Embedding Power BI reports in your own portal



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Bmatix Belgium and Luxembourg

Founded **2010**

Kontich
Genk
Heusden
← Belgium
Luxemburg

Offices **4**

Financials **>7.5M €**

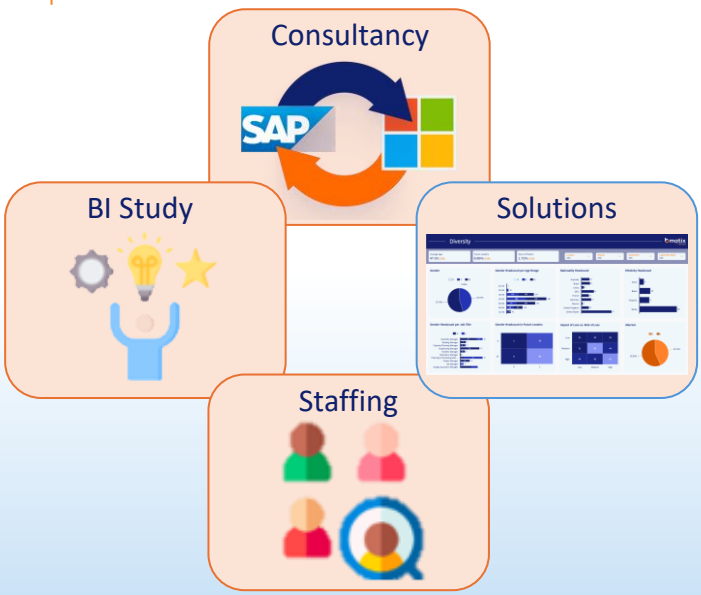
Headcount → **>74**
Belgium ±60
Luxemburg ±14

>8 yrs Average experience

Active Customers → **>70**
Belgium
Luxemburg
The Netherlands
Switzerland

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What we do



Microsoft

Microsoft Dynamics 365 Business Central

odoo

sdworx

= exact Online

SAP Business One

SAP to Microsoft Extractor

SAP

SAP Analytics Cloud Working Capital

SAP S/4 HANA Go Beyond Analytics

SAP Analytics Cloud Demand Planning

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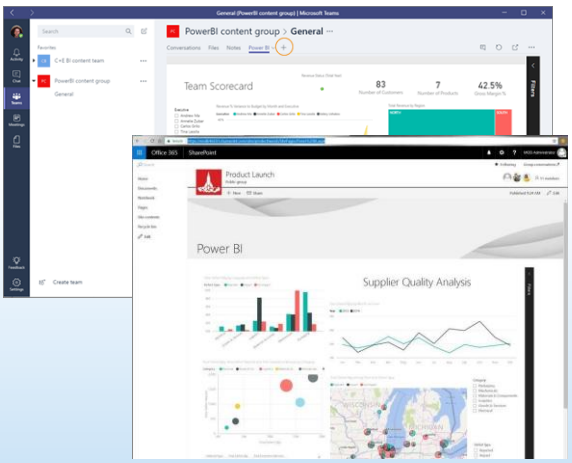
What is Power BI Embedded Analytics: Use case

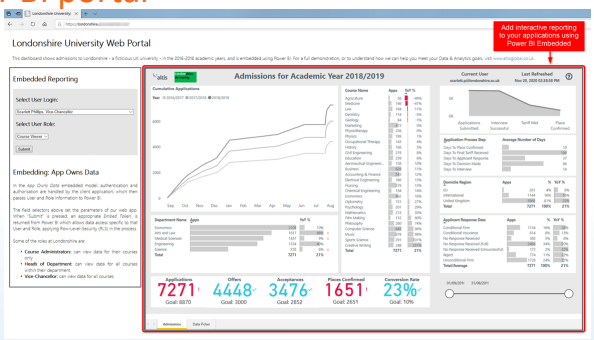
- Retail chain
- Internal users have no or minimal communication with corporate
  - Need to view sales reports
  - Need to view stock reports
- External users/Customers have no communication with corporate
  - Need to view stock reports

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What is Power BI Embedded Analytics

- Embedding a report outside of Power BI portal





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Different kinds of embedding

- Embedding in your organization
  - Sharepoint: Power BI test
  - Teams
  - Dynamics
- Embedding in a custom application San Francisco GOV
  - Custom client portal: Power BI in Your Apps | Microsoft Power BI

Embed for your customers	Embed for your organization
Also known as **app owns data**	Also known as **user owns data**
Aimed at external users	Aimed at internal users
To authenticate app users, use your own authentication method	App users authenticate against Azure AD
App users don't need a license	Each app user needs a Power BI license
Non-interactive authentication. Your app uses a *service principal* or a *master user* to authenticate	Interactive authentication. Your app uses the app user's credentials to authenticate

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Different kinds of embedding: Embedding in a custom application

- Pro's
  - User only needs to login in custom application
  - Application manages security and can be used in Power BI
  - No Power BI license needed for report viewers
  - No knowledge of Power BI needed by users
- Cons
  - A bit of development needed
  - API knowledge needed
  - Not for enterprise wide use (not a replacement for Power BI premium)

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Pricing

- Power BI Premium P
- Power BI Embedded A
- Fabric F

Node Type	Virtual Cores	Memory	Price
A1	1	3 GB RAM	€0.9310/hour
A2	2	5 GB RAM	€1.8545/hour
A3	4	10 GB RAM	€3.7164/hour
A4	8	25 GB RAM	€7.4401/hour
A5	16	50 GB RAM	€14.8876/hour
A6	32	100 GB RAM	€29.7831/hour
A7	64	200 GB RAM	N/A
A8	128	400 GB RAM	N/A

Price
€679.6076/month
€1,353.7545/month
€2,712.9021/month
€5,431.2648/month
€10,867.9227/month
€21,741.6429/month
N/A
N/A

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Embedding Setup Power BI: What do you need

- Power BI pro account
- Premium/Fabric capacity workspace
- Published report
- App registration rights on Azure Active Directory + Admin to consent
- The ability to add code to your application

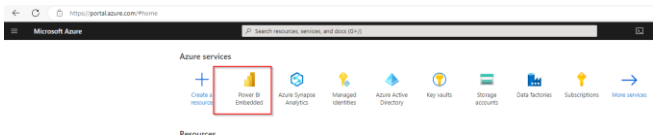
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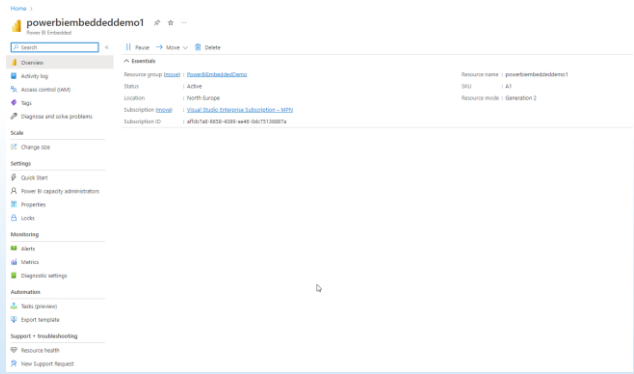
Embedding Setup Power BI

- Create Power BI embedded capacity
- Allow service principals to use Power BI APIs
- App registration
- Set up Premium workspace
- Publish report
  - Give member access to workspace in Power BI

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Create Power BI embedded capacity

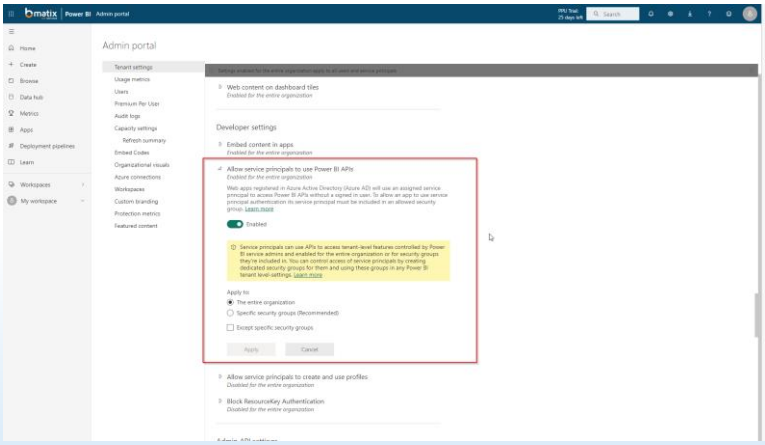




Create Embedded Resource group.mp4

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Allow service principals to use Power BI APIs

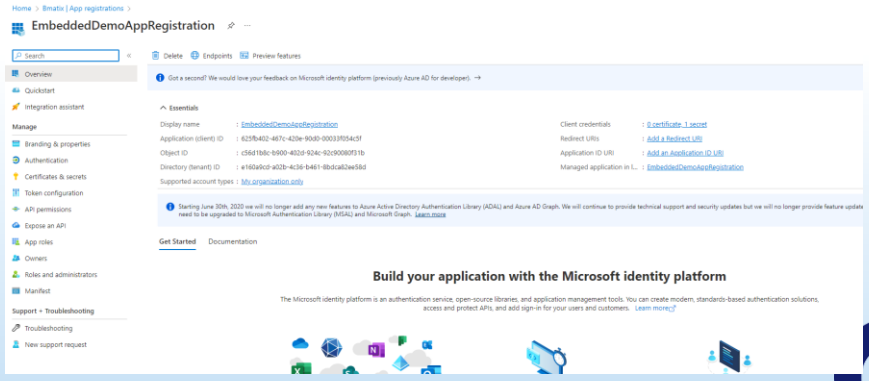


Create Embedded Resource group.mp4

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App registration

- Create app
- Create secret
- Grant API permision to read reports

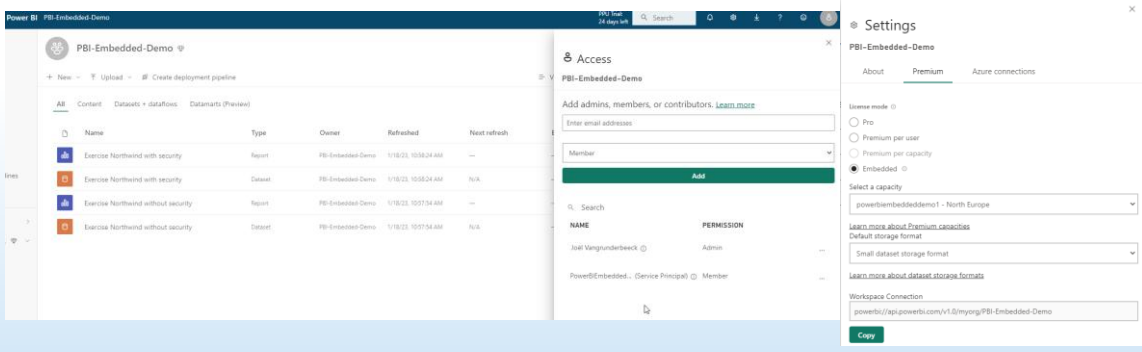


3 Create App Registration.mp4

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Create premium workspace

- Create premium workspace with embedded capacity
- Add App as member to workspace

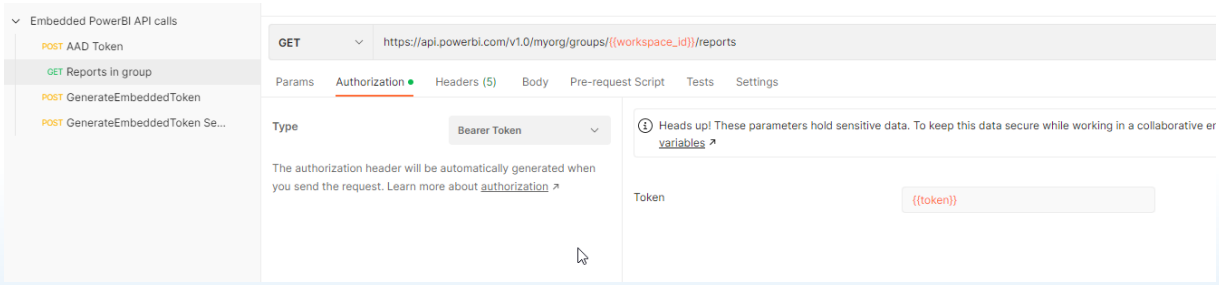


4 Create premium workspace.mp4

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API Calls: Report without security

- GET Reports in group

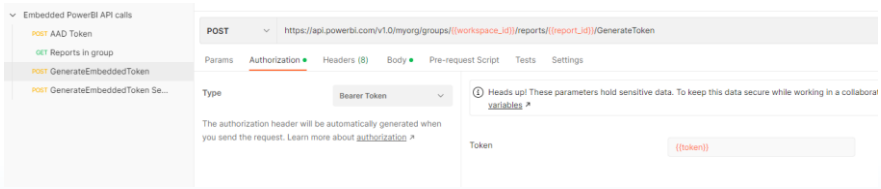


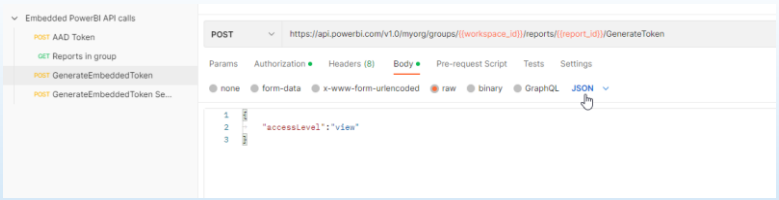
5.2 Reports in group.mp4

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API Calls: Report without security

- POST GenerateEmbeddedToken





5.3 Generate Embedded token without security.mp4

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API Calls: Power BI playground

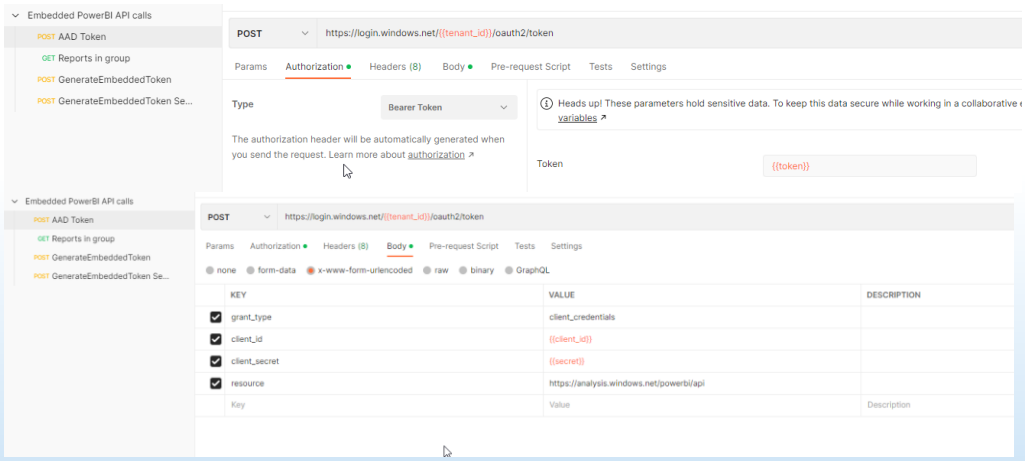
- https://playground.powerbi.com/en-us/
- Generate code for application

6 Power BI Playground.mp4

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API Calls: Report with security

- POST AAD Token

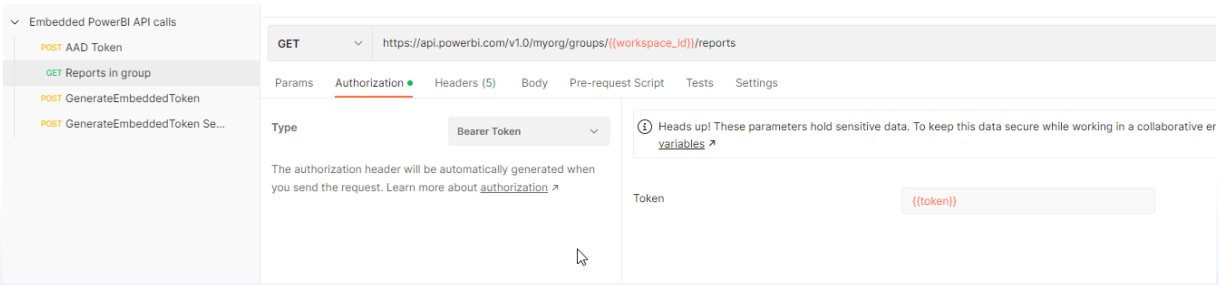


7 Report with securityu.mp4

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API Calls: Report with security

- GET Reports in group

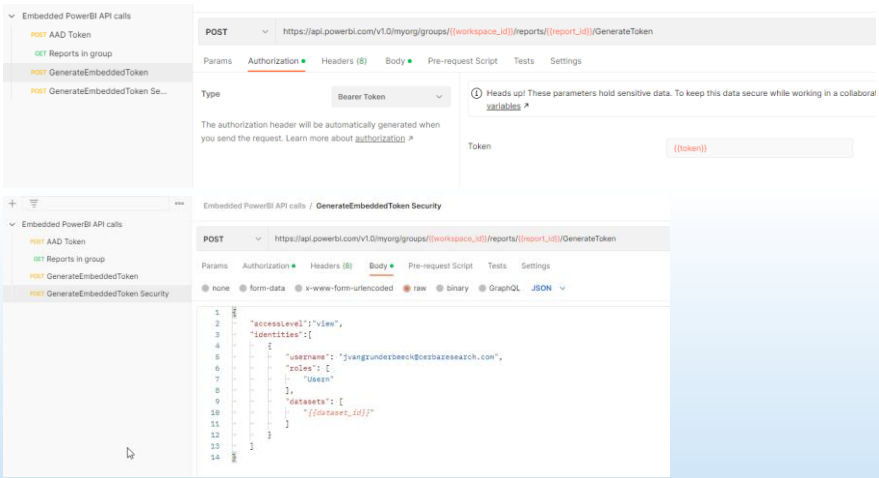


7 Report with securityu.mp4

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API Calls: Report with security

- POST GenerateEmbeddedToken



7 Report with securityu.mp4

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Power BI Embedded new features

Released

- Using Microsoft fabric capacity

Private preview

- Automation using Fabric API's
- Power BI embedded with Direct lake semantic model

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Act informed

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