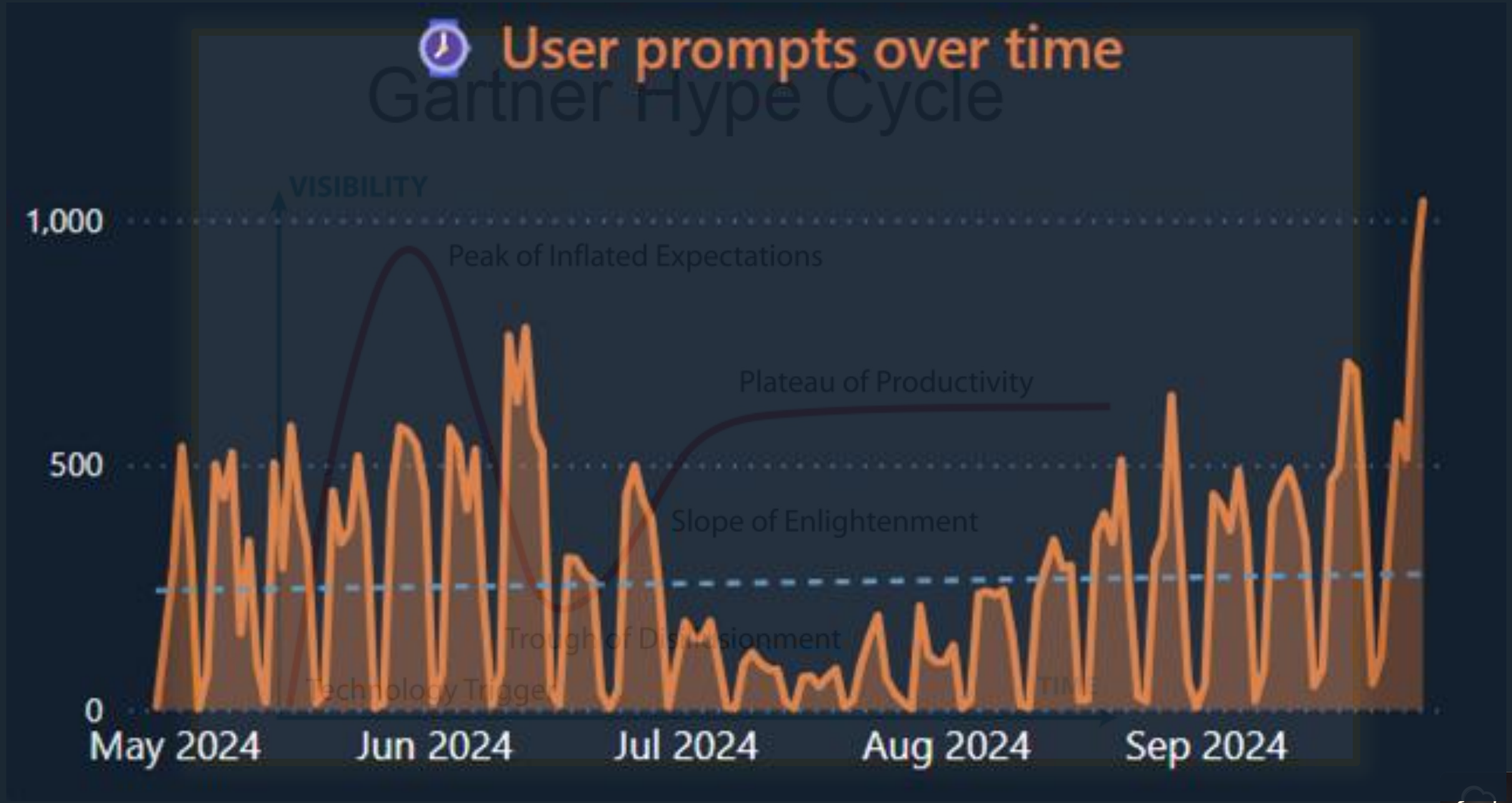
- AveragePromptsPerUser
- jobTitle
- TotalUserPrompts
- UniqueUsers

Collapse

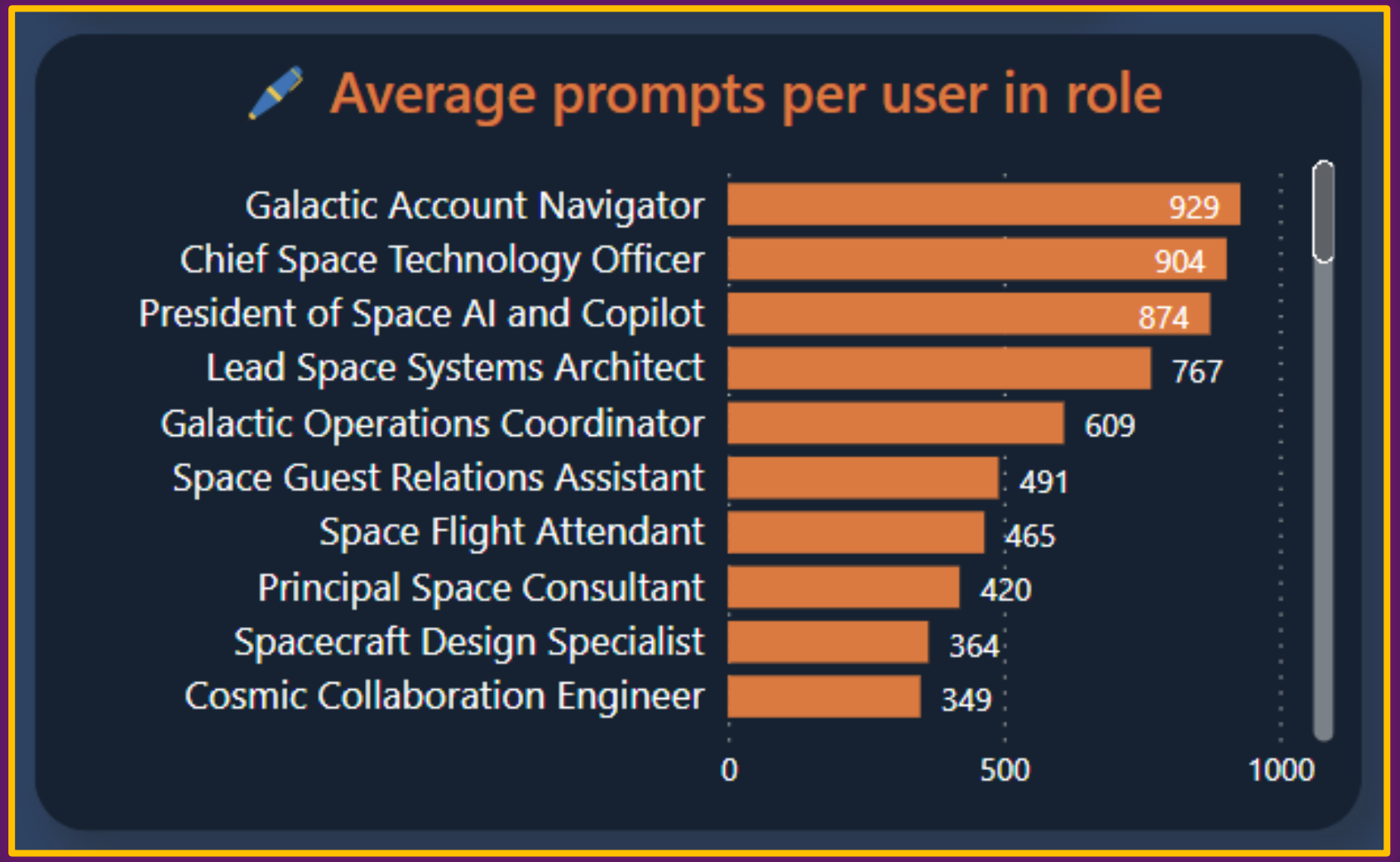


jobTitle	Senior Space Consultant
Sum of AveragePromptsPerUser	329
Sum of UniqueUsers	51
Total	329

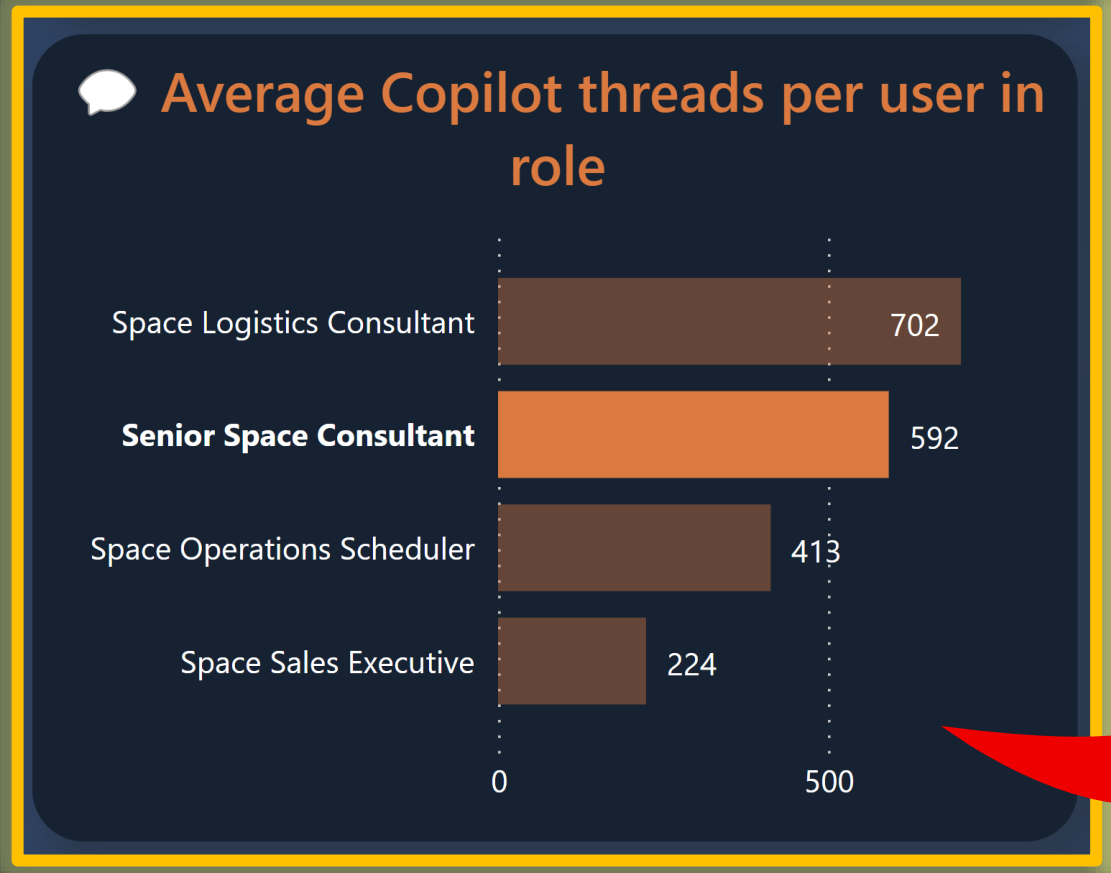
Disclaimer: I'm a Power BI newbie - you can optimize the DAX queries far better for scale!

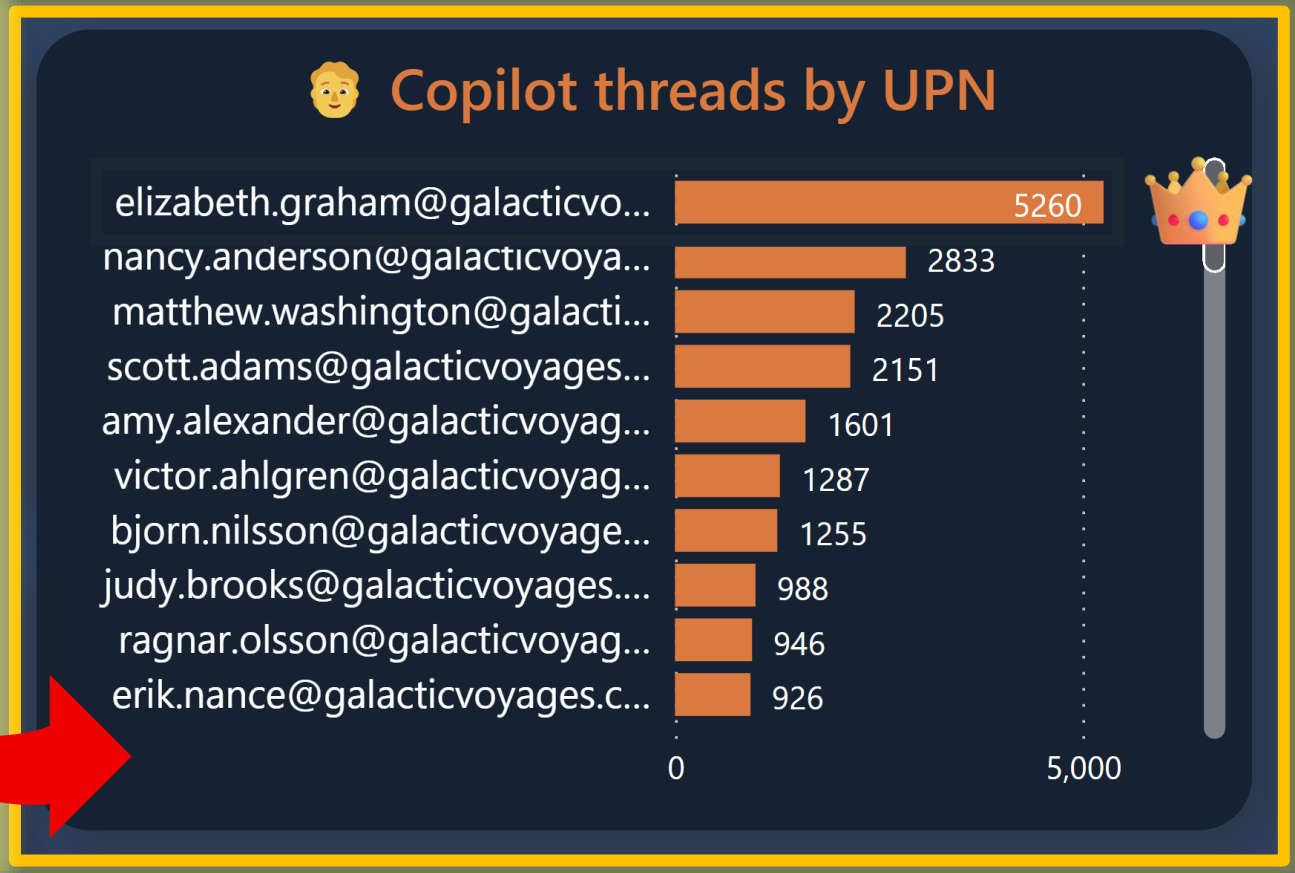

User prompts over time
Gartner Hype Cycle
VISIBILITY
1,000
500
0
Peak of Inflated Expectations
Plateau of Productivity
Slope of Enlightenment
Trough of Disillusionment
Technology Trigger
TIME
May 2024
Jun 2024
Jul 2024
Aug 2024
Sep 2024

Identify roles with high *average* usage..



..and then discover the pioneers!

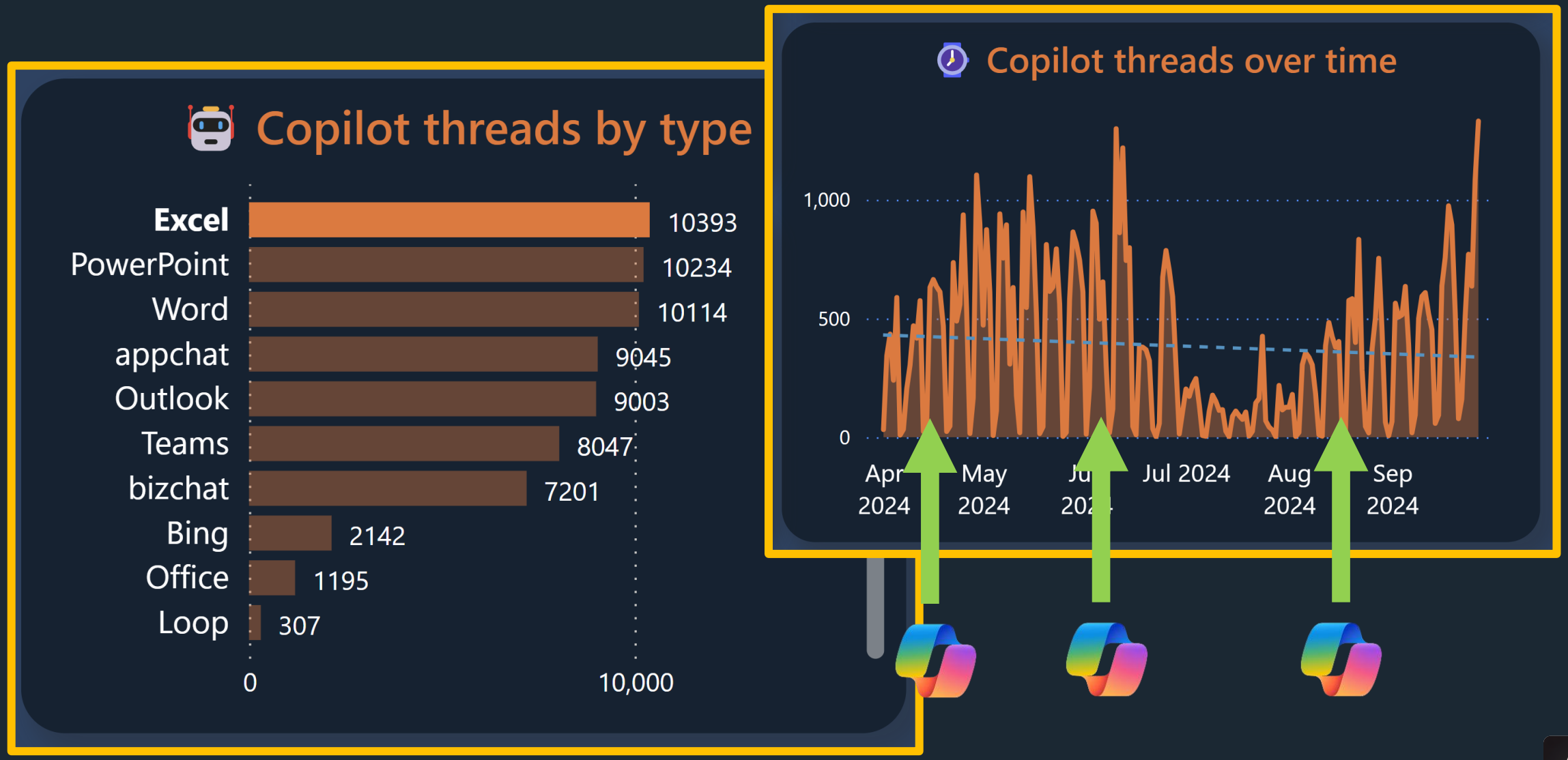




Discover the pioneers!

- There is usually a significant gap in Copilot use between..
  - The **top 3-5** individuals
  - The bottom **~30-40%** of users within any given job / role
- Recruit top users within roles for your adoption efforts
- Have pioneers share their use cases and methods with others

Monitor the impact of trainings



For E5: Configure audit retention policy

Record Type

CopilotInteraction

Activities

Interacted with Copilot

If no activities are selected, then this policy will apply to all activities for the selected record types.

Duration *

Choose how long to retain logs that match this policy's conditions before they're automatically deleted. Learn more about licensing

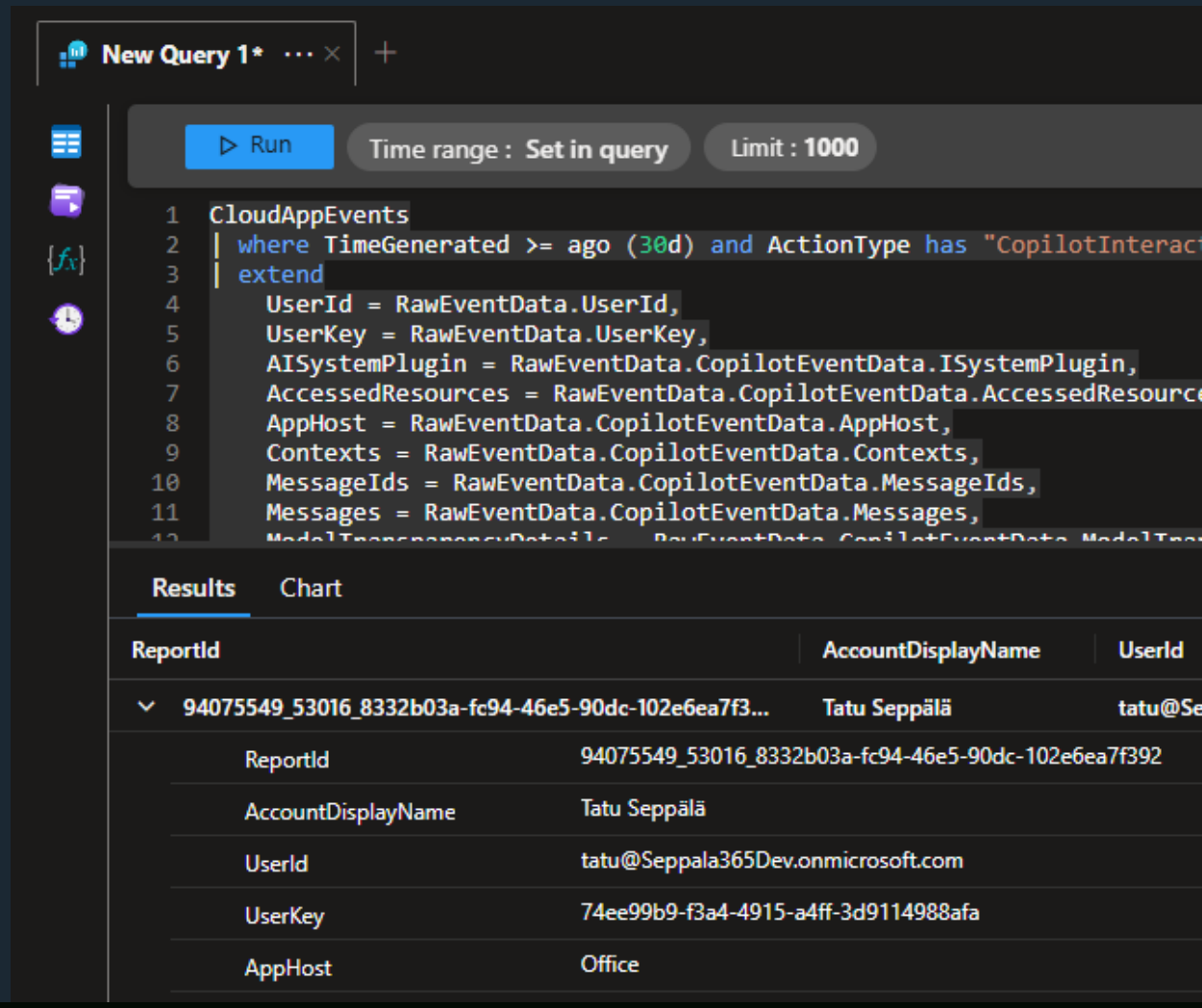
1 Year

Automate fetching CopilotInteraction events

Directly from Sentinel's Log Analytics workspace

Prerequisites:

- E5/E5 Security or similar licensing
- Defender for Cloud Apps (MDA) deployed & connected to M365 Unified Audit Log
- Defender XDR connector ingesting events from MDA to CloudAppEvents

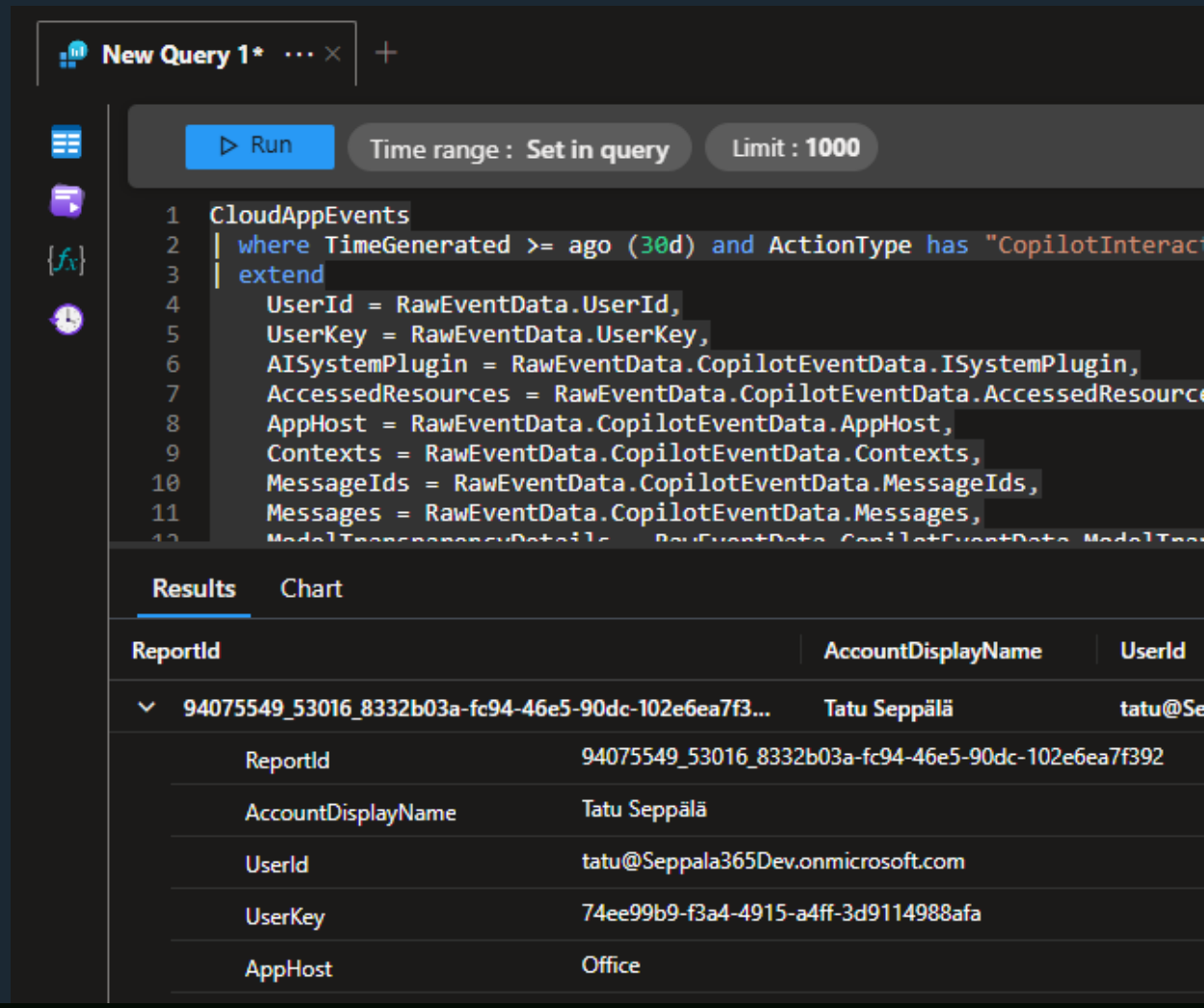


✨ **Recommended method** ✨

Directly from Sentinel's Log Analytics workspace

Benefits:

- ✓Fetch up to 500,000 **CopilotInteraction** events programmatically to Power BI
- ✓Only fetch the attributes you need
- ✓Granular summarization also supported
- ✓Setting up the prerequisites is a win for your security team too!

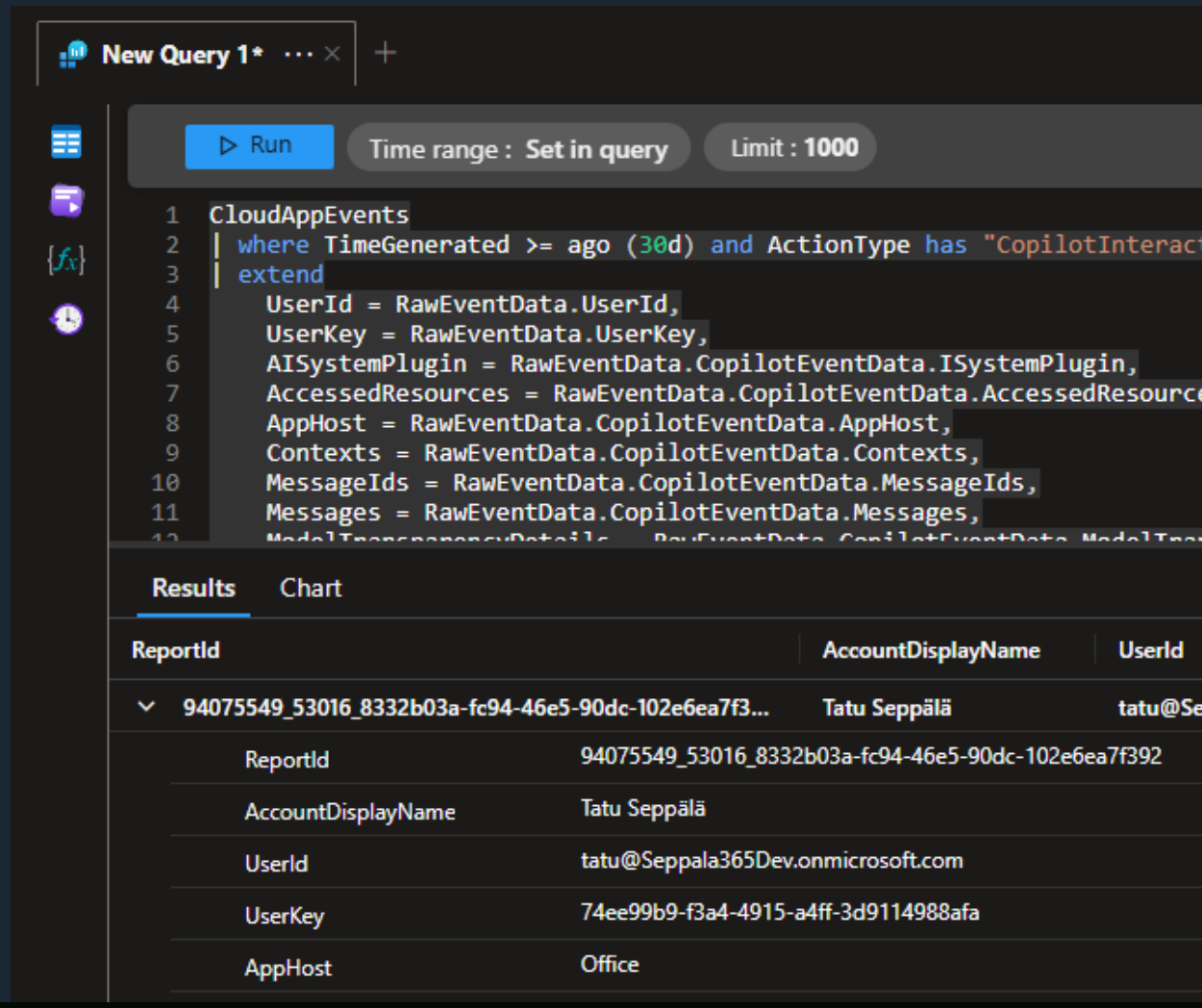


✨ **Recommended method** ✨

Directly from Sentinel's Log Analytics workspace

Limitations:

- More than 500,000 record queries not supported by API
- Queries running for >10 minutes not supported by API



✨ **Recommended method** ✨

Connected apps
App Connectors
Conditional Access App Control apps
Information Protection
Admin quarantine
Microsoft Information Protection
Files
Conditional Access App Control
General Settings
User monitoring
Device identification
App onboarding/maintenance

App Connectors

App connectors provide you with greater visibility and control over your cloud apps.

Filters:

Advanced filters

App: **Select apps** | App category: **Select category** | Connected by: **Select users**

Connect an app | Hide filters | Table settings

App	Status	Was co...	Last ac...	Acc...
Microsoft 365 Collaboration	...	Nov 4, 2024...	Dec 2, 2024...	342
Microsoft Azure Cloud computing platform	...	Jun 14, 202...	Dec 2, 2024...	8

- **Select Microsoft 365 components**
- Great, Microsoft 365 is connected

Select Microsoft 365 components

Connect as Microsoft 365 administrator to gain full visibility and control.

To connect this app, provide your access credentials. We secure your data as described in the privacy statement | Terms

- [x] Microsoft Entra Users and groups
- [x] Microsoft Entra ID Management events
- [x] Microsoft Entra ID Sign-in events
- [x] Microsoft Entra ID Apps
- [x] Microsoft 365 activities
- [x] Microsoft 365 files

Enable file monitoring before enabling Office 365 files.

Connect Microsoft 365

Cancel

Microsoft Sentinel | Content hub

Selected workspace: 'la-seppala365dev'

Search

- General
- Threat management
- Content management
  - Content hub
  - Repositories (Preview)
  - Community
- Configuration

Refresh | Install/Update | Delete | SIEM Migration | Guides & Feedback

368 Solutions | **307** Standalone contents | **14** Installed | **7** Updates

Defender XDR

Status : All | Content type : All | Support : All | Provider : All | Category : All | Content source

Content title	Status	Content sour
Log4j Vulnerability Det... FEATURED	Not installed	Solution
Microsoft Defender XDR FEATURED	Installed, Updates	Solution
Business Email Compromise - Financ...	Not installed	Solution
Endpoint Threat Protection Essentials	Not installed	Solution
Legacy IOC based Threat Protection	Not installed	Solution

Microsoft Defender XDR

Microsoft Provider | Microsoft Support | 3.0.8 Version

Description

Note: Please refer to the following before installing the solution:

• Review the solution Release Notes

The Microsoft Defender XDR solution for Microsoft Sentinel enables you to ingest Security Alerts/Incidents and raw logs from the products within Microsoft Defender XDR suite into Microsoft Sentinel.

Additional Hunting Queries to support proactive and reactive hunting for the Microsoft Defender XDR solution can be found

Microsoft Defender XDR

Microsoft Defender XDR

Connected	Microsoft	49 minutes ago
Status	Provider	Last Log Received

Description
Microsoft Defender XDR is a unified, natively integrated, pre- and post-breach enterprise defense suite that protects endpoint, identity, email, and applications and helps you detect, prevent, investigate, and automatically respond to sophisticated threats.

Microsoft Defender XDR suite includes:

- Microsoft Defender for Endpoint
- Microsoft Defender for Identity
- Microsoft Defender for Office 365
- Microsoft Defender for Cloud Apps
- Microsoft Defender Alerts
- Microsoft Defender Vulnerability Management
- Microsoft Purview Data Loss Prevention
- Microsoft Entra ID Protection

When turning on Incidents synchronization **Microsoft Defender for Cloud** Incidents are automatically synced to Sentinel at a tenant level. To match all alerts that may appear in incidents, turn

Note: Office 365 data does not necessarily reside in the region where your Microsoft Sentinel workspace is located. Office 365 data may therefore cross regional boundaries when being ingested to Sentinel.

Instructions

Microsoft Defender for Cloud Apps (1/1 connected)

Name	Description
CloudAppEvents	Events involving accounts and objects in Office...

Microsoft Defender for Identity (0/3 connected)

la-seppala365dev | Logs

Log Analytics workspace

New Query 1* ··· ×

Save Share ··· Queries hub

Run | Time range : Set in query | Limit : 1000 | KQL mode

```
CloudAppEvents
| where TimeGenerated >= ago (30d) and ActionType has "CopilotInteraction"
| extend
    UserId = RawEventData.UserId,
    UserKey = RawEventData.UserKey,
    AISystemPlugin = RawEventData.CopilotEventData.ISystemPlugin,
    AccessedResources = RawEventData.CopilotEventData.AccessedResources,
    AppHost = RawEventData.CopilotEventData.AppHost,
    Contexts = RawEventData.CopilotEventData.Contexts,
    MessageIds = RawEventData.CopilotEventData.MessageIds,
    Messages = RawEventData.CopilotEventData.Messages,
    ModelTransparencyDetails = RawEventData.CopilotEventData.ModelTransparencyDetails,
    ThreadId = RawEventData.CopilotEventData.ThreadId,
    CopilotLogVersion = RawEventData.CopilotLogVersion
| project
    ReportId,
    AccountDisplayName,
    UserId,
    UserKey,
    AppHost,
    AccessedResources,

    Contexts,
    ThreadId,
    MessageIds,
    Messages,
    AISystemPlugin,
    ModelTransparencyDetails,
    Application,
    ApplicationId,
    CopilotLogVersion
```

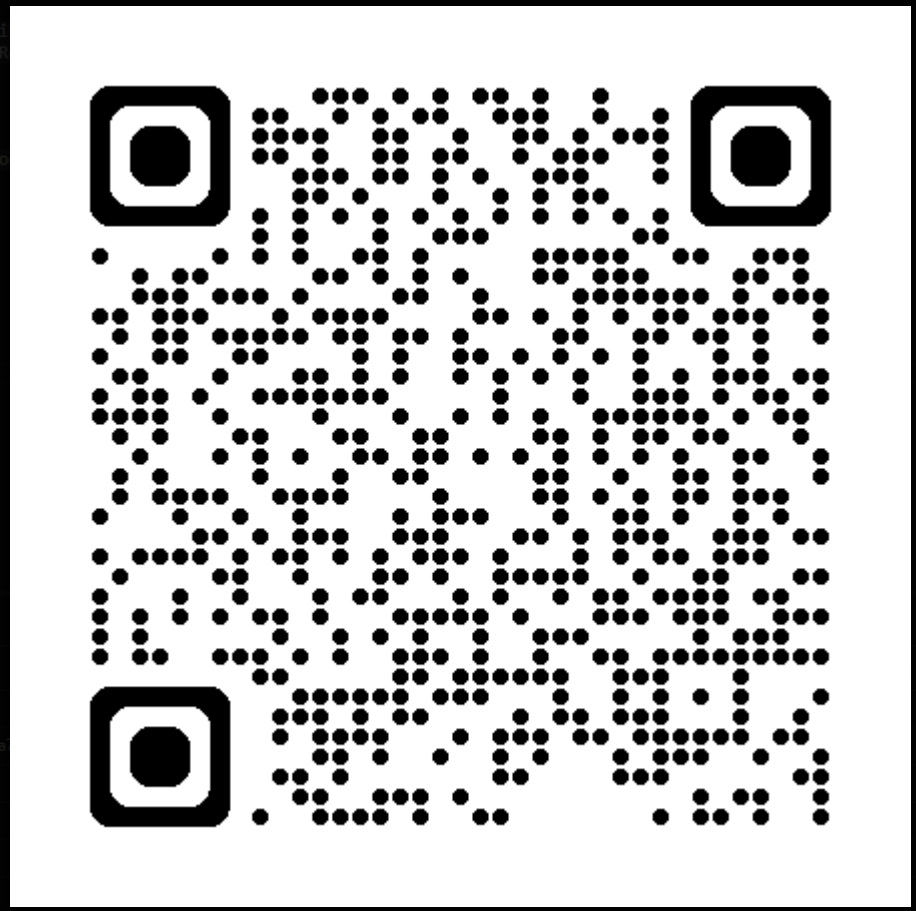
Results | Chart

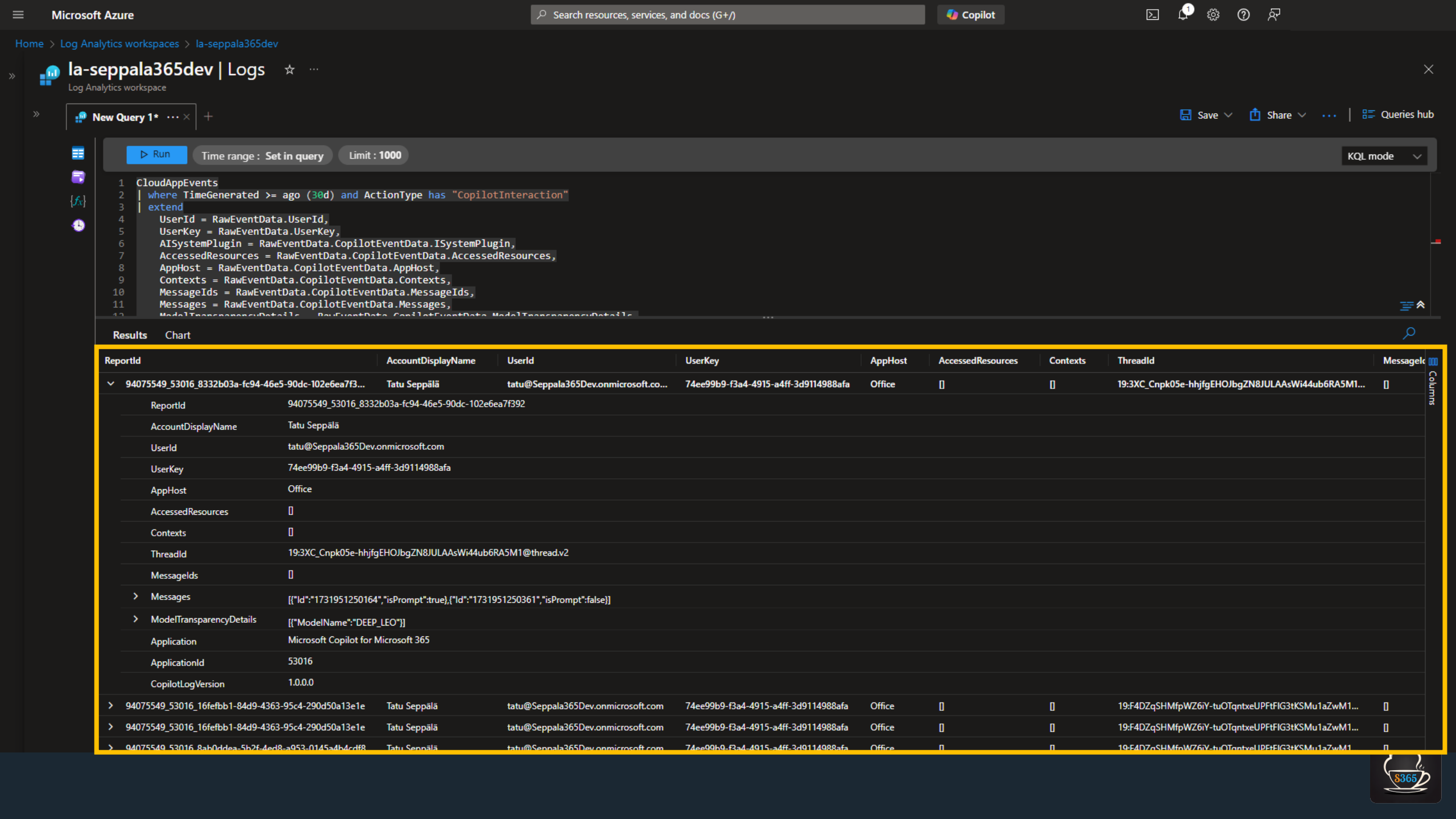
ReportId	AccountDisplayName	UserId	UserKey	AppHost	AccessedResources	Contexts	ThreadId	MessageId
94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f3...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.co...	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi44ub6RA5M1...	[]

ReportId	94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f392
AccountDisplayName	Tatu Seppälä
UserId	tatu@Seppala365Dev.onmicrosoft.com
UserKey	74ee99b9-f3a4-4915-a4ff-3d9114988afa
AppHost	Office
AccessedResources	[]

Columns

Grab the query from GitHub! 👇




Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Log Analytics workspaces > la-seppala365dev
la-seppala365dev | Logs
Log Analytics workspace
New Query 1*
Save
Share
Queries hub
Run
Time range : Set in query
Limit : 1000
KQL mode
CloudAppEvents
| where TimeGenerated >= ago (30d) and ActionType has "CopilotInteraction"
| extend
UserId = RawEventData.UserId,
UserKey = RawEventData.UserKey,
AISystemPlugin = RawEventData.CopilotEventData.ISystemPlugin,
AccessedResources = RawEventData.CopilotEventData.AccessedResources,
AppHost = RawEventData.CopilotEventData.AppHost,
Contexts = RawEventData.CopilotEventData.Contexts,
MessageIds = RawEventData.CopilotEventData.MessageIds,
Messages = RawEventData.CopilotEventData.Messages,
Results
Chart
ReportId
AccountDisplayName
UserId
UserKey
AppHost
AccessedResources
Contexts
ThreadId
MessageId
Columns
94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f3...
Tatu Seppälä
tatu@Seppala365Dev.onmicrosoft.co...
74ee99b9-f3a4-4915-a4ff-3d9114988afa
Office
[]
[]
19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi44ub6RA5M1...
[]
ReportId 94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f392
AccountDisplayName Tatu Seppälä
UserId tatu@Seppala365Dev.onmicrosoft.com
UserKey 74ee99b9-f3a4-4915-a4ff-3d9114988afa
AppHost Office
AccessedResources []
Contexts []
ThreadId 19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi44ub6RA5M1@thread.v2
MessageIds []
Messages [{"Id":"1731951250164","isPrompt":true},{"Id":"1731951250361","isPrompt":false}]
ModelTransparencyDetails [{"ModelName":"DEEP_LEO"}]
Application Microsoft Copilot for Microsoft 365
ApplicationId 53016
CopilotLogVersion 1.0.0.0
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e
Tatu Seppälä
tatu@Seppala365Dev.onmicrosoft.com
74ee99b9-f3a4-4915-a4ff-3d9114988afa
Office
[]
[]
19:F4DZqSHMfpWZ6iY-tuOTqntxeUPFtFIG3tKSMu1aZwM1...
[]
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e
Tatu Seppälä
tatu@Seppala365Dev.onmicrosoft.com
74ee99b9-f3a4-4915-a4ff-3d9114988afa
Office
[]
[]
19:F4DZqSHMfpWZ6iY-tuOTqntxeUPFtFIG3tKSMu1aZwM1...
[]

la-seppala365dev | Logs

Log Analytics workspace

New Query 1*

Save | Share | ... | Queries hub

- Copy link to query
- Copy query text
- Copy results
- Export to CSV (all columns)
- Export to CSV (displayed columns)
- Export to Power BI (as an M query)
- Export to Power BI (new Dataset)
- Open in Excel

Run | Time range : Set in query | Limit : 1000

```
CloudAppEvents
| where TimeGenerated >= ago (30d) and ActionType has "CopilotInteraction"
| extend
    UserId = RawEventData.UserId,
    UserKey = RawEventData.UserKey,
    AISystemPlugin = RawEventData.CopilotEventData.ISystemPlugin,
    AccessedResources = RawEventData.CopilotEventData.AccessedResources,
    AppHost = RawEventData.CopilotEventData.AppHost,
    Contexts = RawEventData.CopilotEventData.Contexts,
    MessageIds = RawEventData.CopilotEventData.MessageIds,
    Messages = RawEventData.CopilotEventData.Messages,
```

Results | Chart

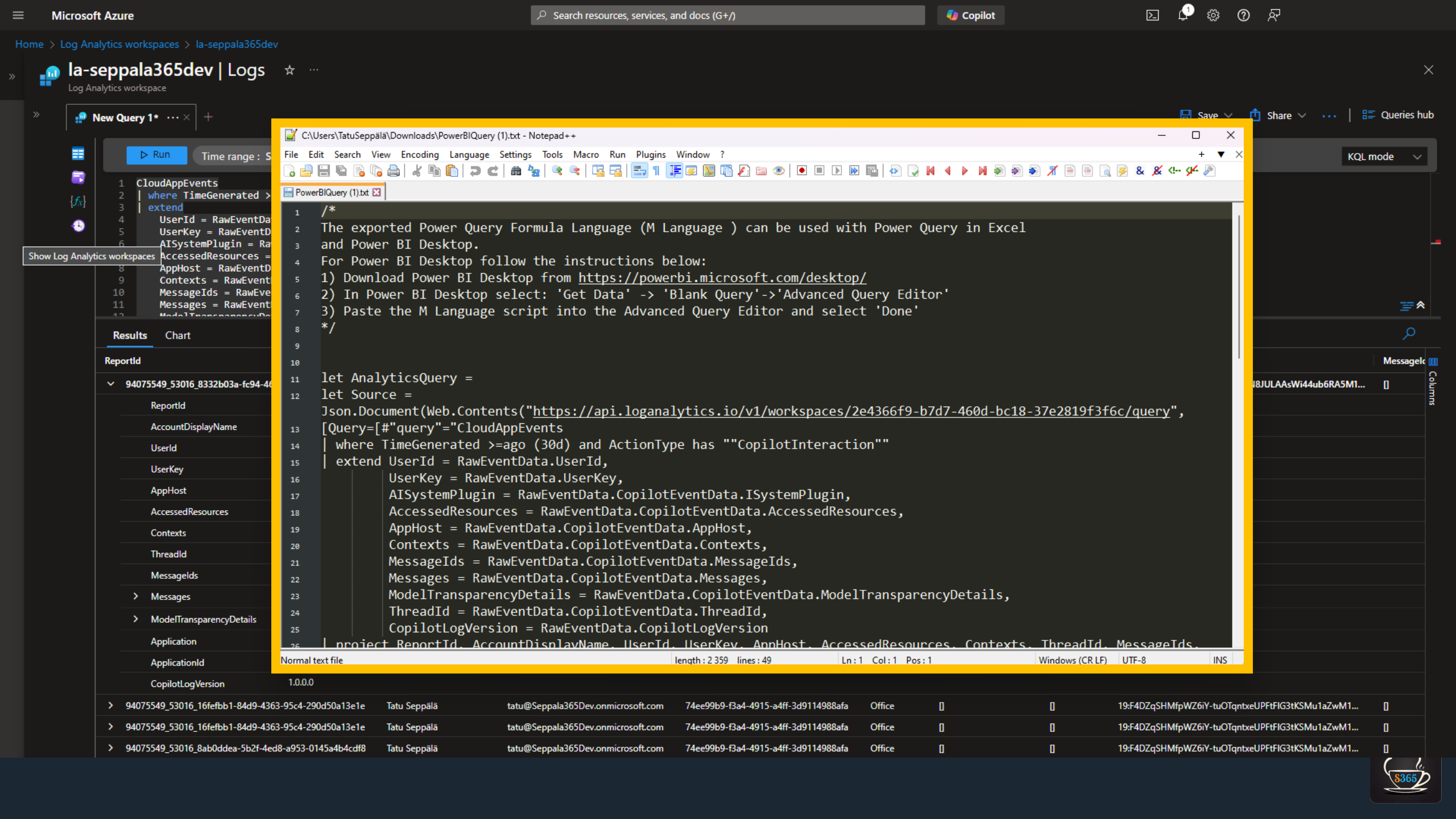
ReportId	AccountDisplayName	UserId	UserKey	AppHost	AccessedResources	Contexts	ThreadId	MessageIds
94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f3...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.co...	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi44ub6RA5M1...	[]

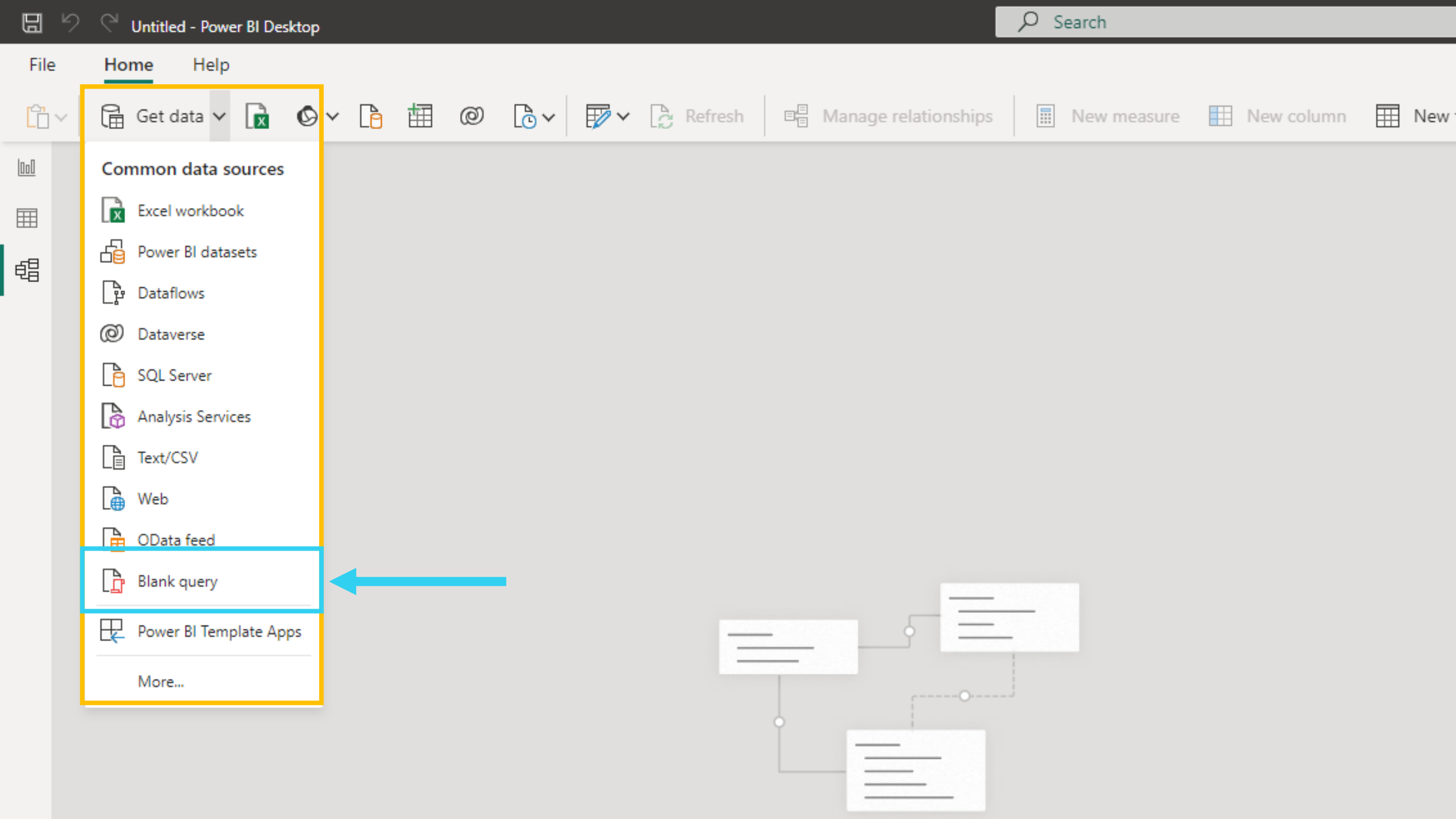
ReportId	94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f392
AccountDisplayName	Tatu Seppälä
UserId	tatu@Seppala365Dev.onmicrosoft.com
UserKey	74ee99b9-f3a4-4915-a4ff-3d9114988afa
AppHost	Office
AccessedResources	[]
Contexts	[]
ThreadId	19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi44ub6RA5M1@thread.v2
MessageIds	[]
Messages	[{"Id":"1731951250164","isPrompt":true},{"Id":"1731951250361","isPrompt":false}]
ModelTransparencyDetails	[{"ModelName":"DEEP_LEO"}]
Application	Microsoft Copilot for Microsoft 365
ApplicationId	53016
CopilotLogVersion	1.0.0.0

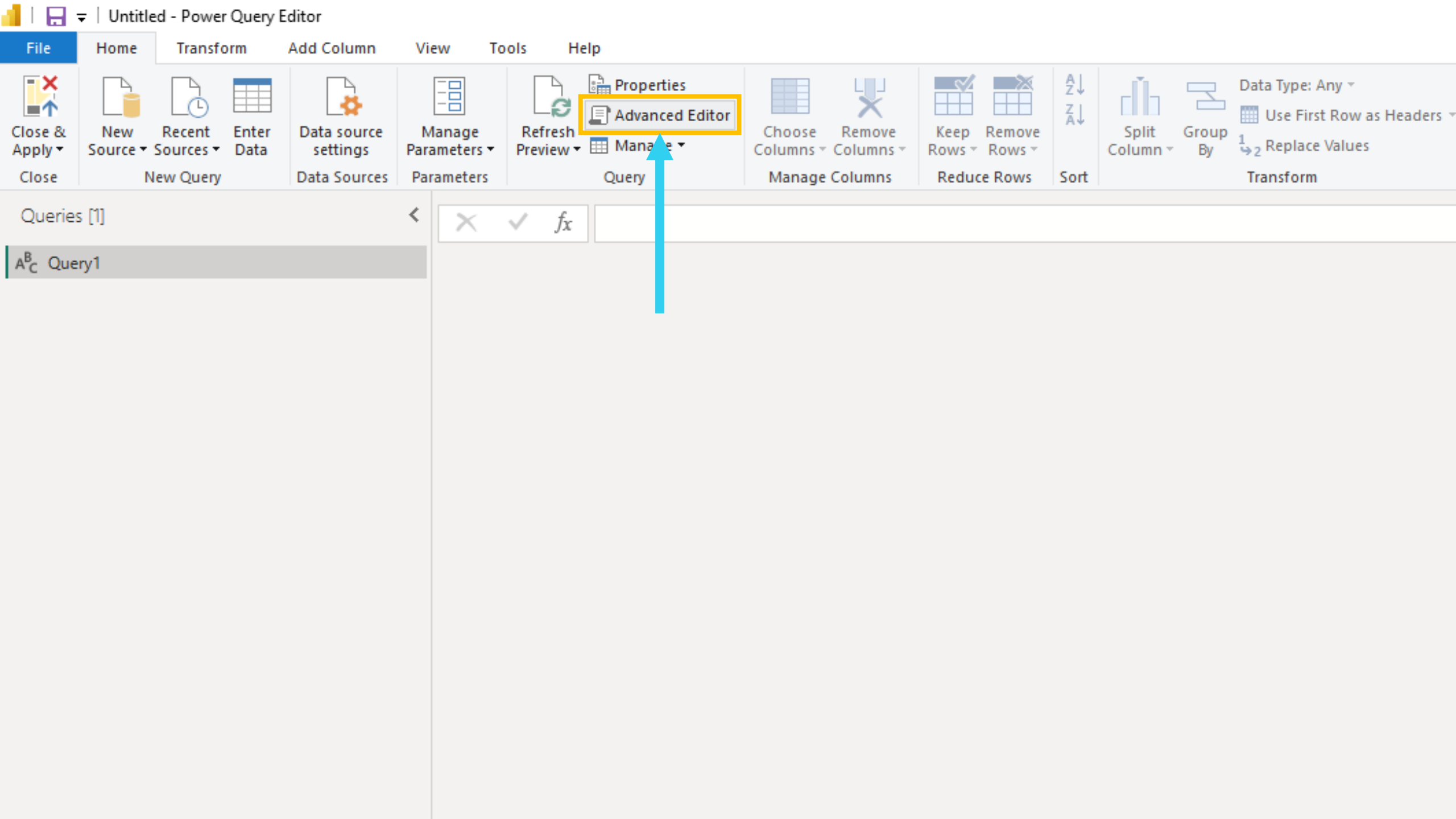
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSH...
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSH...
94075549_53016_8ab0ddea-5b2f-4ed8-a953-0145a4b4cdf8	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSH...

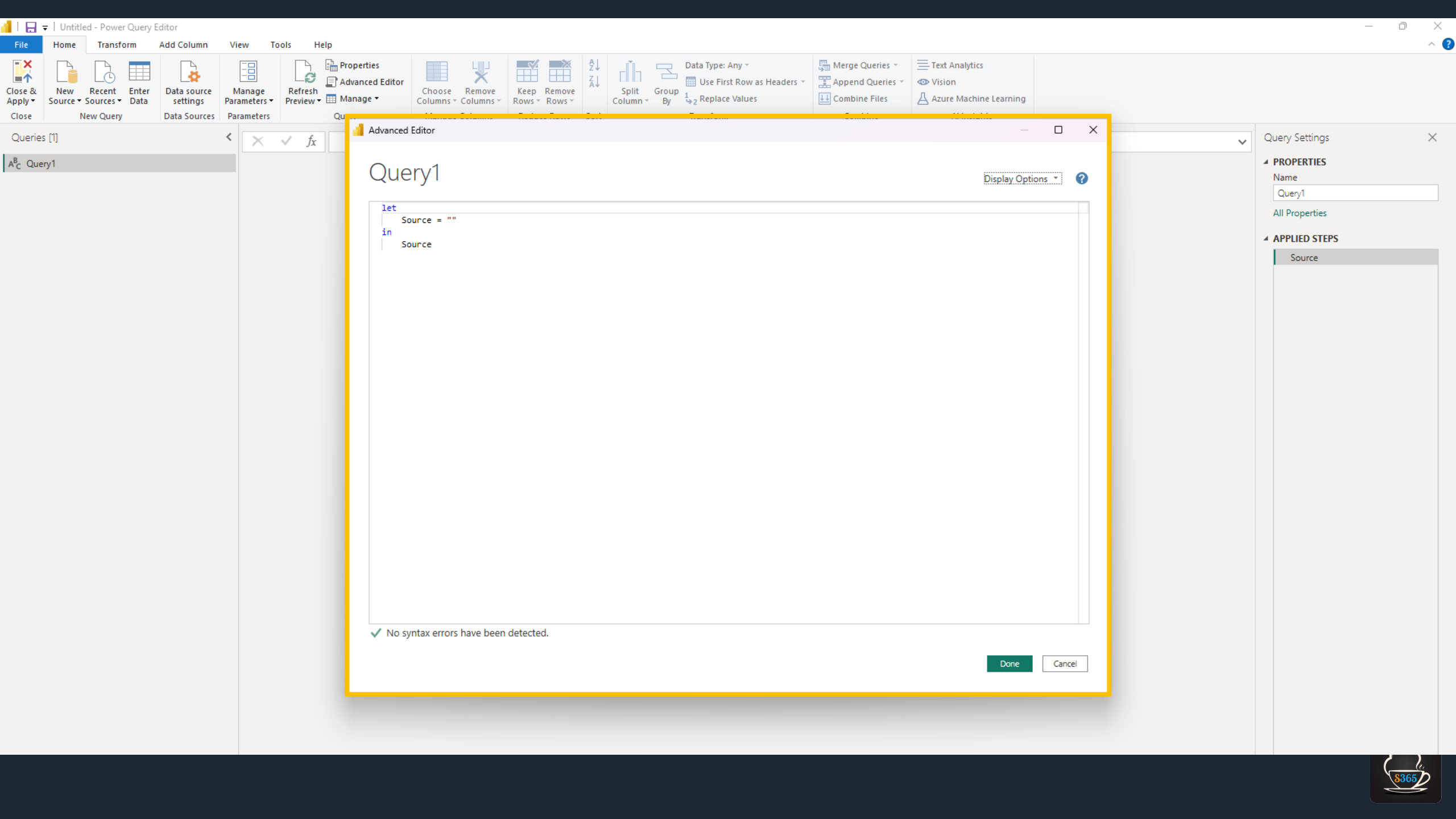
Columns

Greenshot
Greenshot
Exported to: Save as (displaying dialog)


Microsoft Azure
Search resources, services, and docs (G+/)
Copilot
Home > Log Analytics workspaces > la-seppala365dev
la-seppala365dev | Logs
Log Analytics workspace
New Query 1*
Save
Share
Queries hub
Run
Time range : S
KQL mode
CloudAppEvents
| where TimeGenerated >
| extend
UserId = RawEventDa
UserKey = RawEventD
AISystemPlugin = Ra
AccessedResources =
AppHost = RawEventD
Contexts = RawEvent
MessageIds = RawEve
Messages = RawEvent
Show Log Analytics workspaces
Results
Chart
ReportId
Messagel
94075549_53016_8332b03a-fc94-4
ReportId
AccountDisplayName
UserId
UserKey
AppHost
AccessedResources
Contexts
ThreadId
MessageIds
Messages
ModelTransparencyDetails
Application
ApplicationId
CopilotLogVersion
1.0.0.0
Columns
C:\Users\TatuSeppälä\Downloads\PowerBIQuery (1).txt - Notepad++
File Edit Search View Encoding Language Settings Tools Macro Run Plugins Window ?
PowerBIQuery (1).txt
/*
The exported Power Query Formula Language (M Language) can be used with Power Query in Excel
and Power BI Desktop.
For Power BI Desktop follow the instructions below:
1) Download Power BI Desktop from https://powerbi.microsoft.com/desktop/
2) In Power BI Desktop select: 'Get Data' -> 'Blank Query'->'Advanced Query Editor'
3) Paste the M Language script into the Advanced Query Editor and select 'Done'
*/
let AnalyticsQuery =
let Source =
Json.Document(Web.Contents("https://api.loganalytics.io/v1/workspaces/2e4366f9-b7d7-460d-bc18-37e2819f3f6c/query",
[Query=[#"query"="CloudAppEvents
| where TimeGenerated >=ago (30d) and ActionType has ""CopilotInteraction""
| extend UserId = RawEventData.UserId,
UserKey = RawEventData.UserKey,
AISystemPlugin = RawEventData.CopilotEventData.ISystemPlugin,
AccessedResources = RawEventData.CopilotEventData.AccessedResources,
AppHost = RawEventData.CopilotEventData.AppHost,
Contexts = RawEventData.CopilotEventData.Contexts,
MessageIds = RawEventData.CopilotEventData.MessageIds,
Messages = RawEventData.CopilotEventData.Messages,
ModelTransparencyDetails = RawEventData.CopilotEventData.ModelTransparencyDetails,
ThreadId = RawEventData.CopilotEventData.ThreadId,
CopilotLogVersion = RawEventData.CopilotLogVersion
| project ReportId, AccountDisplayName, UserId, UserKey, AppHost, AccessedResources, Contexts, ThreadId, MessageIds,
Normal text file
length : 2 359 lines : 49
Ln : 1 Col : 1 Pos : 1
Windows (CR LF)
UTF-8
INS
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e Tatu Seppälä tatu@Seppala365Dev.onmicrosoft.com 74ee99b9-f3a4-4915-a4ff-3d9114988afa Office
94075549_53016_16fefbb1-84d9-4363-95c4-290d50a13e1e Tatu Seppälä tatu@Seppala365Dev.onmicrosoft.com 74ee99b9-f3a4-4915-a4ff-3d9114988afa Office
94075549_53016_8ab0ddea-5b2f-4ed8-a953-0145a4b4cdf8 Tatu Seppälä tatu@Seppala365Dev.onmicrosoft.com 74ee99b9-f3a4-4915-a4ff-3d9114988afa Office


Untitled - Power BI Desktop
Search
File
Home
Help
Get data
Refresh
Manage relationships
New measure
New column
New
Common data sources
Excel workbook
Power BI datasets
Dataflows
Dataverse
SQL Server
Analysis Services
Text/CSV
Web
OData feed
Blank query
Power BI Template Apps
More...


Untitled - Power Query Editor
File
Home
Transform
Add Column
View
Tools
Help
Close & Apply
Close
New Source
Recent Sources
Enter Data
New Query
Data source settings
Data Sources
Manage Parameters
Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Query
Choose Columns
Remove Columns
Manage Columns
Keep Rows
Remove Rows
Reduce Rows
Sort
Split Column
Group By
Data Type: Any
Use First Row as Headers
Replace Values
Transform
Queries [1]
Query1


Untitled - Power Query Editor
File
Home
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Add Column
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Tools
Help
Close & Apply
New Source
Recent Sources
Enter Data
Data source settings
Manage Parameters
Refresh Preview
Properties
Advanced Editor
Manage
Choose Columns
Remove Columns
Keep Rows
Remove Rows
Split Column
Group By
Data Type: Any
Use First Row as Headers
Replace Values
Merge Queries
Append Queries
Combine Files
Text Analytics
Vision
Azure Machine Learning
Queries [1]
Query1
Advanced Editor
Query1
Display Options
let
Source = ""
in
Source
No syntax errors have been detected.
Done
Cancel
Query Settings
PROPERTIES
Name
Query1
All Properties
APPLIED STEPS
Source

Untitled - Power Query Editor

File Home Transform Add Column View Tools Help

Close & Apply | New Source | Recent Sources | Enter Data | Data source settings | Manage Parameters | Refresh Preview | Properties | Advanced Editor | Manage | Choose Columns | Remove Columns | Keep Rows | Remove Rows | Split Column | Group By | Data Type: Any | Use First Row as Headers | Replace Values | Merge Queries | Append Queries | Combine Files | Text Analytics | Vision | Azure Machine Learning

Close | New Query | Data Sources | Parameters | Query | Manage Columns | Reduce Rows | Sort | Transform | Combine | AI Insights

Queries [1]

Query1

Advanced Editor

Query1

Display Options

```
/*
The exported Power Query Formula Language (M Language ) can be used with Power Query in Excel
and Power BI Desktop.
For Power BI Desktop follow the instructions below:
1) Download Power BI Desktop from https://powerbi.microsoft.com/desktop/
2) In Power BI Desktop select: 'Get Data' -> 'Blank Query'->'Advanced Query Editor'
3) Paste the M Language script into the Advanced Query Editor and select 'Done'
*/


let AnalyticsQuery =
let Source = Json.Document(Web.Contents("https://api.loganalytics.io/v1/workspaces/2e4366f9-b7d7-460d-bc18-37e2819f3f6c/query",
[Query=[#"query"="CloudAppEvents
| where TimeGenerated >=ago (30d) and ActionType has ""CopilotInteraction""
| extend UserId = RawEventData.UserId,
        UserKey = RawEventData.UserKey,
        AISystemPlugin = RawEventData.CopilotEventData.ISystemPlugin,
        AccessedResources = RawEventData.CopilotEventData.AccessedResources,
        AppHost = RawEventData.CopilotEventData.AppHost,
        Contexts = RawEventData.CopilotEventData.Contexts,
        MessageIds = RawEventData.CopilotEventData.MessageIds,
        Messages = RawEventData.CopilotEventData.Messages,
        ModelTransparencyDetails = RawEventData.CopilotEventData.ModelTransparencyDetails,
        ThreadId = RawEventData.CopilotEventData.ThreadId,
        CopilotLogVersion = RawEventData.CopilotLogVersion
| project ReportId, AccountDisplayName, UserId, UserKey, AppHost, AccessedResources, Contexts, ThreadId, MessageIds, Messages, AISystemPlugin

",#"x-ms-app"="OmsAnalyticsPBI",#"prefer"="ai.response-thinning=true"],Timeout=#duration(0,0,4,0)])),
TypeMap = #table(
{ "AnalyticsTypes", "Type" },
{
{ "string",   Text.Type },
{ "int",      Int32.Type },
{ "long",     Int64.Type },
{ "real",     Double.Type },
```

No syntax errors have been detected.

Done Cancel

Query Settings

PROPERTIES

Name

Query1

All Properties

APPLIED STEPS

Source

Untitled - Power Query Editor

File | Home | Transform | Add Column | View | Tools | Help

Close & Apply | New Source | Recent Sources | Enter Data | Data source settings | Manage Parameters | Refresh Preview | Properties | Advanced Editor | Manage | Choose Columns | Remove Columns | Keep Rows | Remove Rows | Split Column | Group By | Data Type: Text | Use First Row as Headers | Replace Values | Merge Queries | Append Queries | Combine Files | Text Analytics | Vision | Azure Machine Learning

Close | New Query | Data Sources | Parameters | Query | Manage Columns | Reduce Rows | Sort | Transform | Combine | AI Insights

Queries

```
= let Source = Json.Document(Web.Contents("https://api.loganalytics.io/v1/workspaces/2e4366f9-b7d7-460d-bc18-37e2819f3f6c/query",
```

	ReportId	AccountDisplayName	UserId	UserKey	AppHost	AccessedResources	Contexts	ThreadId
1	94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:3XC_Cnpk05e-hhjfgEHOJbgZN8JULAAsWi4
2	94075549_53016_16fefbb1-84d9-4363-95c4-290d50a1...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSHMfpWZ6iY-tuOTqntxeUPFtFIG3tk
3	94075549_53016_16fefbb1-84d9-4363-95c4-290d50a1...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSHMfpWZ6iY-tuOTqntxeUPFtFIG3tk
4	94075549_53016_8ab0ddea-5b2f-4ed8-a953-0145a4b4...	Tatu Seppälä	tatu@Seppala365Dev.onmicrosoft.com	74ee99b9-f3a4-4915-a4ff-3d9114988afa	Office	[]	[]	19:F4DZqSHMfpWZ6iY-tuOTqntxeUPFtFIG3tk

94075549_53016_8332b03a-fc94-46e5-90dc-102e6ea7f392

Query Settings

PROPERTIES

Name: Query1

All Properties

APPLIED STEPS

AnalyticsQuery

Alternate method: Graph API audit log search

Audit log query (preview)

Microsoft Purview Audit provides an integrated solution to help organizations effectively respond to security events, forensic investigations, internal investigations, and compliance obligations. Thousands of user and admin operations performed in dozens of Microsoft 365 services and solutions are captured, recorded, and retained in your organization's unified audit log. Audit records for these events are searchable by security ops, IT admins, insider risk teams, and compliance and legal investigators in your organization. This capability provides visibility into the activities performed across your Microsoft 365 organization.

Grant Graph API permissions to a Logic Apps managed identity (or register an application)

AuditLogsQuery.Read.All ← **Required permission**

- ✓ Application permission supported
- ✓ Delegated permission supported

✨ **Recommendation** ✨

Use a Logic App with a system-assigned managed identity and authorize it to run Audit Log searches directly against Graph API

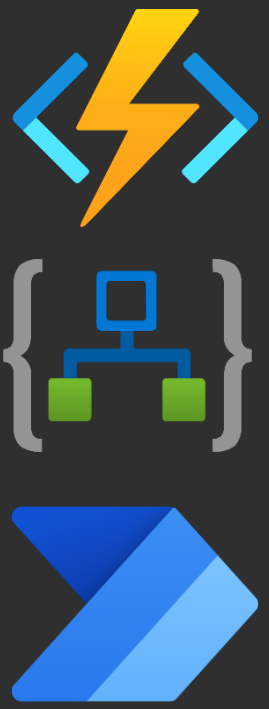
For guidance on authorizing a managed identity to Graph API, see for example:
https://laurakokkarinen.com/authenticate-to-entra-id-protected-apis-with-managed-identity-no-key-vault-required/

Create auditLogQuery

HTTP Copy

```
POST https://graph.microsoft.com/beta/security/auditLog/queries
Content-Type: application/json

{
  "@odata.type": "#microsoft.graph.security.auditLogQuery",
  "displayName": "String",
  "filterStartDateTime": "String (timestamp)",
  "filterEndDateTime": "String (timestamp)",
  "recordTypeFilters": [
    "String"
  ],
  "keywordFilter": "String",
  "serviceFilter": "String",
  "operationFilters": [
    "String"
  ],
  "userPrincipalNameFilters": [
    "String"
  ],
  "ipAddressFilters": [
    "String"
  ],
  "objectIdFilters": [
    "String"
  ],
  "administrativeUnitIdFilters": [
    "String"
  ],
  "status": "String"
}
```



HTTP request

HTTP Copy

```
POST /security/auditLog/queries
```

```
"operationFilters": [
"CopilotInteraction"
]
```

Get results of auditLogQuery

HTTP request

HTTP Copy

```
GET /security/auditLog/queries/{auditLogQueryId}
```

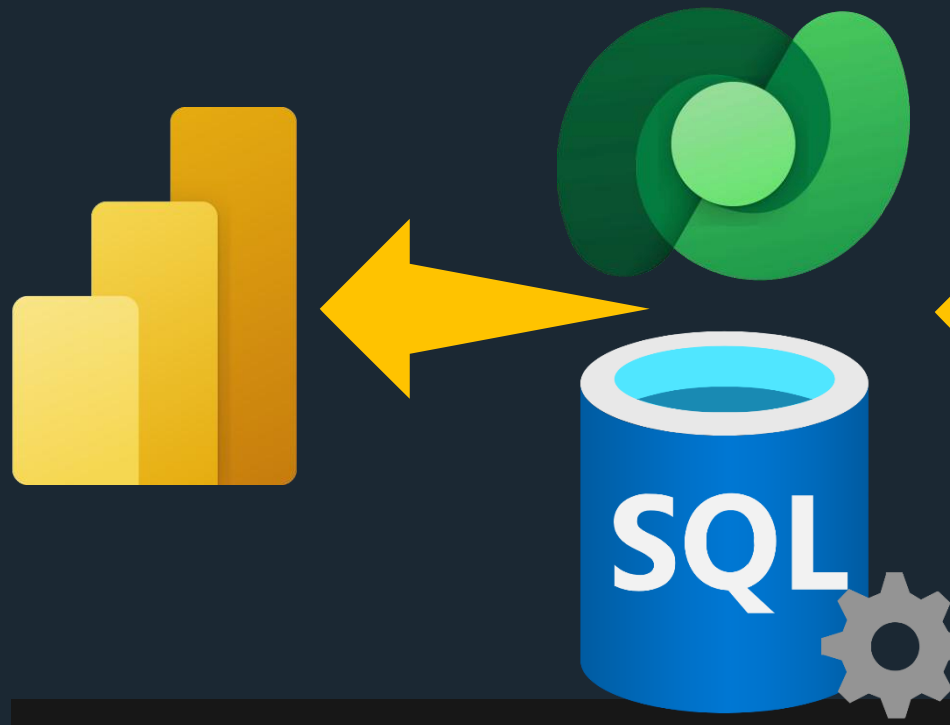
Periodically check status until ✅ complete

HTTP request

HTTP Co

```
GET /security/auditLog/queries/{auditLogQueryId}/records
```

Get results of auditLogQuery



HTTP request

HTTP Copy

```
GET /security/auditLog/queries/{auditLogQueryId}/records
```

HTTP Copy

```
HTTP/1.1 200 OK
Content-Type: application/json

{
  "value": [
    {
      "@odata.type": "#microsoft.graph.security.auditLogRecord",
      "id": "40706737-7eca-f9a1-97a5-dedd3260e24a",
      "createdDateTime": "String (timestamp)",
      "auditLogRecordType": "String",
      "operation": "String",
      "organizationId": "String",
      "userType": "String",
      "userId": "String",
      "service": "String",
      "objectId": "String",
      "userPrincipalName": "String",
      "clientIp": "String",
      "administrativeUnits": [
        "String"
      ],
      "auditData": {
        "@odata.type": "microsoft.graph.security.auditData"
      }
    }
  ]
}
```

Automate fetching CopilotInteraction events

The Graph API method: Query the Users endpoint

List users

Article • 10/21/2024 • 24 contributors

In this article

- Permissions
- HTTP request
- Optional query parameters
- Request headers

Show 3 more

Namespace: microsoft.graph

Retrieve a list of user objects.

msgraph Copy Try It

```
GET https://graph.microsoft.com/v1.0/users
```

HTTP Copy

```
HTTP/1.1 200 OK
Content-type: application/json

{
    "@odata.context": "https://graph.microsoft.com/v1.0/$metadata#users",
    "value": [
        {
            "businessPhones": [],
            "displayName": "Conf Room Adams",
            "givenName": null,
            "jobTitle": null,
            "mail": "Adams@contoso.com",
            "mobilePhone": null,
            "officeLocation": null,
            "preferredLanguage": null,
            "surname": null,
            "userPrincipalName": "Adams@contoso.com",
```

The Graph API method: Query the Users endpoint

⚠️ **Power BI intentionally restricts direct queries to Graph API**

> Connecting to Microsoft Graph REST APIs from Power Query isn't recommended or supported. Instead, we recommend users explore alternative solutions for retrieving analytics data based on Graph, such as Microsoft Graph data connect.

Lack of Support for Microsoft Graph in Power Query - Power Query | Microsoft Learn

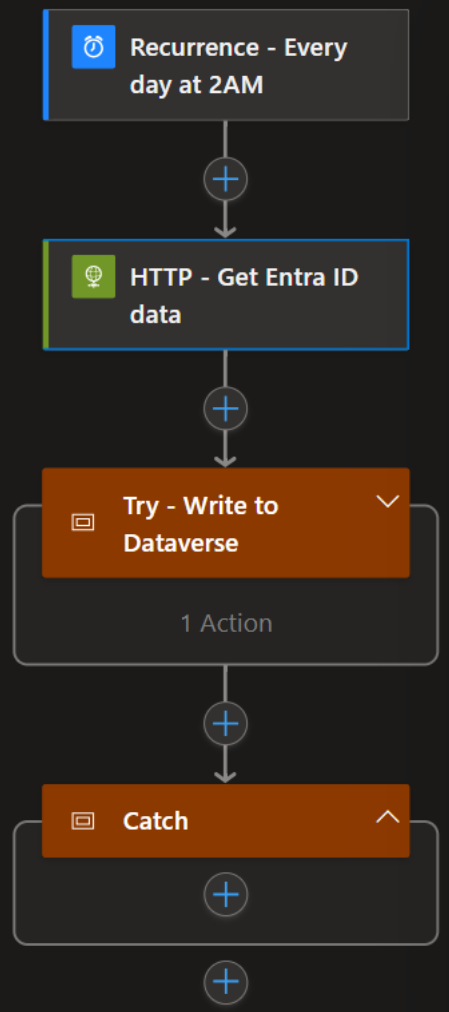
The Graph API method: Query the Users endpoint

⚙️ **Steps:**

1. Provision a **Logic App** with a system-assigned managed identity
2. Use the method detailed earlier to give it **User.Read.All** rights
3. Have the Logic App use HTTP queries to fetch recurring user reports from Graph API
4. Save only the required information from the user records into a dedicated, access-controlled [illegible] in Dataverse / Azure SQL / etc.

la-CopilotAnalytics-GetEntraIDUsers

Run | Save | Discard | Parameters | Code view | Errors | Info | File a bug



HTTP - Get Entra ID data

Parameters | Settings | Code view | Testing | About

URI *
https://graph.microsoft.com/v1.0/users

Method *
GET

Headers
Enter key | Enter value

Authentication

Authentication Type *
Managed identity

Managed Identity *
System-assigned managed identity

Audience
https://graph.microsoft.com

Runs history

la-CopilotAnalytics-GetEntraIDUsers

Refresh

All

Pick a date | Pick a time

Search to filter items by identifier

Start time	Duration
12/3/2024, 8:54 AM	407 Milliseconds
12/3/2024, 8:45 AM	187 Milliseconds

la-CopilotAnalytics-GetEntraIDUsers

Run details | Resubmit | Cancel run | Refresh | Info | File a bug

HTTP

Submit from this action

Parameters | Settings | Code view | About

Show more

OUTPUTS

Show raw outputs

Body

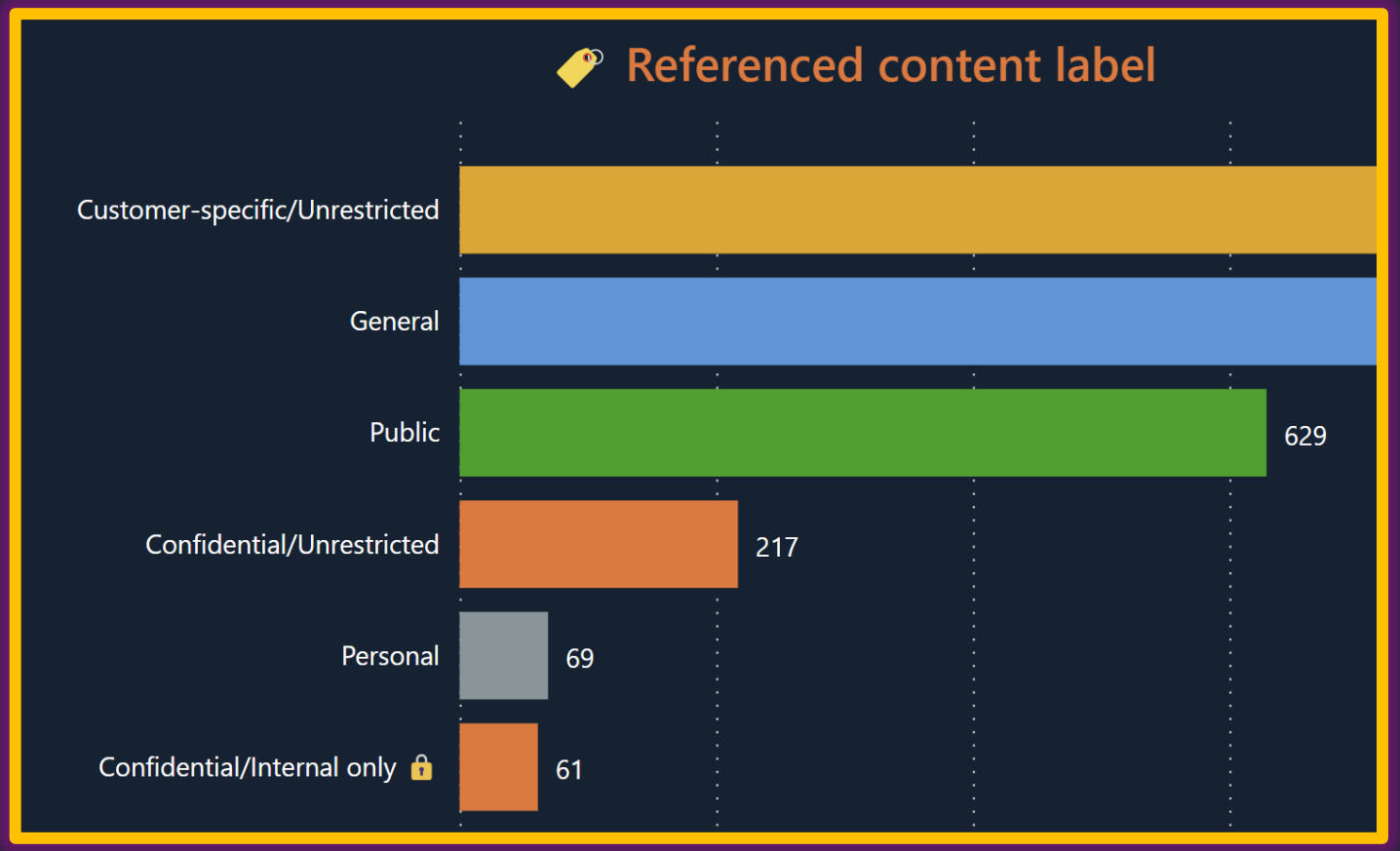

```
{
  "businessPhones": [],
  "displayName": "Odin Allfather",
  "givenName": null,
  "jobTitle": "Chief Executive Officer",
  "mail": null,
  "mobilePhone": null,
  "officeLocation": "Valhalla, Asgard",
  "preferredLanguage": null,
  "surname": null,
```


PROPERTIES

EntraIDUsers

Expand

Add sensitivity label insights



Grab **sensitivity label data** with Security & Compliance PowerShell:

- **Label names**
- **Label GUIDs**

Add as a table in Power BI Desktop & create a 1:many relationship w/ CopilotInteraction

Add sensitivity label insights

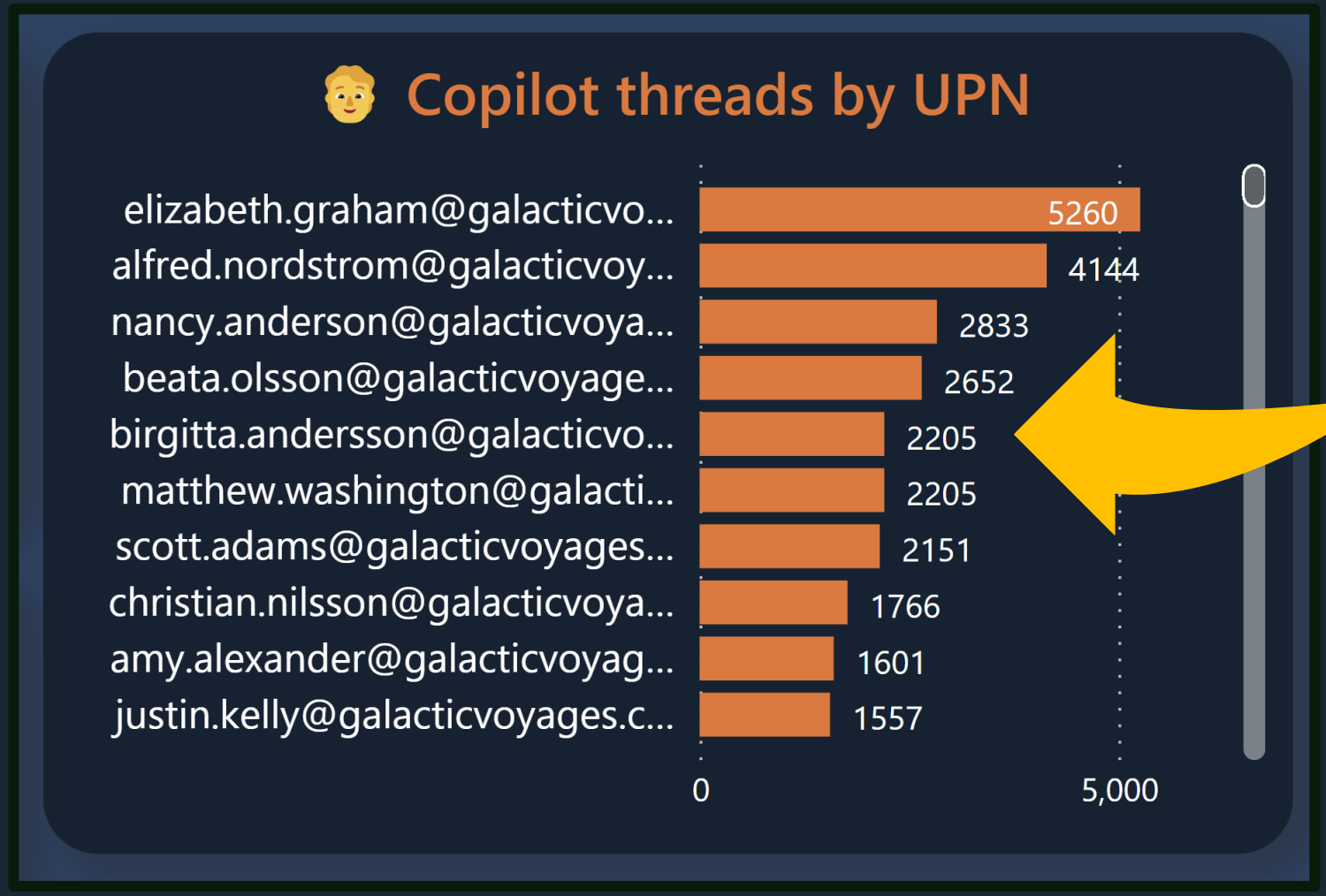
```
# Connect to the Security & Compliance PowerShell
Connect-IPPSSession

# Get a CSV report of your current sensitivity labels
Get-Label | Select guid,
@{Name="LabelDisplayName";Expression={if
($_.parentlabeldisplayname)
{"$($_.parentlabeldisplayname)/$($_.displayname)"} else
{$_.displayname}}} | Export-CSV
C:\Temp\SensitivityLabels.csv -NTI
```

Add sensitivity label insights

Guid	LabelDisplayName
defa4170-0d19-0005-0000-bc88714345d2	Personal
94774665-6c19-4675-8464-17a2a1e7d3ca	Public
defa4170-0d19-0005-0002-bc88714345d2	General
f11eccd2-5707-42d1-bbf7-687810ed9f86	Confidential
5948967a-be92-4652-bda9-521b79f86c10	Confidential/Unrestricted
50f416be-deb7-416d-b102-426405ae1176	Confidential/Secure email 🔒
c2faab4d-519f-4812-af32-dabe19d53e73	Confidential/Internal only 🔒
beddede8-e9b6-4986-b4a2-2d8242d4b8b4	Confidential/Custom permissions 🔒
22b40fa4-b0cf-4a88-a1f3-270d8d225816	Secret
85a26ec7-98d3-41fb-a12f-d7e6dff2da9c	Secret/Unrestricted
35057bd7-9717-450a-9f31-41391c20e6e9	Secret/Secure email (forwarding restricted) 🔒
b271c7cf-b2cd-4933-abf8-ee1bb529522d	Secret/Internal only 🔒
a8188293-3685-42d7-abfd-fca01125c682	Secret/Custom permissions 🔒

Add results from sentiment questionnaires



❓ How much time do you feel you save with Copilot per week?

5h 🚀

3h

2h

0,5h

Summary

Summary

🤖 Get **CopilotInteraction** events from the UAL

🤜 Get **Entra ID** identity data

🍲 Combine in **Power BI**

🔎 **Analyze** M365 Copilot use in-depth across roles and more

⚡ **Automate** audit event & identity data refresh

🚀 **Expand** your analytics to offer more insights

⚙️ **Apply** gathered insights to adoption and upskilling efforts

❓ ❓ ❓

🏆 **Profit!**

Comments or questions?

Connect with me!