

Benni De Jagere

Keeping up with your Power BI Tenant Administration

Westhill & 15:00PM

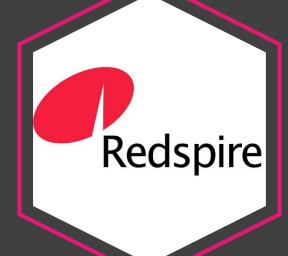
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Enterprise Data Architect

data Minds.be, Co-Leader



@BenniDeJagere



/bennidejagere



Data Platform

#SayNoToPieCharts







Hello, (Accidental) Tenant Admin!

Dedicated resources are not common

Overlap with M365 is often not the case

Plenty of admins are appointed by association

le. You're the 'SQL' person, so ..

Early experiences were based on trial and error

Community & Enterprise maturity has risen exponentially

Power BI is a moving target ©

Power BI End-To-End: Top Features, Key Integration Points & Related Services

Last Updated: January 4, 2021

Coates Data Strategies









Azure Data SQL DB Lake



Azure Dataverse Synapse



Files & Cloud Services Folders & APIs



Databases Spark & & NoSQL Hadoop



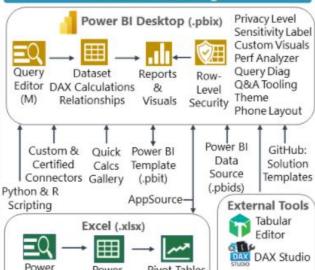
Dynamics Streaming 365 Data

• 7



SharePoint Excel & OneDrive

Content Authoring







VS SSDT

ALM Toolkit

+ Community

Azure Synapse Studio





T Teams

Power BI Personal

App for Teams

Embedded reports

Private chats

Link previews

Power

Power BI Report Server

Paginated

BI Report Report Workbook

Data Refresh | Shared Datasets

Subscriptions | Security

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Excel

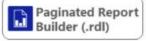


Dataset Streaming (QuickCreate) Dataset

Power BI Custom Development

REST APIs | .NET API | JavaScript API | Custom Visual SDK Tabular Object Model | Tabular Model Scripting Language Power BI Embedded | VS Code (PQ/M Ext)

Dataflow



Report Dashboard



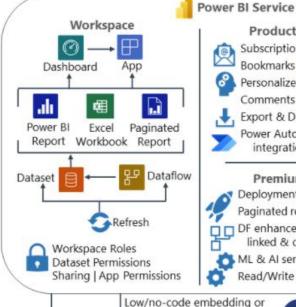
Storage of Authoring Files







Content Delivery, Collaboration & Sharing



Productivity Subscriptions & Alerts







& Data Discovery Datasets Hub

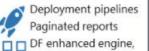
Governance

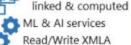




Azure Purview integration

Premium





full Javascript + REST APIs

Embedded Content

Internal portal or SharePoint

Public website

Power BI

Power BI

Analyze

in Excel

Mobile App

App for Windows

Power Apps

Scalability

Azure Synapse integration DirectQuery for PBI/AS

Composite models Aggregations Large models

Incremental refresh

Third party apps & services for management, modeling, debugging & querying

Related Services



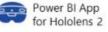


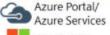












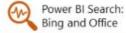












System Administration



Power BI Subscription M365 Audit Loa Power BI Capacity Licenses M365 Groups Power BI User Licenses: Pro and PPU



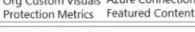
Azure Active Directory

Users | Groups | Guest User Access Azure AD Apps | Service Principals Conditional Access Policies & App Control Identity Governance | Terms of Use



Power BI Service Admin Center







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Power BI Premium

Premium: Per-User (PPU) & Capacity-Based Premium Capacity Settings & Workloads Premium Capacity Metrics App



Power BI Activity Log & API Data REST APIs | PowerShell | Azure CloudShell







On-Premises Data Gateway Power Platform Admin Center

Gateway Mgmt | Data Source Mgmt Policies | Administrators Standard Mode | Personal Mode Drivers | Custom Connectors





Power Automate, Azure Functions, Azure Logic Apps, Azure DevOps





What does a Tenant Admin do?





A Tenant Admin should strive to Empower and Enable a Data Culture in their organisation.

Restricting and disabling features means policies, processes, and people need to be able to handle incoming requests and guide along the way.



But they can't do it alone ©



What does a Tenant Admin do?





What does a Tenant Admin do?

Data Management

Data Governance

Security & Compliance

Change Management

Product Integration

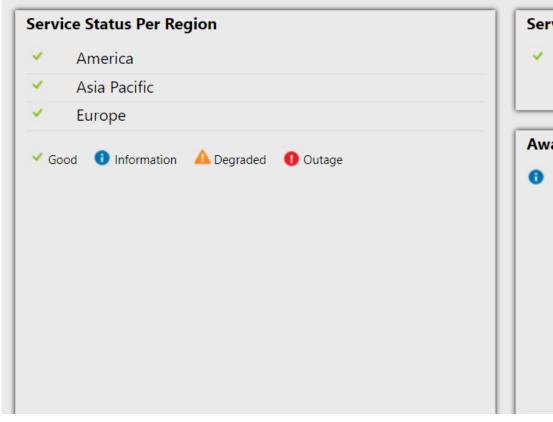
Problem Solving

But most importantly ..





Power BI Support



Service Outage/Degradation

✓ No known issues: Power BI is running smoothly

Awareness

- Power BI customers attempting to upgrade a workspace from the settings pane will be redirected to the home page instead of the upgrade UI. As a workaround customers can:
 - 1. Upgrade using the "Upgrade now" link in the banner.
 - 2. Open the report settings pane for any report within the workspace, close the pane, then try to upgrade from the workspace settings pane again.
 - 3. Ask a tenant or Power BI admin to upgrade the workspace from the workspaces page in the admin portal.
 - Engineers have identified the root cause and a fix is expected to be deployed by end-of-day 02/07/2021.



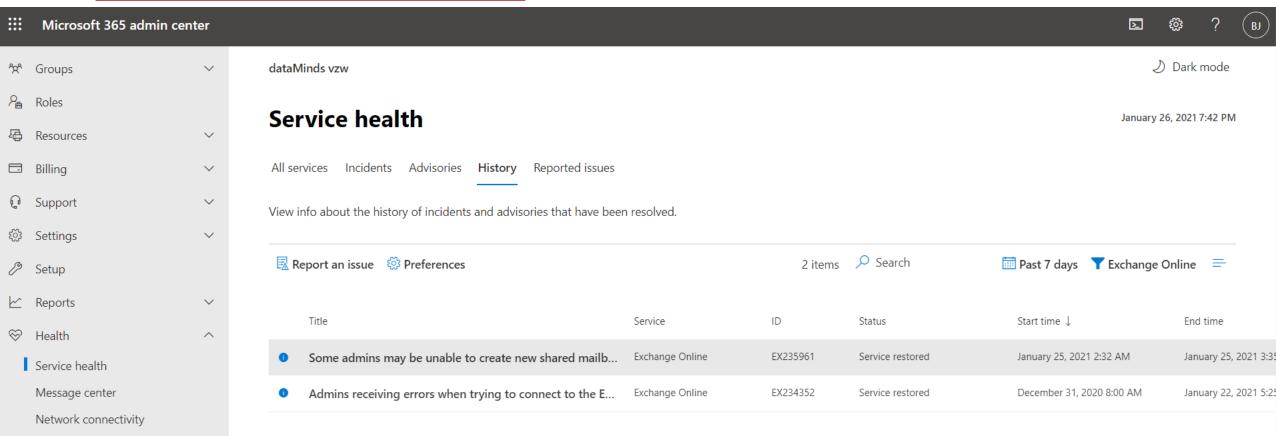
Azure Status

Refresh every							Good	1 Information	▲ Warning	X	Critical
2 minutes	~	,									

	America	s Euro	ope A	sia Pacific	Middle East and Africa			Azure Gove	ernment	Azure China			
PRODUCTS AND SERVICES	*NON- REGIONAL	EAST US	EAST US 2	CENTRAL US	NORTH CENTRAL US	SOUTH CENTRAL US	WEST CENTRA	AL WEST US	WEST US 2	CANADA EAST	CANADA CENTRAL	BRAZIL SOUTH	BRAZIL SOUTHEAST
COMPUTE													
Azure VMware Solution by CloudSimple		•				•		•					
Virtual Machines		•	•	•	•	•	•	•	•	•	•	•	•
SAP HANA on Azure Large Instances		•						•	•				
Windows Virtual Desktop	•												



Microsoft 365 Admin Center





Demo



Activity Log



The Treasure Trove, aka PBI Activity Log

Introduced December 2019 (LINK)

Alternative to Office 365 Audit Log

Data is retained for 30 days

Requires Power BI Admin or Global Admin privileges

Your key to many questions

MSFT Docs



Activity Log

Demo



Artefact Inventory



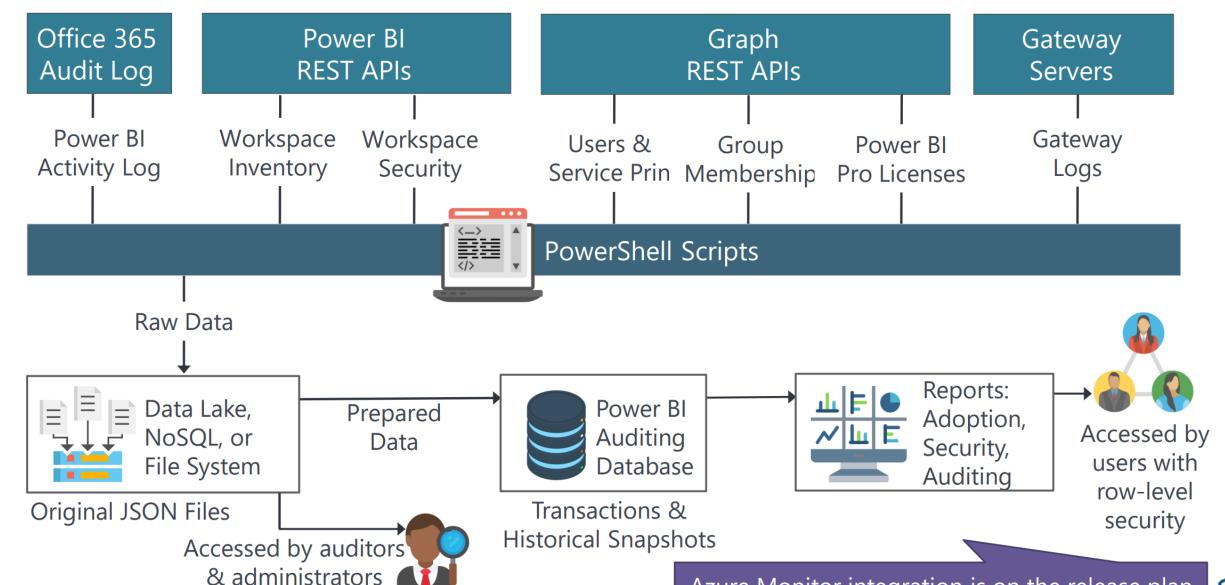
Artefact Inventory

Most artefacts can be extracted through APIs (or PowerShell)
Track details about under/heavily used artefacts

<u>Admin APIs</u> are your friend, especially \$expand

Service Principal is the road ahead

Typical Power BI Auditing Solution





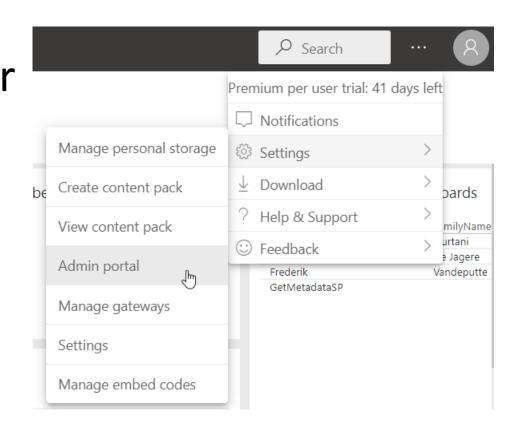
Artefact Inventory

Demo





Admin Portal to control behaviour
Document settings
Changes are not easily captured
Activity Log
Cloud App Security Center





Most settings can be scoped to:

Enable/Disable behaviour

Entire Organisation

Include/Exclude Groups

Mail-Enabled Security Groups work best

Info by Fourmoo

1	Create workspaces (new workspace experience) Unapplied changes
	Users in the organization can create app workspaces to collaborate on dashboards, reports, and other content. Even if this setting is disabled, an upgraded workspace will b created when a template app is installed.
	Enabled
	Apply to:
	○ The entire organization
	Specific security groups
	Enter security groups
	Except specific security groups
	Enter security groups



Pay special attention to:

- Workspace Settings
- Export and Sharing Settings
- Power BI Visuals



Demo





Tenant Setting to control custom visuals

Power BI visuals

- Allow visuals created using the Power BI SDK Enabled for the entire organization
- Add and use certified visuals only (block uncertified)
 Enabled for the entire organization

Users in the organization with permissions to add and use visuals can add and use certified visuals only. Visuals allowed in the "Organizational visuals" page are not affected by this setting, regardless of certification. <u>Learn more</u>



Apply

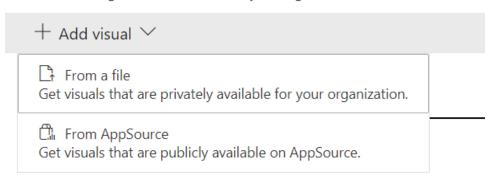
Cancel



Add visuals you trust and approve

Organizational visuals

Add and manage Power BI visuals for your organization. Learn more





Demo



Data Access



Who can access your data?

Access is determined by:

- Workspace Access
- Workspace App Access
- Manual Report Sharing
- Dataset Permissions (Build vs. Read)
- Row-Level Security



Who can access your data?

Workspace Admin, Member, or Contributor have:

- No RLS applied
- Implicit Build Permissions

Monitor key assets closely

An Admin (PBI/Global) can give access to anyone in all V2 Workspaces



Data Access

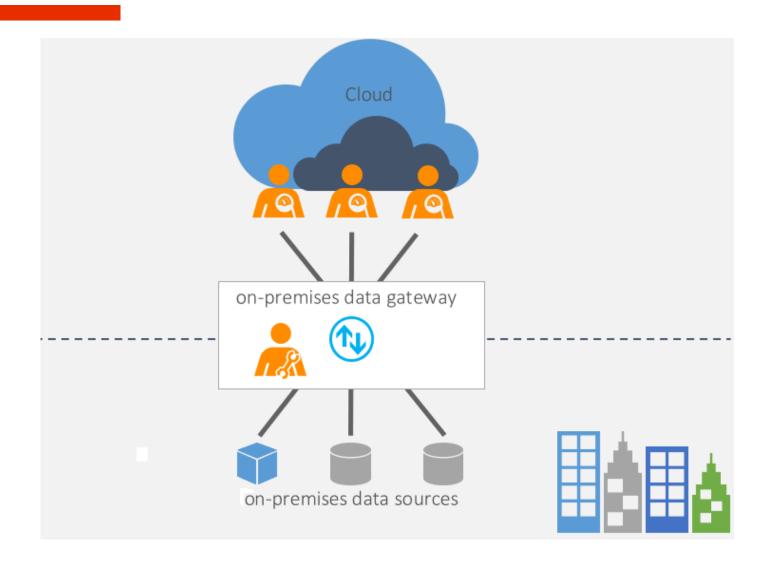
Demo



Gateways



Gateways





Gateways

Allow users that publish new datasets and reports to datasources

By default, any user can install personal and on-premises data gateways

Potentially, this opens up corporate data

Debate the policy for personal gateways in your organisation

Power Platform admin center



Gateways

Be aware of the resources your gateway machines need Query Folding (or lack thereof) has an impact



Power Platform Admin Center (Gateways)

Demo

07



Premium Per User

80



Premium Per User

Preview Feature, be careful with production dependencies

By default users can:

- Self-assign an In Product Trial Experience
- Create workspaces, and assign to a PPU Capacity



Premium Per User

Identify usage by:

- Get Workspace Inventory, correlate with Capacity Information
- Get License Information
- Track the Power BI Activity Log

My chase down the rabbit hole



Monitoring

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Monitoring (Easy mode)

Consider setting up simple alerts you want to follow-up Set up a dashboard tile, with simple count for your actions Possible actions to monitor closely:

- Changes to Tenant Settings
- Publish To Web
- In Product Trial Experiences
- Export Data
- Delete ..
- Create/Edit Gateway

Or build out an End-to-End Monitoring Solution ©



Keep updated

Power BI Roadmap

Power BI Blog

Power Platform Release Waves

Many community authors and iniatives

Pro Tip: Check the release date, as information ages quickly



Takeaways

10



Takeaways

Set up:

- An extraction process for the Power BI Activity Log
- Scoped Tenant Settings for key areas
- Alerting for external failures
- Alerting for internal usage
- Monitoring for creation and configuration of Data Gateways

Foster a Data Culture in your organisation
Try to keep yourself updated



Takeaways



The Self-Service BI Hoax



"Products and technology don't enable Self-Service BI, people and methodologies do"

Nimrod Avissar on LinkedIn Pulse



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in /bennidejagere
#SayNoToPieCharts







API

https://docs.microsoft.com/en-us/rest/api/power-bi

https://azure.microsoft.com/en-us/updates/power-bi-rest-api-tryit-tool/

https://docs.microsoft.com/en-us/power-bi/admin/read-only-apis-service-principal-authentication

https://github.com/sqlchick/Presentations/tree/main/Power-BI-Activity-Log-And-REST-APIs

https://github.com/itsnotaboutthecell/PowerBI-cmdlets

https://github.com/SQLvariant/Demos/tree/master/Presentations/PowerShell-for-PowerBl

https://www.fourmoo.com/2021/01/06/you-can-now-view-the-power-bi-rest-api-calls-via-the-audit-log/



BI Elite - Admin View (Part 1 - 4)

https://www.youtube.com/watch?v=cTqFNg_y9lw

https://www.youtube.com/watch?v=2RZkc_qrV1g

https://www.youtube.com/watch?v=Z4E2jSZ4r6A

https://www.youtube.com/watch?v=BxKIJL5baAU



Power BI Administration

https://www.coatesdatastrategies.com/presentations/#What-You-Need-To-Know-To-Administer-Power-BI

https://www.amazon.co.uk/Pro-Microsoft-Power-Administration-Intelligence/dp/1484265661/ref=sr 1 1?dchild=1&keywords=Pro+Microsoft+Power+BI+Administration&qid=1611771199&sr=8-1



Governance & Data Culture

https://www.coatesdatastrategies.com/power-bi-deployment-and-governance

https://data-marc.com/2020/06/04/power-bi-govern-feature-implementation-in-phases/

https://data-marc.com/2020/04/13/power-bi-governance-why-you-should-consider-to-disable-export-to-excel/

https://www.powerbisentinel.com/

https://ssbipolar.com/building-a-data-culture/



Power BI Whitepapers

https://aka.ms/PBIEnterpriseDeploymentWP

https://docs.microsoft.com/en-us/power-bi/guidance/whitepaper-powerbi-premium-deployment

https://docs.microsoft.com/en-us/power-bi/admin/service-admin-power-bi-security



Gateways

https://medium.com/microsoftazure/on-premises-data-gateway-monitoring-series-part-0-why-should-i-care-about-monitoring-b8211ce428



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Data Platform

#SayNoToPieCharts







Thank You