

Single page tracking in Power BI reports

Andrea Martorana Tusa



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volda;
INFORMATIESPECIALISTEN

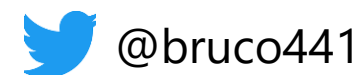
DashData.

VisionBI 
Smart Data Experts

 **easydash**

Andrea Martorana Tusa | @bruco441

- Italian, living in Denmark
- MVP Data Platform
- Team Manager in **PANDORA**
 - Product Manager for the company's Content Management platform, Co-admin of the Power BI tenant
- 25+ years of experience in the world of data with special focus on BI
- Speaker in many events worldwide (SQL Saturday, PASS Summit, Power BI Summit, Data Platform Summit, Power Platform Bootcamp, European Sharepoint Conference ...)



Agenda

- Power BI (Fabric) audit logs
- Usage metrics report
- Admin workspace?
- Pandora custom solution for tracking single pages access



Track user activities

Questions for you:

- Who is collecting Power BI audit logs?
- Who's been asked: "can I track down up to a report's page view?"
- Who would like to have an entry in the logs for that?



Track user activities in Power BI (Fabric)

[Learn](#) / [Microsoft Fabric](#) /



Operation list

Article • 12/26/2023 • 2 contributors

[Feedback](#)

The following operations are available in the audit logs.

[Expand table](#)

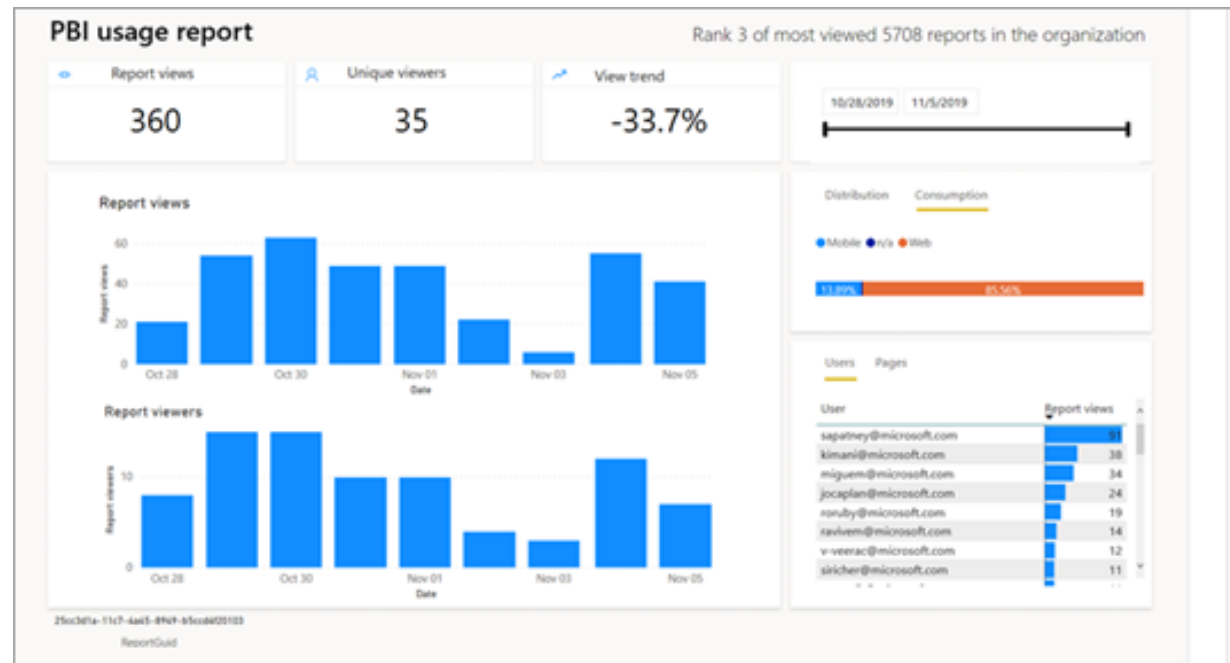
Friendly name	Operation name	Notes
Add Admin Personal Workspace Access	AddAdminPersonalWorkspaceAccess	
Add Artifact To Pipeline	AddArtifactToPipeline	
Add Experiment Run	AddExperimentRun	
Add Model Version	AddModelVersion	
Add Tenant Key	AddTenantKey	
Add Tile	AddTile	Add Tile is dashboard activity which is generated on adding visuals as tiles to a Power BI Dashboard
Added data source to Power BI gateway	AddDatasourceToGateway	

Track user activities in Power BI (Fabric)

Friendly name	Operation name	Notes
Viewed Power BI report	ViewReport	A report is also generated per page when exporting a report. Some fields such as CapacityID and CapacityName, will return null if the report or dashboard is viewed from a Power BI app, rather than a Power BI workspace.
Viewed Power BI tile	ViewTile	
Viewed Power BI usage metrics	ViewUsageMetrics	

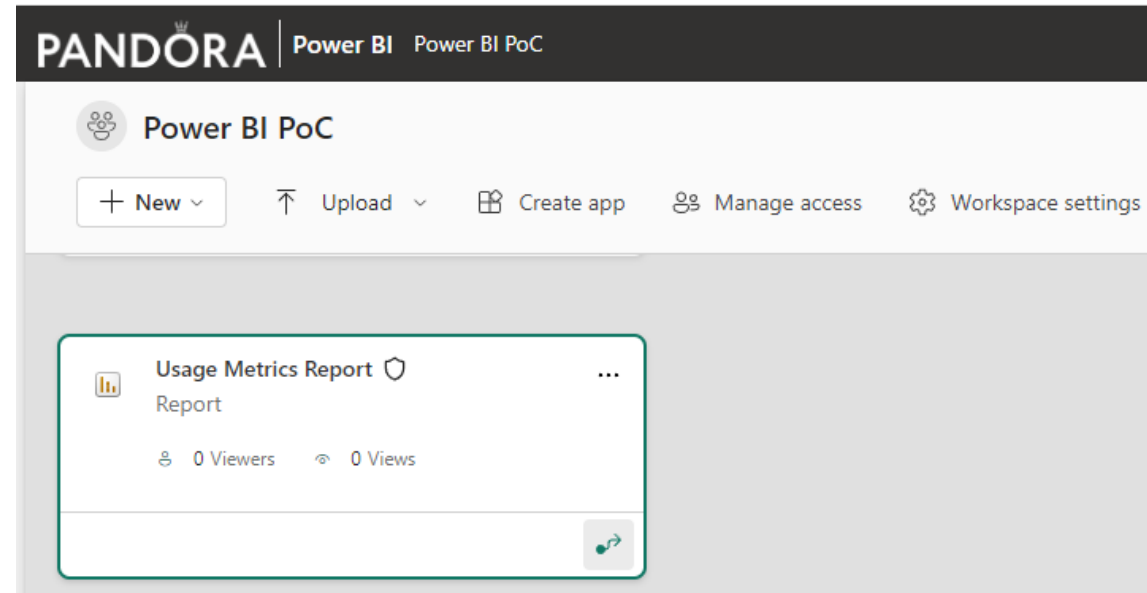
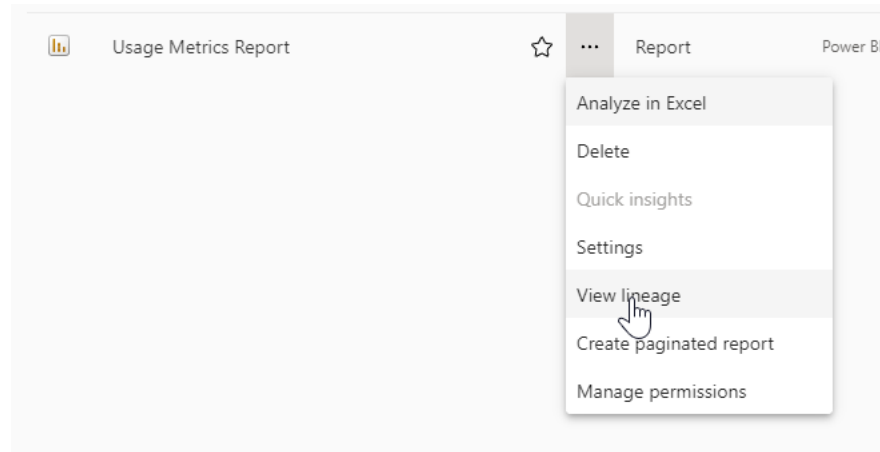
Usage metrics built-in report

Pre-built report generated in the Power BI Service. Gives a glimpse of some metrics for the report



Usage metric report

Lineage view for the Usage Metrics Report. Where the dataset is?



Usage metric report – E-com

View the pages from the Usage Metrics Reports. Where these pages are?

Users Pages

Page	Users	Views	Views %
Home	78	733	43%
Overview	53	350	20%
Period Comparison	35	160	9%
Global Snapshot	26	121	7%
Promotion and Discounts	37	104	6%
Promotion Itens	24	58	3%
Help Center	14	48	3%
Page2	9	33	2%
Uplift	18	24	1%
Help Center_PromotionAndDiscount	10	20	1%
Report usage	5	12	1%

Drill to user level


metric report Users Pages

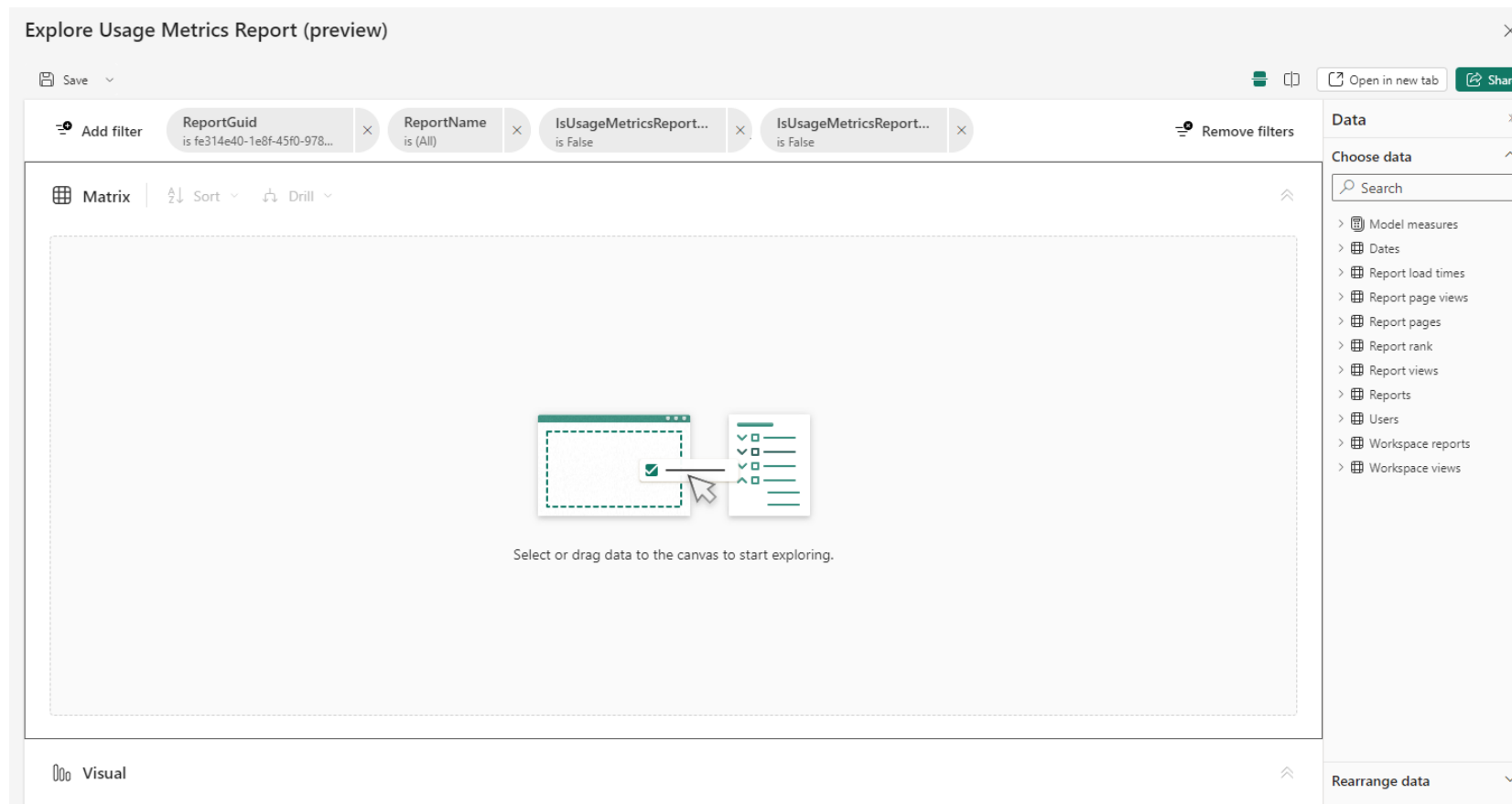
Page	Users	Views	Views %
Overview			
pumod@pandora.net	1	1	100%
extshiks@pandora.net	1	4	57%
extvekav@pandora.net	1	8	53%
aldba@pandora.net	1	1	50%
anffr@pandora.net	1	1	50%
ckreb@pandora.net	1	7	50%
crkli@pandora.net	1	1	50%
crurb@pandora.net	1	1	50%
jeda@pandora.net	1	1	50%
micb@pandora.net	1	1	50%



Usage metric report – E-com

New preview feature: Explore this data

 Explore this data



New dataset feature - exploration

Microsoft Power BI Blog

POWER BI

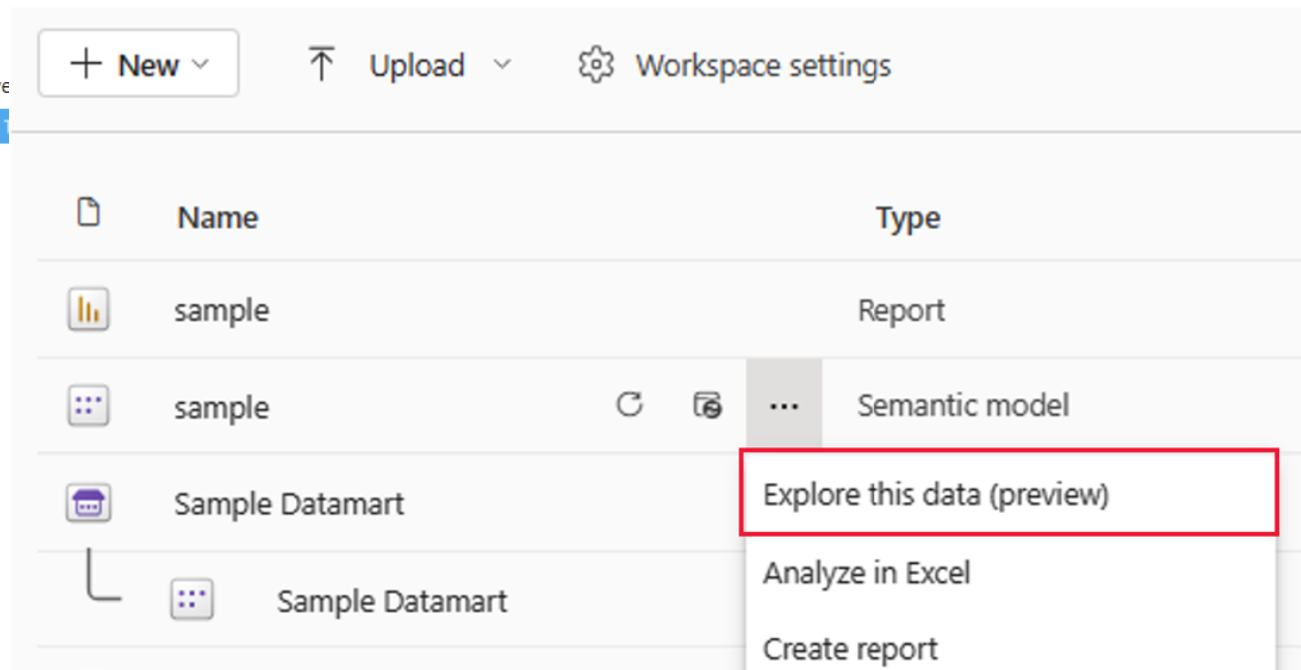
Introducing Explore (Public Preview)



Roseanne Levasseur

Nov 10 2019
Share

Explore Public Preview



The screenshot shows the Power BI workspace interface. At the top, there are buttons for '+ New', 'Upload', and 'Workspace settings'. Below this is a table with columns 'Name' and 'Type'. The table contains the following rows:

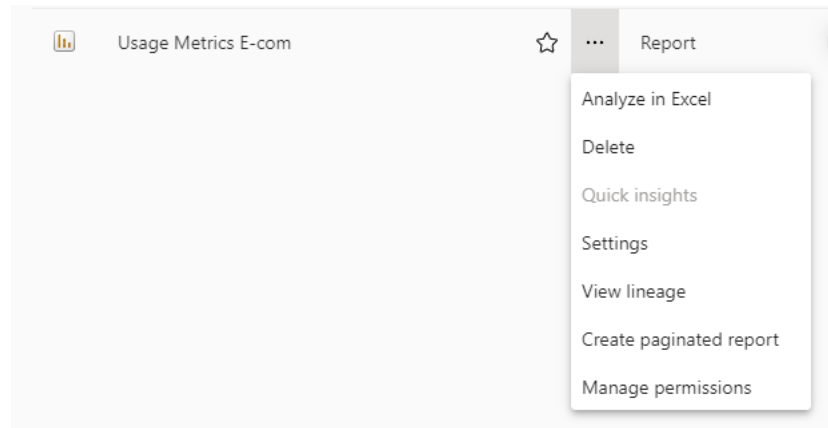
Name	Type
sample	Report
sample	Semantic model
Sample Datamart	
Sample Datamart	

The context menu for the 'sample' semantic model row is open, showing the following options:

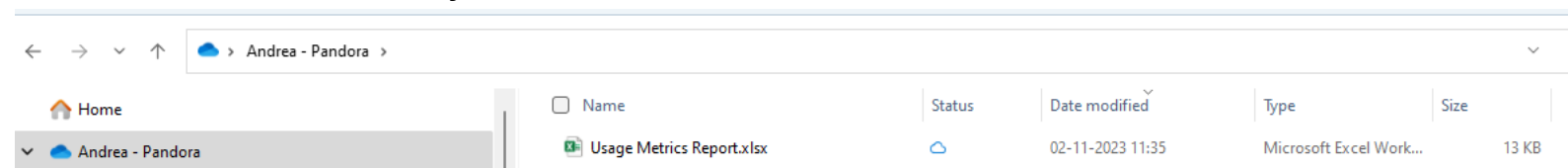
- Explore this data (preview)
- Analyze in Excel
- Create report

Analyze in Excel

- Access the dataset from Excel. Where the pages are?
- Report > Analyze in Excel > Open in Excel for the Web



The file is saved in my One Drive folder



Usage metric report

Demo:

Workspace: E-com

Report name: Ecom Promotion Analysis

Usage metrics report: Usage Metrics Ecom Promotion Analysis

- 1) View the report and the pages
- 2) View report's lineage
- 3) New preview feature > Explore this data. Save as exploration in the workspace
- 4) Analyze in Excel from your OneDrive

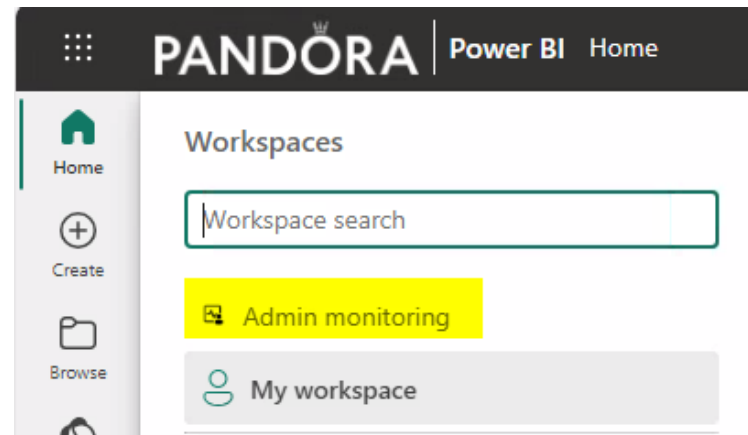
Usage metric report

- Dataset not visible. Accessible with some workaround
- A different metrics report is in each workspace. No global data
- Only 30 days of data
- Unclear data model
- Unfriendly names
- Refresh scheduled daily. Cannot be changed
- ...



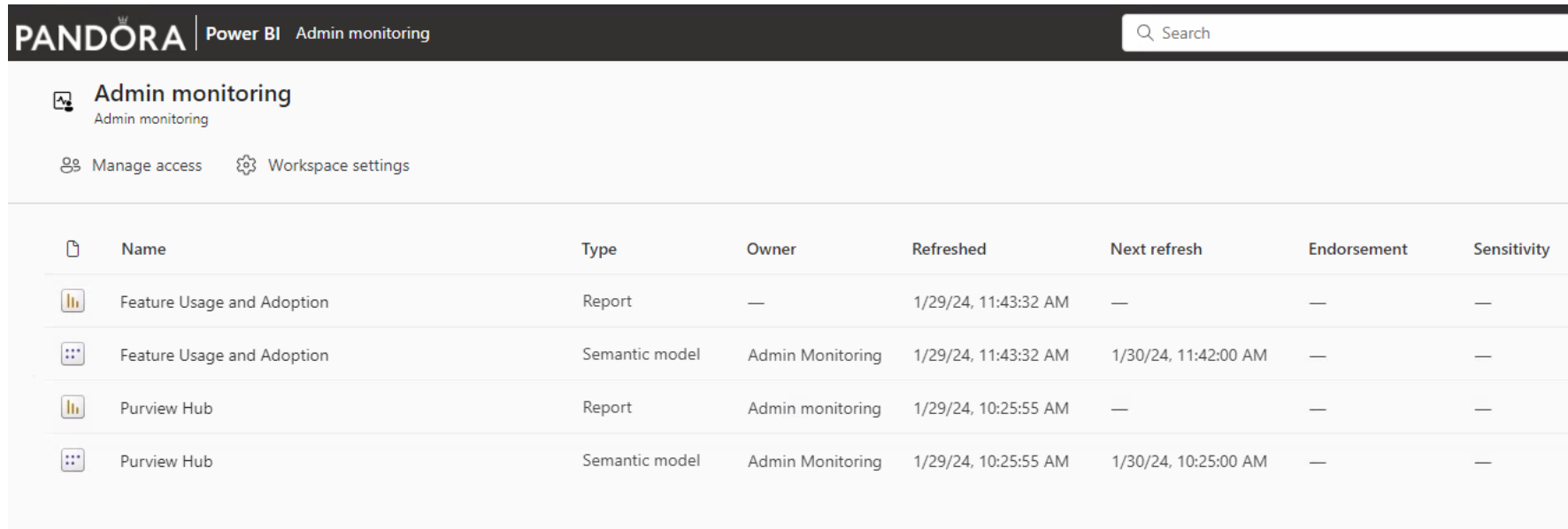
Admin monitoring workspace

If you have admin rights for your tenant, you have access to a dedicated "Admin monitoring" workspace



Admin monitoring workspace

Two default reports and semantic models are featured in the workspace



The screenshot shows the 'Admin monitoring' workspace in PANDORA. The interface includes a search bar and navigation options like 'Manage access' and 'Workspace settings'. Below is a table listing the workspace's contents:

Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity
Feature Usage and Adoption	Report	—	1/29/24, 11:43:32 AM	—	—	—
Feature Usage and Adoption	Semantic model	Admin Monitoring	1/29/24, 11:43:32 AM	1/30/24, 11:42:00 AM	—	—
Purview Hub	Report	Admin monitoring	1/29/24, 10:25:55 AM	—	—	—
Purview Hub	Semantic model	Admin Monitoring	1/29/24, 10:25:55 AM	1/30/24, 10:25:00 AM	—	—

None of them, actually contains details of pages navigation

Admin monitoring workspace

None of them, actually,
contains details of pages
navigation

Explore Feature Usage and Adoption (preview)

Save

Add filter

Matrix | Sort | Drill

Item type	Users
	1,268
App	23
Dashboard	131
DataExploration	3
Dataflow	16
Dataflow Gen2	5
Datamart	0
Dataset	410
Datawarehouse	4
Environment	2
EventStream	0
KustoDatabase	0
KustoEventHubDataConnection	0
KustoQueryWorkbench	0
Lakehouse	9
LakeWarehouse	7
MLExperiment	0
Pipeline	4
ReflexProject	0
Report	3,227
SparkJobDefinition	0
SynapseNotebook	6
Total	3,477

Other options

- Stepan Rešl blog <https://www.powerbiops.com/blog/usage-metrics-without-admin-api/>



How can I automate usage metrics without Admin APIs?

A guest post by Štěpán Rešl describing an approach to automated collection of Usage Metrics across many workspaces, without using the Admin APIs. This is highlighting a free solution that Štěpán has created to automate this workflow.



Štěpán Rešl
Sep 27, 2023 · 9 min read

PANDORA ^{!!!} custom solution

- Custom "embed report" webpart in SharePoint
- Event handlers in the webpart to catch user's activities: timestamp, user email, Report GUID, Page GUID, Page name
- Tracked as "custom event" in Application Insights: Report rendered, page viewed, visual accessed ...



PANDORA ^{!!!} custom solution



SharePoint. Custom webpart. Track down users activities.



Post the activities to **Application Insights** as custom events.



Save into a **Storage Account.**



Copy daily into **Synapse Analytics.**



Display with **Power BI.**



PANDORA ^{!!!} custom solution

Custom react js script to catch the events and push to Application Insights

```
if (this.context.pageContext.user.email == undefined || this.context.pageContext.user.email == null ||  
    this.context.pageContext.user.email == '') {  
    this._appInsightsReportLog.trackEvent({ name: 'Page Change',  
    properties: { userID:userID,  
                 email: this.context.pageContext.user.displayName, component: this.webpartName,  
                 "PageName": page.displayName, "Page GUID": page.name, "GroupID": this.properties.groupId,  
                 "ReportID": this.properties.reportId, "DashBoardID": this.properties.dashboardId, "ReportName": reportName } });  
}  
else  
    this._appInsightsReportLog.trackEvent({ name: 'Page Change',  
    properties: { userID:userID, email: this.context.pageContext.user.email, component: this.webpartName, "PageName": page.displayName, "Page
```

PANDORA ^{!!!} custom solution

There one caveat: it works only in SharePoint. If the report is accessed through Power BI Service or a direct link, the page is not tracked down.

But in Pandora, we are using a SharePoint portal called "**ATHENA**" as the Single Point of Access for all the **Enterprise** reports we deliver. Therefore, we are able to catch almost all the generated traffic.



PANDORA ^{!!!} custom solution

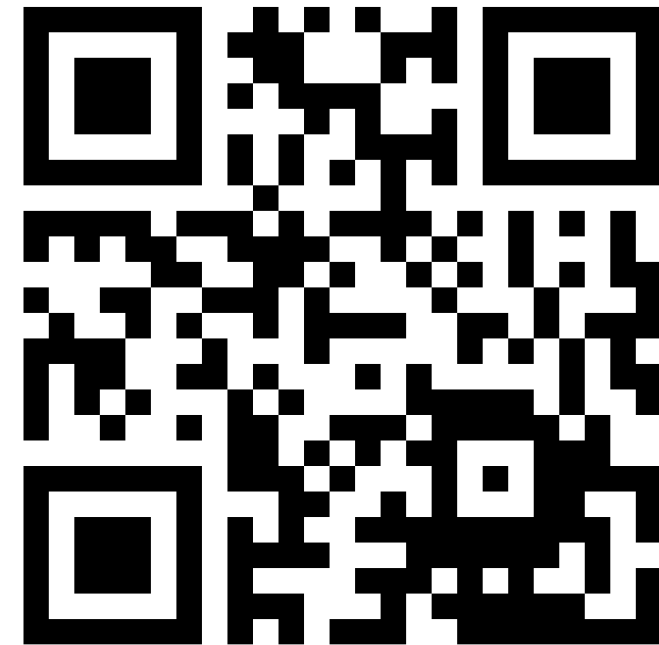
Demo

- Show the Power BI custom webpart in SharePoint
- Add a new report in ATHENA (Workspace "Power BI POC")
- Navigate the report and generate some traffic
- Show the traffic in Application Insights
- Show the table in the data warehouse and in the Power BI adoption report

Session evaluation



Event evaluation



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