Keeping up with your Power BI Tenant Administration



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About me



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Data Platform



#SayNoToPieCharts

Hello, (Accidental) Tenant Admin!

Dedicated resources are not common, especially in SMBs

Overlap with M365 is often not the case

Plenty of admins are appointed by association

Ie. 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



M365 Audit Log

System Administration

Power BI User Licenses: Pro and PPU

Users | Groups | Guest User Access

Azure AD Apps | Service Principals

Identity Governance | Terms of Use

Power BI Service Admin Center

Org Custom Visuals Azure Connections

Protection Metrics Featured Content

Premium: Per-User (PPU) & Capacity-Based

Premium Capacity Settings & Workloads

Premium Capacity Metrics App

Power BI Capacity Licenses M365 Groups

Conditional Access Policies & App Control

Custom Branding

Embed Codes

Gateway Mgmt

Microsoft 365

Tenant Settings

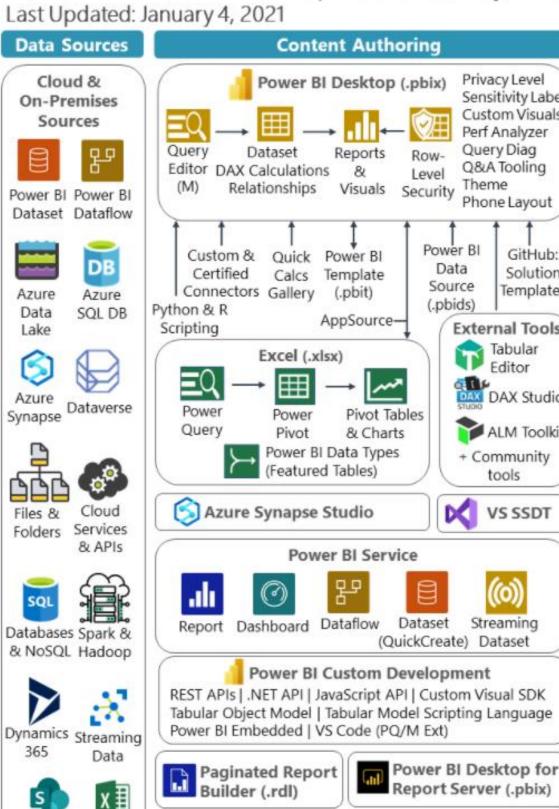
Dataflow Settings

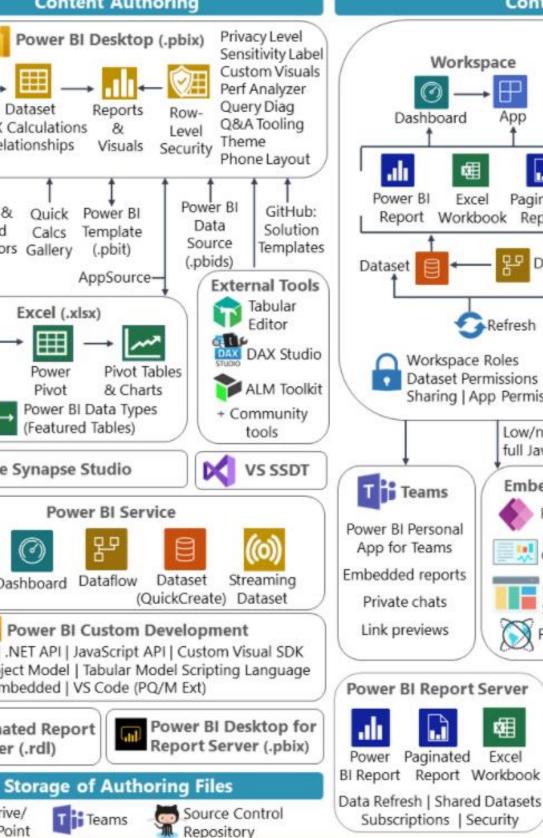
Power BI Premium

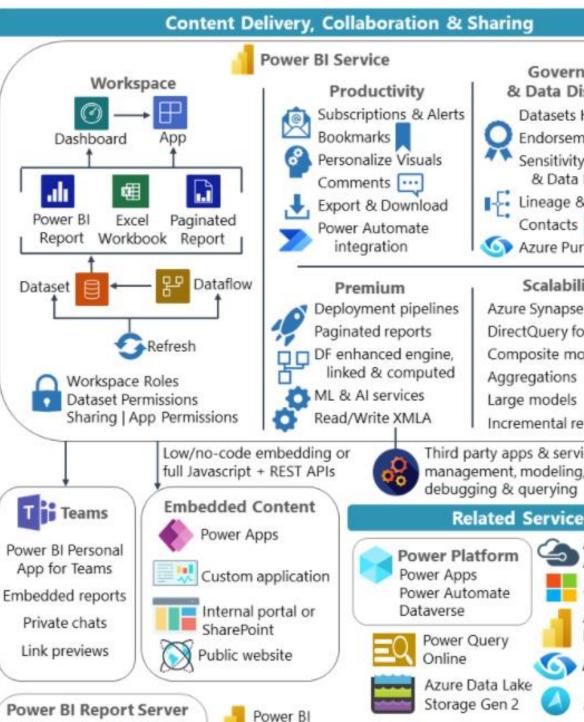
Workspaces

Power BI Subscription

Azure Active Directory







Mobile App

App for Windows

Power BI

Analyze

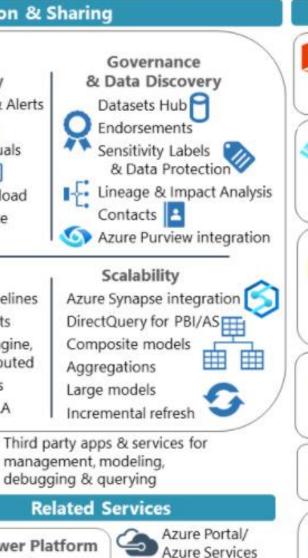
in Excel

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Excel

Report Workbook

Paginated



Azure Maps

Azure Machine

Azure Cognitive

Power BI Search:

Bing and Office

Learning

Services

Azure Premium

Azure Synapse

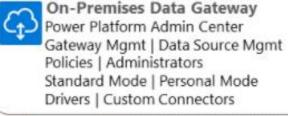
Power BI App

for Hololens 2

Files

Analytics











OneDrive/

SharePoint

Teams

SharePoint Excel

& OneDrive

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?

Data Management

Data Governance

Security & Compliance

Change Management

Product Integration

Problem Solving

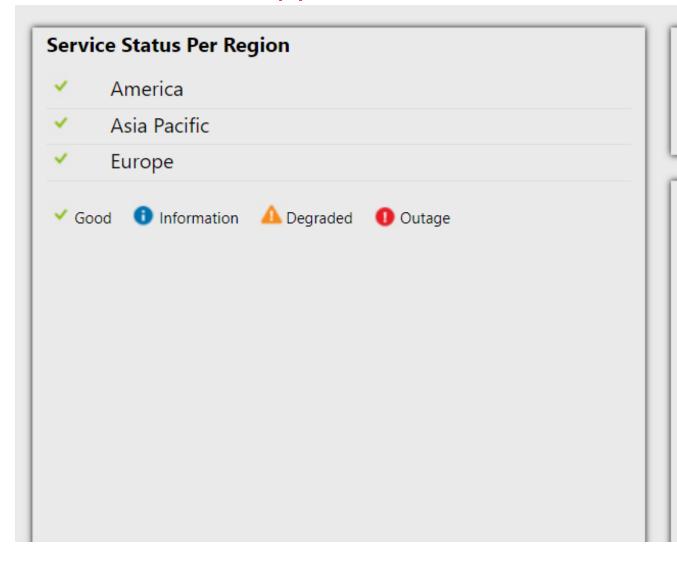
But most importantly ...

What does a tenant admin do?





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.

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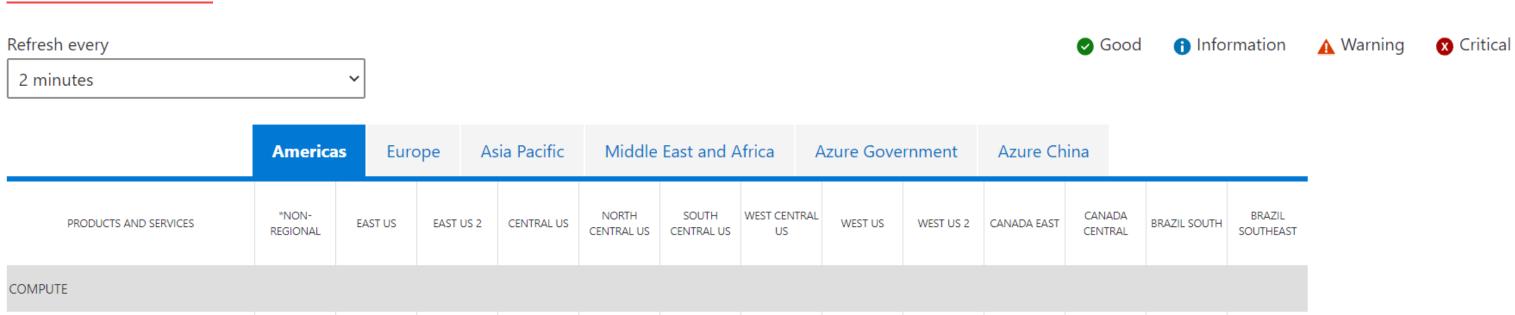
Azure Status

Azure VMware Solution by CloudSimple

SAP HANA on Azure Large Instances

Virtual Machines

Windows Virtual Desktop



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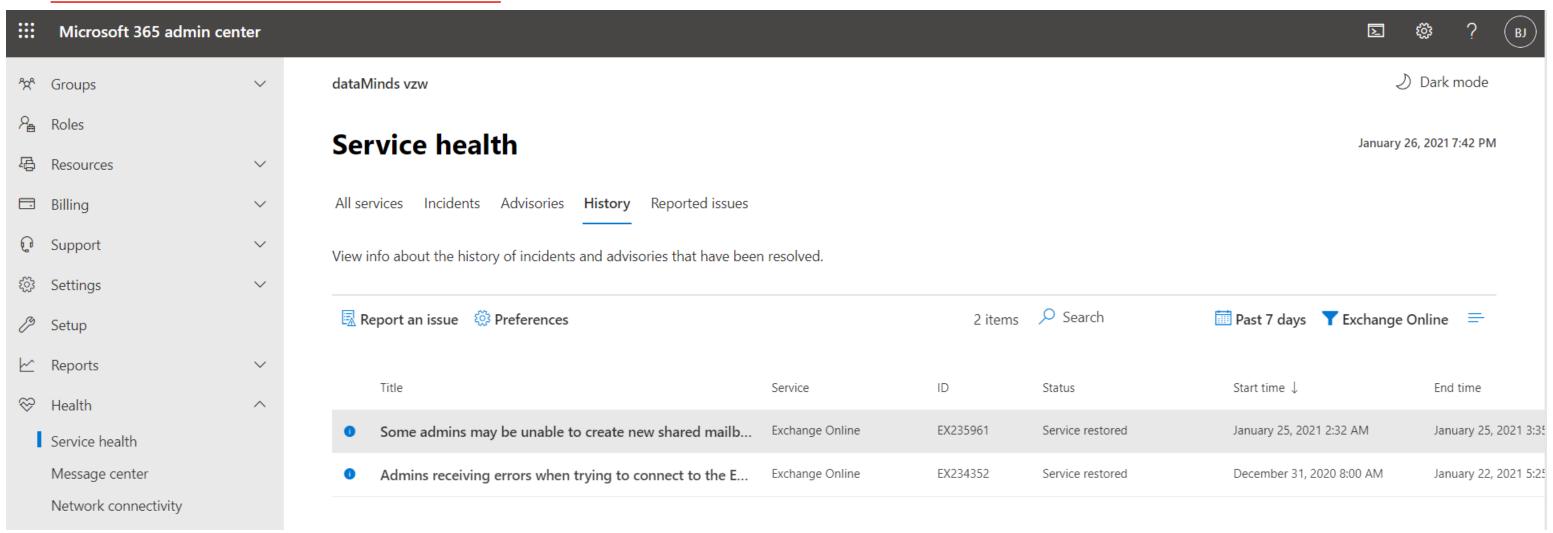
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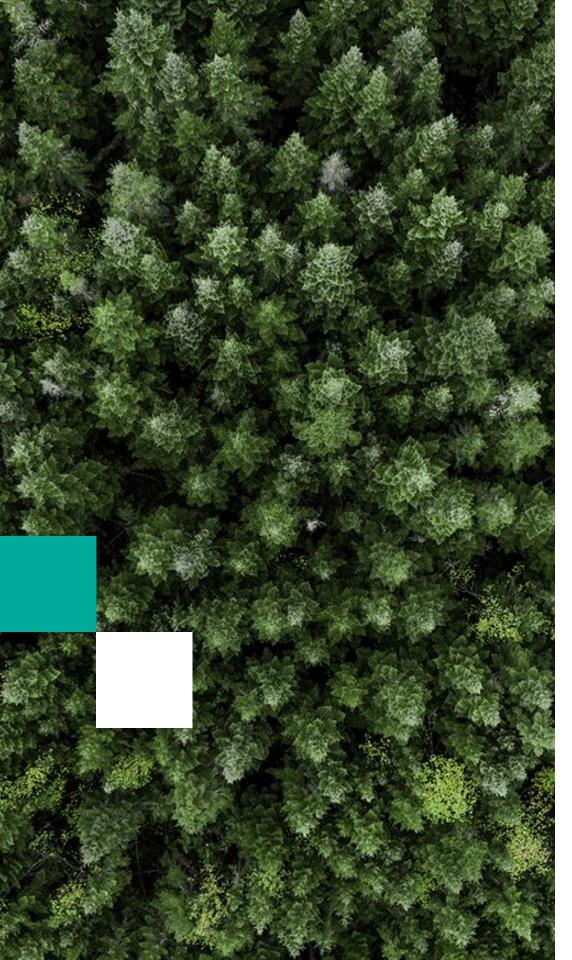
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Microsoft 365 Admin Center





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



Artefact Inventory

The Nugget Factory, aka PBI Artefacts

Most artefacts can be extracted through APIs (or PowerShell)

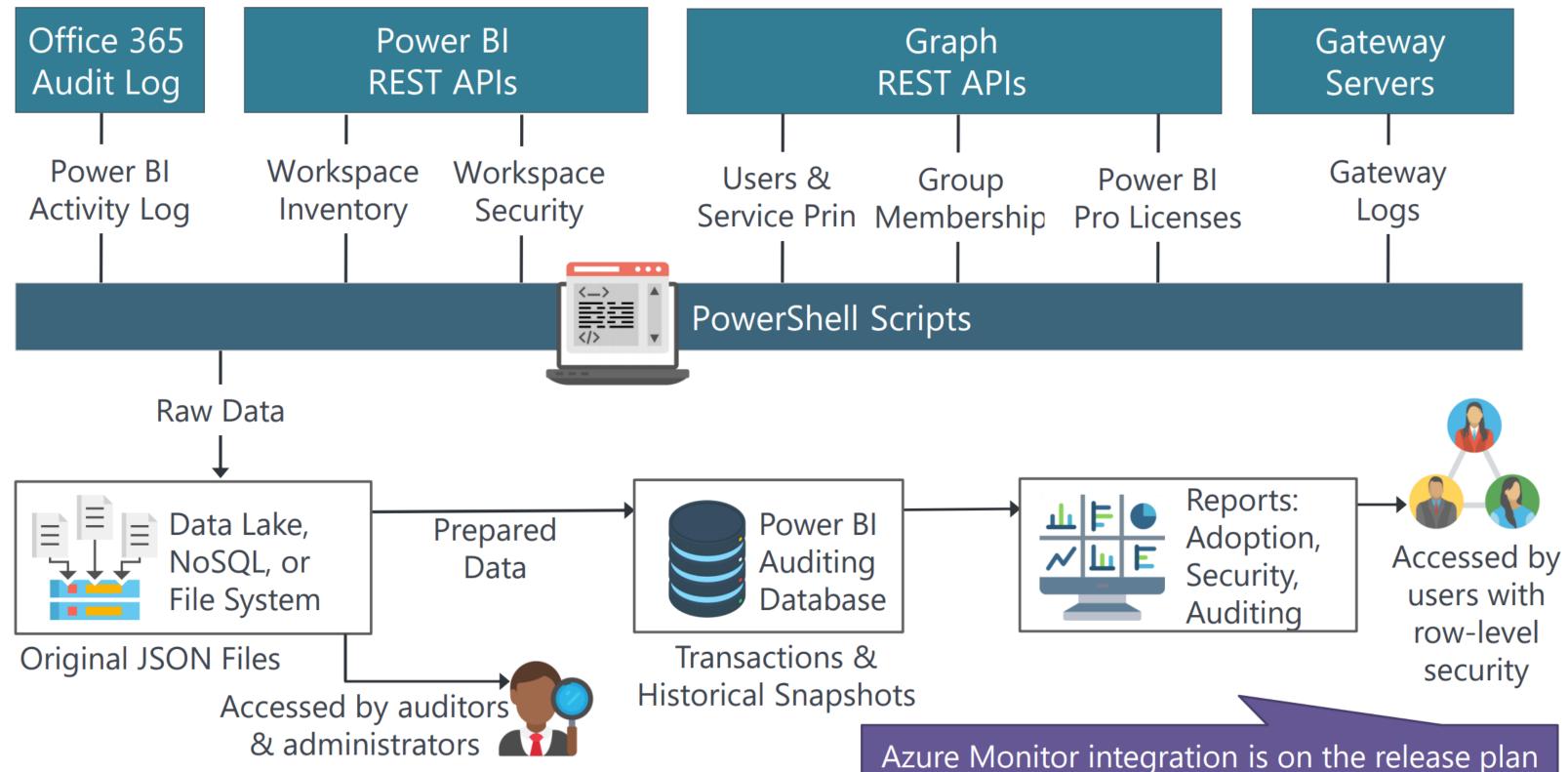
Track details about under/heavily used artefacts

Admin APIs are your friend, especially \$expand

Lineage (Scanner) APIs is where the nuggets are.

Service Principal is the road ahead

Typical Power BI Auditing Solution





Artefact Inventory

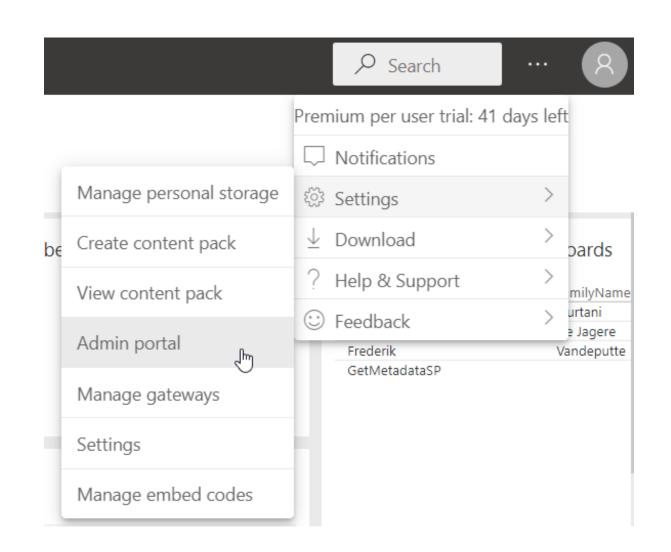


Admin Portal to control behaviour Document settings

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

4	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 be 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
	Apply Cancel

Pay special attention to:

Workspace Settings

Export and Sharing Settings

Power BI Visuals





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. Learn more



Apply

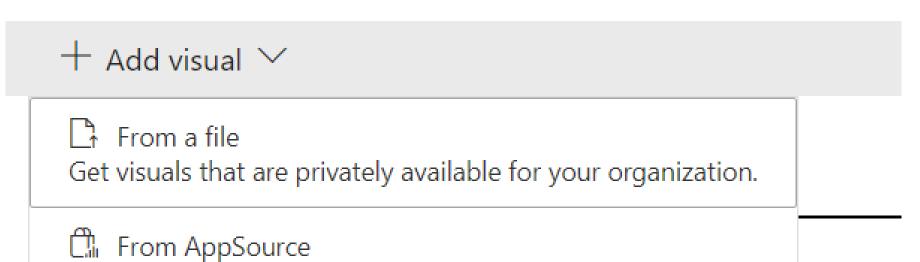
Cancel

Add visuals you trust and approve

Organizational visuals

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

Get visuals that are publicly available on AppSource.







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

Object-Level Security (Preview since Feb. 2021)

Who can access your data?

Workspace Admin, Member, or Contributor have:

No RLS/OLS applied

Implicit Build Permissions

Monitor key assets closely

An Admin (PBI/Global) can give access to anyone in all New (v2) Workspaces

Who can access your data?

For a global overview, use:

Lineage (Scanner) APIs, with \$getArtifactUsers

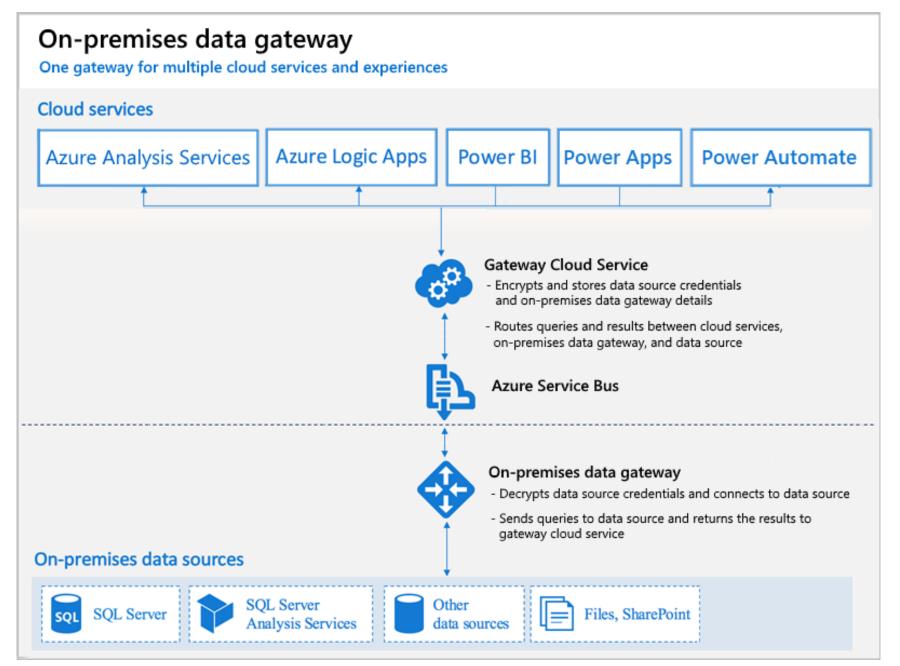
Specific APIs for Reports, Apps, Dashboards

(Ie. GetAppUsersAsAdmin)



Gateway

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 a large impact The gateway machine will perform the heavy lifting on dataset refreshes using the gateway



Power Platform Admin Center (Gateways)



Monitoring

Monitoring

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 ©



Premium Per User (BONUS)

Premium Per User

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



Takeaways

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

Stay 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



The Self-Service BI Hoax

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

Nimrod Avissar on LinkedIn Pulse

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-PowerBI

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 Log Analytics Starter Kit (Nassim Kasdali)

https://github.com/kasdali/pbila

Power BI Monitor (Rui Romano)

https://github.com/RuiRomano/pbimonitor

Power BI Whitepapers, Roadmaps, Frameworks

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

https://docs.microsoft.com/en-us/power-bi/guidance/center-of-excellence-establish

https://github.com/pbiaf/powerbiadoption

https://docs.microsoft.com/en-us/power-bi/guidance/powerbi-adoption-roadmap-overview

Gateways

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

https://medium.com/microsoftazure/on-premises-data-gateway-monitoring-series-part-1-standard-log-files-2a339df746a8

https://medium.com/microsoftazure/on-premises-data-gateway-monitoring-series-part-2-cpu-counters-99631a0a5b17

https://medium.com/microsoftazure/on-premises-data-gateway-monitoring-series-part-3-ram-counters-7e676c0b340b

https://medium.com/microsoftazure/on-premises-data-gateway-monitoring-series-part-4-query-logs-explained-9d2baad13678

About me



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Data Platform



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