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The Digital  
Neighborhood



**Tatu Seppälä**  
Security & Compliance Architect

**MVP** Microsoft®  
Most Valuable Professional





# Dataverse detective: Managing sensitive information with Purview Data Governance

Event name  
Tatu Seppälä



# Topics

- > What's the big deal with Purview and Dataverse?
- > **Demo!**  Purview service build-up
- > **Demo!**  Plugging into Dataverse
- > **Demo!**  Scanning and classifying tables
- > **Demo!**  Investigating discovered assets
- > **Bonus:** Insights from the Unified Audit Log
- > Putting your findings to work
- > Cost considerations
- > What's next?

# Growing maturity

- › **Power Platform usage** maturity is growing across the globe
- › Volume of sensitive and other data is increasing in Dataverse
- › Dynamics 365 & Copilot are playing their part, too!



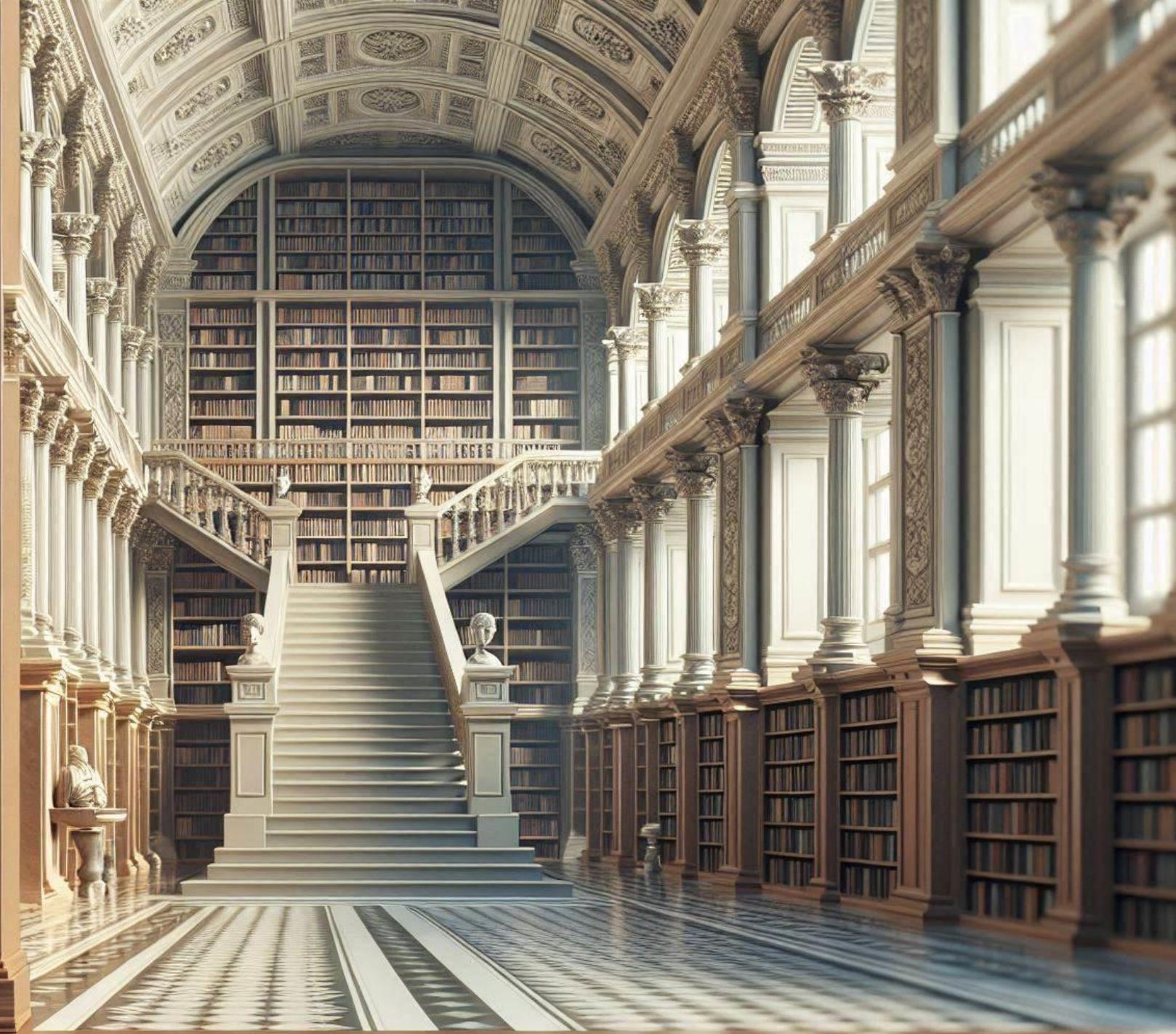
2025

2026

2027

2028







Purview service  
build-up

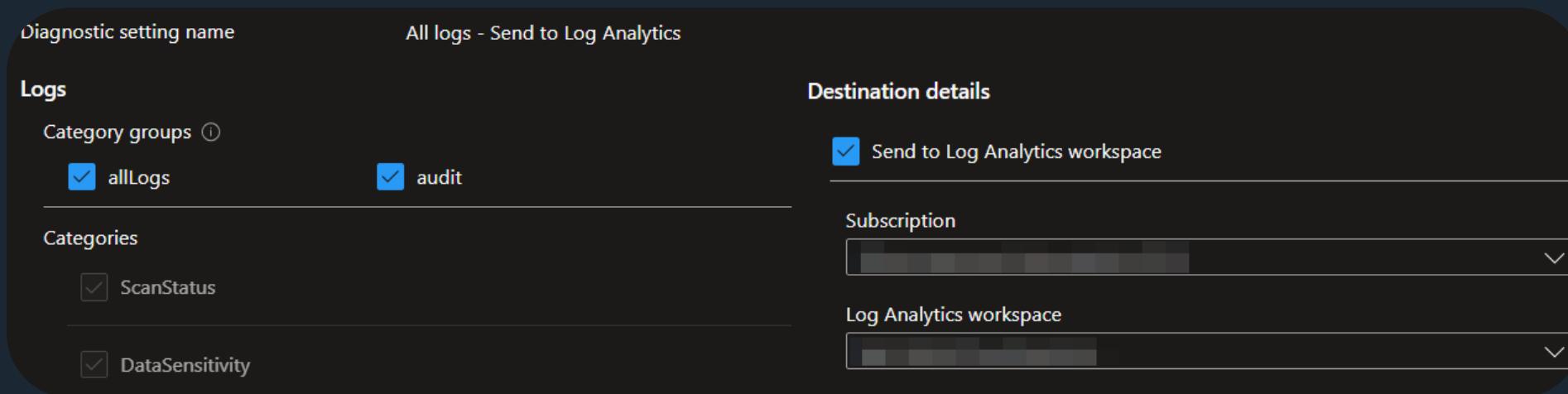




Demo  
time

# Purview service build-up

- › Only one Purview account per tenant → choose the subscription carefully
- › Private endpoints are supported
- › Configure the account's diagnostic settings
  - Send logs to Log Analytics (preferred) – you also get most events through the Unified Audit Log



Diagnostic setting name: All logs - Send to Log Analytics

**Logs**

Category groups ①

allLogs  audit

Categories

ScanStatus  DataSensitivity

**Destination details**

Send to Log Analytics workspace

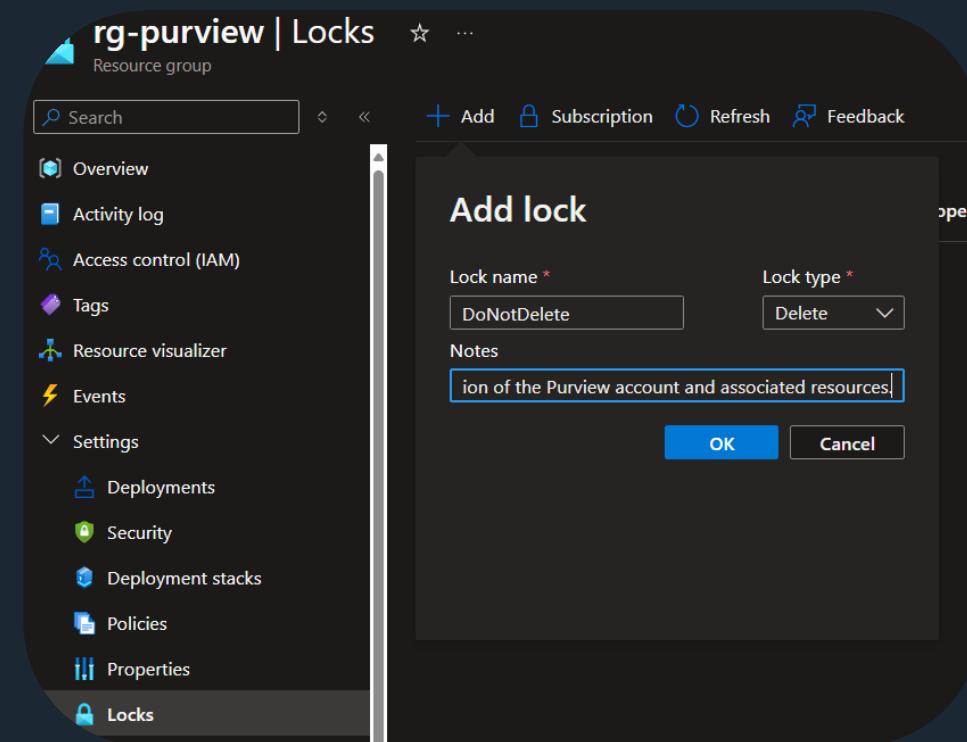
Subscription: [REDACTED]

Log Analytics workspace: [REDACTED]



# Tip: Prevent accidental deletion

- › Protect the Purview account's resource group with a **Delete** type lock to avoid losing the tooling to accidental deletion
- › The lock is inherited to all RG resources





Integrating with  
Dataverse



# Integrating with Dataverse

- › Every unique data source can only be registered once
- › A single Dataverse environment is its own data source

The image shows the Microsoft Dataverse Data Sources list and the Register data source (Dataverse (Preview)) dialog.

**Production Data Sources:**

- Dataverse
- Azure Files

**Registered Data Sources (highlighted with a green border):**

- DV-Developer-TatuDev (Dataverse (Preview))
- azf-storage-weu-dev (Azure Files)

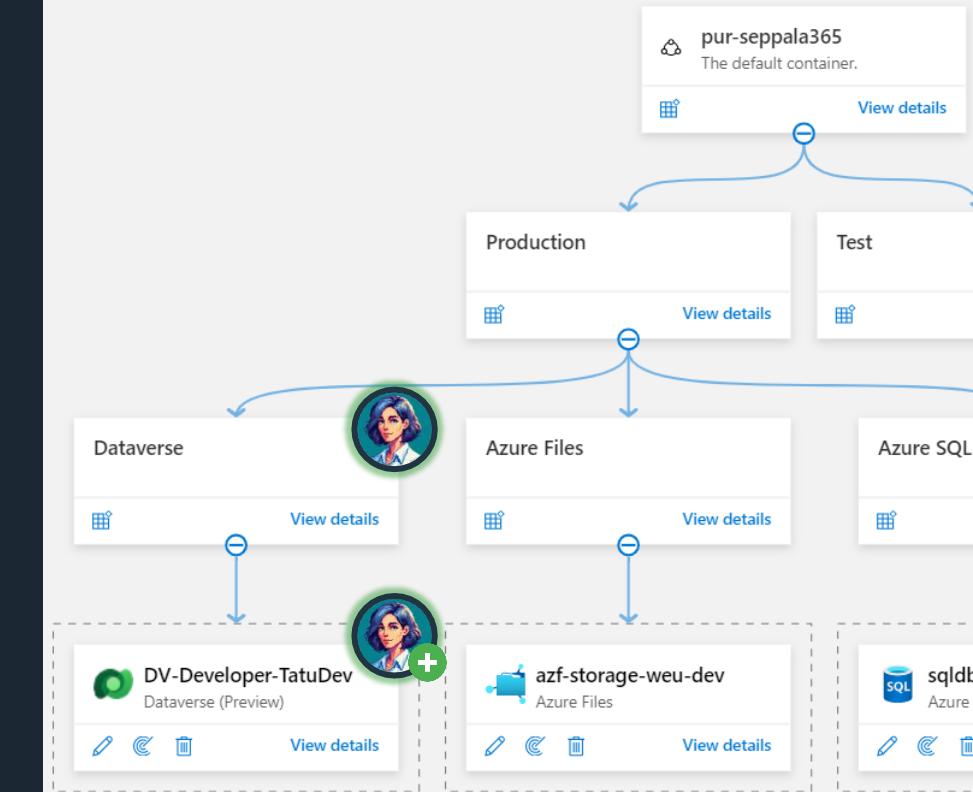
**Register data source (Dataverse (Preview)) Dialog:**

- Data source name \***: Dataverse-BER
- Environment URL \***: (empty)
- Domain \***: pur-seppala365
- Collection \***:
  - Select domain only
  - Filter...
  - Select domain only
    - Production
      - Azure Files
      - Azure SQL
      - Dataverse
      - Test

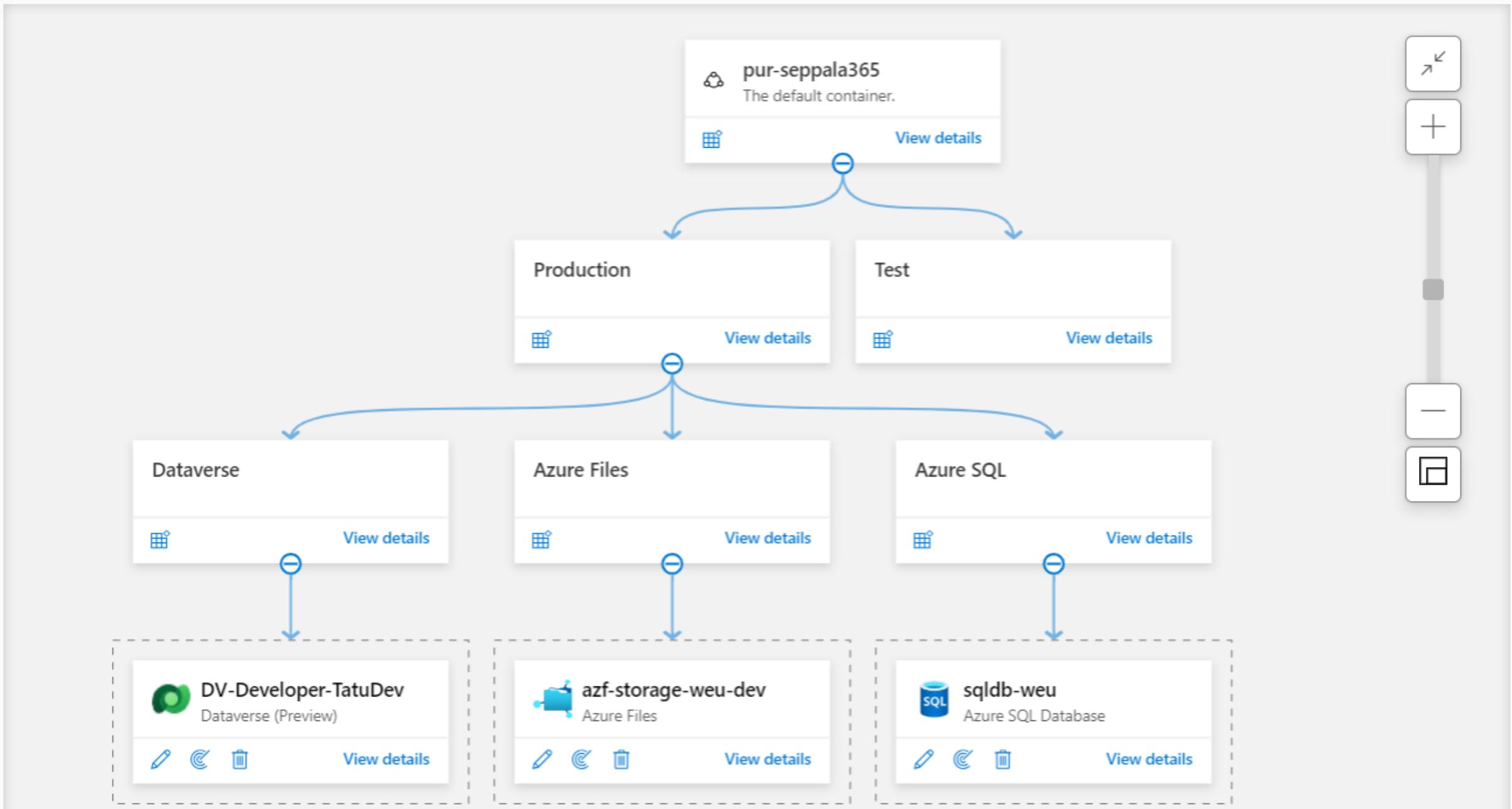


# Integrating with Dataverse

- › Plan your Data Map collection topology carefully
  - For example based on data source type
- › Collections are the basis for access management
- › Permissions are inherited from collections to their subcollections
- › Consider organizing all Dataverse environments in their own collection, at least initially



Showing 5 collections, 3 data sources



C	11	.19	10	.25	34	.25
R	11	.20	21	:94	35	11
C	.24	.43	51	.94	.39	15
4	.16	.20	31	.99	.39	15
R	.16	.46	.50	.84	.52	15
E	.44	15		.44	35	15
4	42	14	35	:90	51	25
5	.43	.24	20	.94	11	15
G	.46	13	25	.80	56	15
C	69	26	1	.90	16	15
D	.15	.79	32	.90	31	15
D	.26	10	11	:90	25	15
R	1	.20	17	.90	10	15
C	6	45	16	50	19	15
T	16	13	10	18	16	15
A	5	:4	15	14	11	15
	19	:	15	14	16	15
	11.		19	68		



# Scanning and classifying tables





Demo  
time

# Scanning and classifying tables

- › **Recommendation:** Create a custom scan to limit which classifications can get applied to content
- › Data Map classifications are **not** 1:1 with Information Protection Sensitive Information Types
- › Notably, credential classifiers are still missing

## Select classification rules

### System rules

<input checked="" type="checkbox"/>	> Government
<input checked="" type="checkbox"/>	Financial
<input type="checkbox"/>	ABA Routing Number
<input type="checkbox"/>	Australia Bank Account Number
<input type="checkbox"/>	Canada Bank Account Number
<input checked="" type="checkbox"/>	Credit Card Number
<input checked="" type="checkbox"/>	EU Debit Card Number
<input checked="" type="checkbox"/>	International Banking Account Number (IBAN)
<input type="checkbox"/>	Israel Bank Account Number
<input type="checkbox"/>	Italy Fiscal Code
<input type="checkbox"/>	Japan Bank Account Number
<input type="checkbox"/>	New Zealand Bank Account Number
<input checked="" type="checkbox"/>	SWIFT Code
<input type="checkbox"/>	U.S. Bank Account Number
<input checked="" type="checkbox"/>	> Base
<input checked="" type="checkbox"/>	> Personal
<input checked="" type="checkbox"/>	> Security
<input checked="" type="checkbox"/>	> Miscellaneous

Continue

Back

201 classification rules selected

# Scanning and classifying tables

- › You can create simple custom classifiers using **RegEx** or **keyword dictionaries**
- › Use custom scan rule sets to optimize for speed
  - Less classifiers to compare data against = faster
- › Full list of built-in classifiers supported by Data Map is [here](#)

## Select classification rules

### System rules

- > Government
- > Financial
  - ABA Routing Number
  - Australia Bank Account Number
  - Canada Bank Account Number
  - Credit Card Number
  - EU Debit Card Number
  - International Banking Account Number (IBAN)
  - Israel Bank Account Number
  - Italy Fiscal Code
  - Japan Bank Account Number
  - New Zealand Bank Account Number
  - SWIFT Code
  - U.S. Bank Account Number
- > Base
- > Personal
- > Security
- > Miscellaneous

Continue

Back

201 classification rules selected

# Edit details

Tatu Seppälä's Environment



## Developer resources

Name \*

Environment unique name

unq6eb1047b3f3241bdbec571d5cfe10

Data Map > Data sources > DV-TatuDev >

## Scan-Baseline run history

pur-seppala365

pur-seppala365 > Production > Dataverse

Run scan now

Edit scan

Delete scan

Cancel runs

Refresh

Edit columns

Showing 5 items

Error: (3818) Connector Exception: Object reference not set to an instance of an object.

[Learn more](#)

Run ID	State	Scan type	Assets discovered	Assets ingested
5c6131f0-a25e-40bd-ae0f-396fb1113ce6	Failed More info	Full scan	Manual	0
34b4e484-237b-42ac-9cc8-794f1589fdde	Failed More info	Full scan	Manual	0
23655538-a131-48d9-b688-46e5f588ac30	Failed More info	Full scan	Manual	0
59938d24-b9ec-49e8-8f7a-65a943d4d5...	Completed with exception: Full scan	Manual	361	361
3641aa49-5b78-4d43-91b9-c619555ef6...	Completed with exception: Full scan	Manual	360	360

A capybara, the world's largest rodent, is dressed as a detective. It wears a tan fedora with the word "Purvieu" on the band and a tan trench coat over a green shirt. The capybara is looking down at an open book it is holding with both hands. A large, glowing green sphere of text is emanating from the book, containing words like "Investigating", "discovered", and "assets". The background is a dark, atmospheric street at night with a street lamp and buildings.

Investigating  
discovered assets



Demo  
time

# Dataverse

 Organization

 Project

## Classification

...

All Physical Addresses 4

Country/Region 4

All Full Names 2

Date of Birth 1

Email Address 1

Finland National ID 1

International Banking Accou... 1

Data source type : All

 Add filter

 Clear all filters

Showing 1 result

Sort by: Relevance ▼



**Customer Information**  Dataverse Table



Confidential\Unrestricted

PII

This table contains customer information.

Fully qualified name: dataverse://tatudev.api.crm4.dynamics.com/tables/cr... Updated 13 days ago

First

< Previous

Next >





# Customer Information

Dataverse Table

PII X

Updated on August 22, 2024 at 9:02 PM by ADM Tatu Sep...

Edit Select for bulk edit Request access Refresh Delete

## Overview

Properties

Schema

Lineage

Contacts

Related

Privacy

History

### Asset description

This table contains customer information.

### Managed attributes

Filter by attribute name

Show attributes without a value

No Attributes for this asset.

### Classifications ⓘ

No classifications for this asset.

### Schema classifications (2) ⓘ

Email AddressFinland National ID

### Fully qualified name ⓘ

dataverse://tatudev.api.crm4.dynamics.com/tables/cr876\_customerinformation

### Collection path

pur-seppala365ProductionDataverse

### Hierarchy

tatudev.api.crm4.dynamics.com:443

Dataverse Environment

Customer Information

Dataverse Table

### Glossary terms

No glossary terms for this asset.



# Customer Information



Dataverse Table

PII X



Updated on August 22, 2024 at 9:02 PM by ADM Tatu Sep

Edit

Select for bulk edit

Request access

Refresh

Delete

Edit columns

Overview

 Filter by name

Properties

Showing 37 of 37 items

Schema



	Column name	Classifications	Sensitivity label	Glossary terms	Data type	Column description
Lineage	Customer Information				Uniqueidentifier	Unique identifier for entity instances
Contacts	Email	⚡ Email Address			String	Customer's Email Address
Related	Home Address				String	Customer's Home Address
Privacy	Name				String	Customer's Name
History	Postal Code and City				String	Customer's Postal Code and City
	Social Security Number	⚡ Finland National ID	+1 More		String	Customer's Social Security Number
	Created By				Lookup	Unique identifier of the user who created the record
	createdbyname				String	
	createdbyyominame				String	
	Created On				DateTime	Date and time when the record was created





Dataverse Table

PII X



☆☆☆☆☆ (0)

Updated on September 4, 2024 at 10:28 AM by ADM Tatu Seppälä

Edit Select for bulk edit Request access

Refresh

Delete

Overview

Properties

Schema

Lineage

Contacts

Related

Privacy

History

These are the contacts for this asset.

Experts (1)



Henrietta Mueller

Developer

Owners (1)



Diego Siciliani

HR Manager





Insights from the  
Unified Audit Log





Home



Solutions



Learn



Information Protection



Data Map



Data Loss Prevention



Audit



Data Catalog

# Activity explorer

Review activity related to content that contains sensitive info or has labels applied, such as what labels were changed, files were modified, and more. Label activity is monitored across Exchange, SharePoint, OneDrive, and endpoint devices. Support for more locations is coming soon. [Learn more](#)

Built-in filters

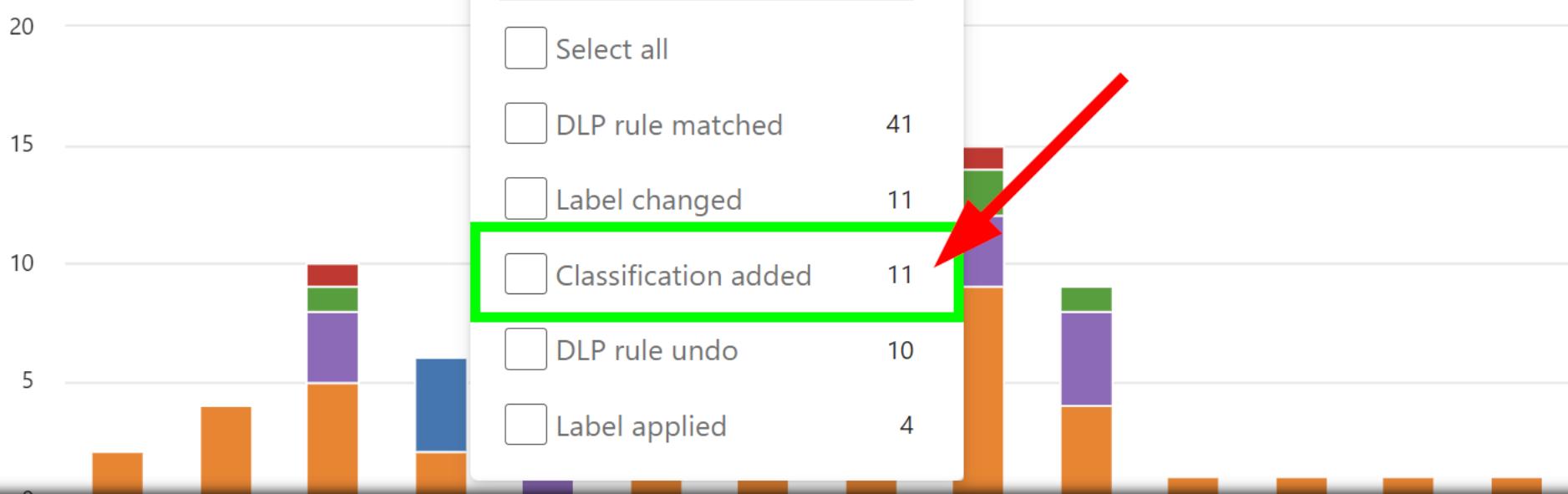
Date: 9/1/2024-9/14/2024

Activity: Any

Location: Any

User: Any

+1 more





Home



Solutions



Learn



Information Protection



Data Map



Data Loss Prevention



Audit



Data Catalog

Export Refresh

Activity

 Classification added Label changed Classification added Classification added

File

dat

↑ ↓ ×

## Classification added

### About this item

**File**

cra50\_bankaccountinformation

**User**

DataScan

#### New classifications

MICROSOFT.FINANCIAL.INTERNATIONAL.BANK\_ACCOUNT\_NUMBER

### Location details

**Location**

Dataverse

**Parent**

dataverse://org393540c7.api.crm4.dynamics.com/tables

**File path**

dataverse://org393540c7.api.crm4.dynamics.com/tables/cra50\_bankaccountinformation

```
▶ Run Time range: Set in query Limit: 1000

1 CloudAppEvents
2 // Set the time to fetch logs from.
3 | where TimeGenerated > ago(90d)
4 // Get data map events and filter for audit events for adding classifications to table columns
5 | where RawEventData.Workload has "PurviewDataMap" and ActionType has "ClassificationAdded"
6 extend ClassifiedColumns = parse_json(tostring(RawEventData.NewValue))
7 mv-expand ClassifiedColumns
8 project TimeGenerated, ClassifiedColumns
```

## Results Chart

TimeGenerated [Helsinki, Kiev, Riga, Sofia, Tallinn, V... ↑↓

### ClassifiedColumns

## TimeGenerated [UTC]

2024-08-22T17:42:38Z

## ClassifiedColumns

Attributed

> attribute

CONFIDENCE 0.87

entityGuid 5983a2ed-df84-4f50-b1cf-8cf6f6f6001

12 JULY 2004

entityStatus ACTIVE

fullTypeName MICROS

1-Butyne-3-ol

source DataScan

> sourceDetails {"Classific

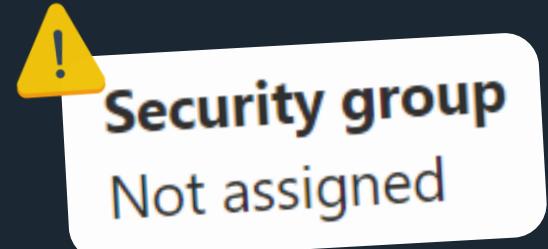
typeGuid 430f15dd

typeduid 43011500

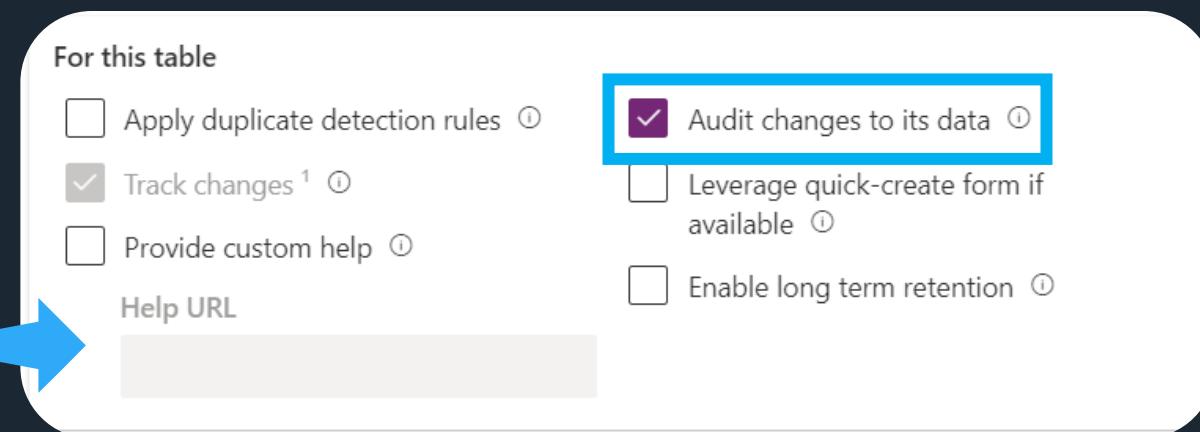
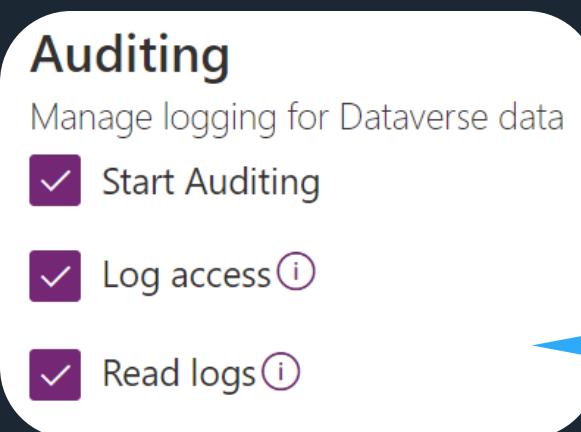
### typeName MICROSCOPE

94

# Putting your findings to work



- > Add **tags**, **experts** and **owners** to discovered tables
- > Ensure environments & tables with sensitive information are audited
- > Make sure environments have access groups
- > Practice proper Dataverse security role hygiene
  - **Tip:** Manage Dataverse security roles through Entra ID w/ [Group Teams](#)



# Cost considerations



# Cost considerations

- › You currently still pay for **asset data ingestion** and **metadata storage**
- › Cost scales elastically by hour according to usage
- › Use **incremental scans** if the data source supports them
  - Dataverse only supports full scans for now



For more details on things to consider in the current model, check out:  
[Pricing guidelines for classic Microsoft Purview data governance | Microsoft Learn](#)



# Cost considerations

- > Basically...
  - **Frequency:** The more **often** you scan, the more you pay
  - **Volume:** The more **content** you scan, the more you pay
  - **Depth:** The more **classifiers** you sample against, the longer each scan takes, the more you pay



**A major refresh to Purview Data Governance is coming  
– including the pricing model! Keep an eye out.**

For more details on things to consider in the current model, check out:  
[Pricing guidelines for classic Microsoft Purview data governance | Microsoft Learn](#)





What's next?



# What's next?

- › Sensitivity Labels are already available for Dataverse assets in Data Catalog but they don't do much yet
- › Automatic label application to table schema is already a thing, based on supported classifiers

## My prediction:

I think eventually we'll get..

- Modernized auto-labeling w/ support for M365 classifiers
- Column read permission restrictions based on sensitivity labels through **Protection Policies** – a new Purview capability.





# Resources

- › [Connect to and manage Microsoft Dataverse in Microsoft Purview](#)
- › [List of supported classifications](#)
- › [Create a custom classification and classification rule](#)
- › [Asset change auditing / Data map history](#)
- › [Pricing - Microsoft Purview](#)

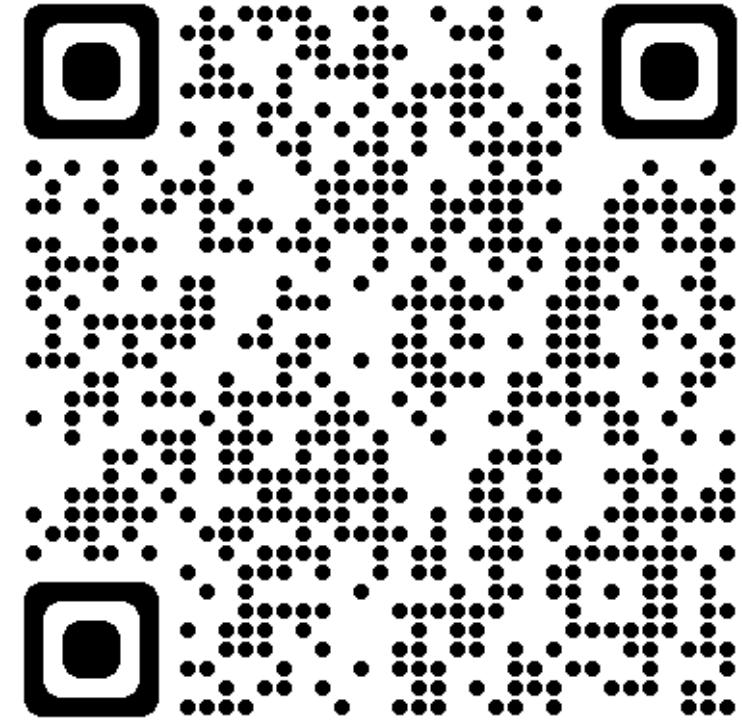




?

Questions

Comments



Connect with me!

