

# Reference Guide

# Datawareness

# BI Endpoints

*Simplified API Access for Business Central Data*

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# 1. Introduction

Dataawareness BI Endpoints is a free extension for Microsoft Dynamics 365 Business Central that provides a comprehensive set of API endpoints designed specifically for extracting data for business intelligence and analytics.

Traditional Business Central API access often requires complex queries and deep knowledge of the Business Central data model. BI Endpoints simplifies this by providing pre-built, optimized API pages that expose commonly needed data in a format ready for analytics and reporting.

## 1.1 Key Features

- Pre-built API endpoints
- Optimized for business intelligence workloads
- Compatible with Power BI, Microsoft Fabric and other BI tools
- Free to use, install from Microsoft AppSource
- Consistent naming conventions and data structures
- Built-in support for incremental data extraction

## 1.2 Use Cases

- Building Power BI dashboards directly connected to Business Central
- Loading Business Central data into Microsoft Fabric lake houses
- Creating data warehouses with Business Central as a source system
- Integrating Business Central data with other analytics platforms
- Automating data extraction for reporting purposes



## 2. Getting Started

This section guides you through the complete setup process to start using Dataawareness BI Endpoints with your Business Central environment.

### 2.1 Install Extension from AppSource

Follow these steps to install the application from Microsoft AppSource:

1. Navigate to [Microsoft AppSource](#)
2. Search for "Dataawareness BI Endpoints"
3. Click "Get it now" and sign in with your Microsoft account
4. Select the Business Central environment where you want to install the extension
5. Review and accept the permissions required by the extension
6. Wait for the installation to complete (this may take a few minutes)

Alternatively, you can install directly from within Business Central:

1. Open Business Central and navigate to the Extension Management page
2. Click "Marketplace" in the ribbon
3. Search for "Dataawareness BI Endpoints" and select the extension
4. Click "Install" and follow the prompts

### 2.2 Activate subscription

Follow these steps to activate the free subscription with Dataawareness.

1. In Business Central navigate to "Dataawareness BI Endpoints Setup".
2. Fill out Admin Name and Admin Email.
3. Click "Create Subscription" and select Free tier.



## 2.3 Azure App Registration Setup

To authenticate API calls to Business Central, you need to create an Azure App Registration in Microsoft Entra ID (formerly Azure Active Directory).

### Create the App Registration

1. Sign in to the [Azure Portal](#)
2. Navigate to Microsoft Entra ID > App registrations
3. Click "New registration"
4. Enter a name for your application (e.g., "Business Central API Access")
5. Select "Accounts in this organizational directory only" for supported account types
6. Leave the Redirect URI blank for now (not needed for API access)
7. Click "Register"

### Configure API Permissions

1. In your new app registration, go to "API permissions"
2. Click "Add a permission"
3. Select "Dynamics 365 Business Central"
4. Choose "Application permissions"
5. Select the following permissions:
  - API.ReadWrite.All
6. Click "Add permissions"
7. Click "Grant admin consent for [Your Organization]"

### Create a Client Secret

1. Go to "Certificates & secrets"
2. Click "New client secret"
3. Enter a description and select an expiration period
4. Click "Add"
5. Copy the secret value immediately (it will not be shown again)

**Note:** Store the client secret securely. You will need it along with the Application (client) ID and Directory (tenant) ID for authentication.



## 2.4 Configure Business Central Permissions

After creating the Azure App Registration, you need to register the Azure Entra application in Business Central and assign appropriate permissions.

### Register the Entra Application

1. Open Business Central and search for "Microsoft Entra Applications"
2. Click "New" to create a new entry
3. Enter the Client ID from your Azure App Registration
4. Enter a description (e.g., "Business Central API Access")
5. Set the State to "Enabled"

### Assign Permission Sets

Grant the application appropriate permissions based on which endpoints you need to access:

- D365 READ - For read access to most Business Central data
- D365 FULL ACCESS - For comprehensive access (use with caution)
- DTW BI ENDPOINTS – For access to the API endpoints included in the app
- Additional custom permission sets as needed for specific modules

**Note:** Follow the principle of least privilege. Only grant the permissions necessary for your use case.



## 3. Endpoint Reference

This section provides detailed documentation on how to work with the endpoints available from the Dataawareness BI Endpoints application.

### 3.1 Construction of URL

This is a sample URL – broken down, to describe the individual parts:

```
https://api.businesscentral.dynamics.com/v2.0/{{tenantid}}/{{environment}}/api/dataawareness/endpoints/v1.0/companies({{companyid}})/glEntries?$filter=postingDate%20ge%202026-01-01
```

Dynamics Business Central base url, where {{tenantid}} should be replaced with the specific GUID of the BC implementation, and {{environment}} should be replaced with the environment to reach fx. Production:

```
https://api.businesscentral.dynamics.com/v2.0/{{tenantid}}/{{environment}}/api/
```

The root for this specific application:  
dataawareness/endpoints/

The current version of the endpoints:  
v1.0/

Specification of which BC company to get data from, where {{companyid}} should be replaced with the GUID of the relevant company:  
companies({{companyid}})/

The specific entity set name, from this application, to request data from:  
glEntries

Optional filter parameters:  
?\$filter=postingDate%20ge%202026-01-01

### 3.1 Authentication

Always include Bearer token when requesting data from a Business Central web service. See 4.1 Testing with Postman for details.



## 3.2 Filter expressions

All endpoints can be queried with a **\$filter** parameter on almost any of the fields available in the dataset returned from the endpoint.

For example query GL Ledger Entries posted since 2026-01-01

```
GET
https://api.businesscentral.dynamics.com/v2.0/{{tenantid}}/{{environment}}/
api/dataawareness/endpoints/v1.0/companies({{companyid}})/glEntries?$filter=
postingDate%20ge%202026-01-01
```

**Note:** Use the [Microsoft reference](#) for additional filter expressions.

## 3.3 Pagination

In case the requested query contains more data than the max 20.000 rows returned, there will be an additional key / value pair called “@odata.nextLink”. The value is the next page for this specific query. To accumulate the complete dataset, keep calling the URL specified in @odata.nextLink until that key is no longer returned.

```
"@odata.nextLink":
https://api.businesscentral.dynamics.com/v2.0/{{tenantid}}/{{environment}}/
api/dataawareness/endpoints/v1.0/companies({{companyid}})/glEntries?$filter=
postingDate%20ge%202026-01-01&$skiptoken=469268
```

**Note:** Limiting the number of records returned to fx. 5.000 records can generally be a good idea if you have problems with Business Central time out or error codes returned when loading large datasets.  
Use a header called **prefer : odata.maxpagesize=5000**

## 3.4 System Modified At timestamp

All endpoints include the “systemModifiedAt” timestamp, describing when the record was created or last modified. Use this information for incremental data extraction, to only retrieve changed records since your last extraction.

**Note:** Use systemModifiedAt for incremental data extraction to only retrieve changed records since your last extraction.





## 3.5 Listing available endpoints

After installing the app, search for “Datawareness BI Endpoints” in Business Central. This will give you a complete list of the BI endpoints available.

Entity Set Name ↑	Description	Category	Type	Business Key Fields	URL
<a href="#">causesOfAbsence</a>	Cause of absence definitions.	Resources	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence">https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence</a>
<a href="#">chartOfAccounts</a>	G/L accounts from the chart of accounts.	Finance	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/chartOfAccounts">https://api.businesscentral.dynamics.com/api/v1/odata/chartOfAccounts</a>
<a href="#">contactBusinessRelations</a>	Contact to business relations mapping.	Sales	Master Data	contactNo&&businessRelation...	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/contactBusinessRelations">https://api.businesscentral.dynamics.com/api/v1/odata/contactBusinessRelations</a>
<a href="#">contacts</a>	Contact master data.	Sales	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/contacts">https://api.businesscentral.dynamics.com/api/v1/odata/contacts</a>
<a href="#">customerLedgerEntries</a>	Customer ledger entries.	Sales	Transactional Data	entryNo	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/customerLedgerEntries">https://api.businesscentral.dynamics.com/api/v1/odata/customerLedgerEntries</a>
<a href="#">customers</a>	Customer master data.	Sales	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/customers">https://api.businesscentral.dynamics.com/api/v1/odata/customers</a>
<a href="#">dimensions</a>	Dimension definitions for financial analysis.	Finance	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/dimensions">https://api.businesscentral.dynamics.com/api/v1/odata/dimensions</a>
<a href="#">dimensionValues</a>	Values for each dimension used in analysis.	Finance	Master Data	dimensionCode&&code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/dimensionValues">https://api.businesscentral.dynamics.com/api/v1/odata/dimensionValues</a>
<a href="#">employees</a>	Employee master data.	Resources	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/employees">https://api.businesscentral.dynamics.com/api/v1/odata/employees</a>
<a href="#">genProductPostingGroups</a>	General product posting group definitions.	Inventory	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/genProductPostingGroups">https://api.businesscentral.dynamics.com/api/v1/odata/genProductPostingGroups</a>
<a href="#">glBudgetEntries</a>	Budget entries for G/L accounts.	Finance	Transactional Data	entryNo	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/glBudgetEntries">https://api.businesscentral.dynamics.com/api/v1/odata/glBudgetEntries</a>
<a href="#">glBudgets</a>	G/L budget definitions.	Finance	Master Data	name	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/glBudgets">https://api.businesscentral.dynamics.com/api/v1/odata/glBudgets</a>

**Note:** Use Category and Type for filtering to narrow down the list.

When clicking a specific entity set name, a list of details for the specific entity set name will become available.

Endpoint	
Source Table	Cause of Absence
Business Key Fields	code
Description	Cause of absence definitions.
URL	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence">https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence</a>
Properties	
Property Name	Property Caption
→ code	Code
description	Description
systemModifiedAt	System Modified At



On the Datawareness BI Endpoints page, make sure to expand the factbox pane, to get access to support material for download.

Datawareness BI Endpoints

Datawareness BI Endpoints Setup

Entity Set Name ↑	Description	Category	Type	Business Key Fields	URL
<a href="#">causesOfAbsence</a>	Cause of absence definitions.	Resources	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence">https://api.businesscentral.dynamics.com/api/v1/odata/causesOfAbsence</a>
<a href="#">chartOfAccounts</a>	G/L accounts from the chart of accounts.	Finance	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/chartOfAccounts">https://api.businesscentral.dynamics.com/api/v1/odata/chartOfAccounts</a>
<a href="#">contactBusinessRelations</a>	Contact to business relations mapping.	Sales	Master Data	contactNo&&businessRelation...	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/contactBusinessRelations">https://api.businesscentral.dynamics.com/api/v1/odata/contactBusinessRelations</a>
<a href="#">contacts</a>	Contact master data.	Sales	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/contacts">https://api.businesscentral.dynamics.com/api/v1/odata/contacts</a>
<a href="#">customerLedgerEntries</a>	Customer ledger entries.	Sales	Transactional Data	entryNo	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/customerLedgerEntries">https://api.businesscentral.dynamics.com/api/v1/odata/customerLedgerEntries</a>
<a href="#">customers</a>	Customer master data.	Sales	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/customers">https://api.businesscentral.dynamics.com/api/v1/odata/customers</a>
<a href="#">dimensions</a>	Dimension definitions for financial analysis.	Finance	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/dimensions">https://api.businesscentral.dynamics.com/api/v1/odata/dimensions</a>
<a href="#">dimensionValues</a>	Values for each dimension used in analysis.	Finance	Master Data	dimensionCode&&code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/dimensionValues">https://api.businesscentral.dynamics.com/api/v1/odata/dimensionValues</a>
<a href="#">employees</a>	Employee master data.	Resources	Master Data	no	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/employees">https://api.businesscentral.dynamics.com/api/v1/odata/employees</a>
<a href="#">genProductPostingGroups</a>	General product posting group definitions.	Inventory	Master Data	code	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/genProductPostingGroups">https://api.businesscentral.dynamics.com/api/v1/odata/genProductPostingGroups</a>
<a href="#">glBudgetEntries</a>	Budget entries for G/L accounts.	Finance	Transactional Data	entryNo	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/glBudgetEntries">https://api.businesscentral.dynamics.com/api/v1/odata/glBudgetEntries</a>
<a href="#">glBudgets</a>	G/L budget definitions.	Finance	Master Data	name	<a href="https://api.businesscentral.dynamics.com/api/v1/odata/glBudgets">https://api.businesscentral.dynamics.com/api/v1/odata/glBudgets</a>

**Support Material**

**Getting Started**

Reference Guide [Download PDF](#)

Use the reference guide to get started.

**Postman**

Postman Collection [Download ZIP](#)

Download the Postman collection to easily get started working with the BI Endpoints.

**Microsoft Power BI**

Power BI template [Download ZIP](#)

Download Power BI template to get an example of using the BI Endpoints with a datamodel.

**Microsoft Fabric**

Fabric Spark Notebook [Download ZIP](#)

Download Fabric Spark Notebook to get an example of loading the BI Endpoints to a Lakehouse.



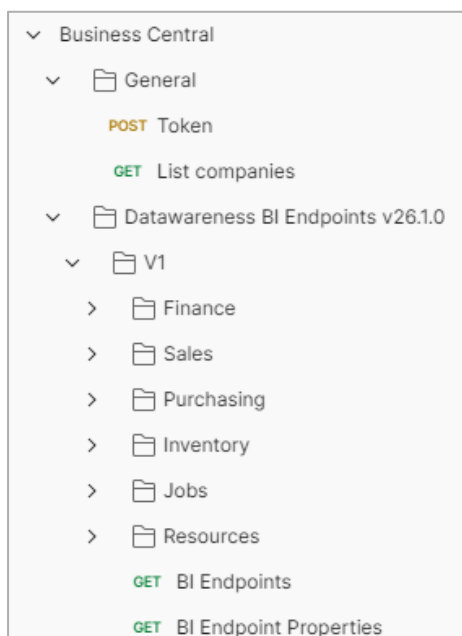
## 4. Working with the BI endpoints

### 4.1 Testing with Postman

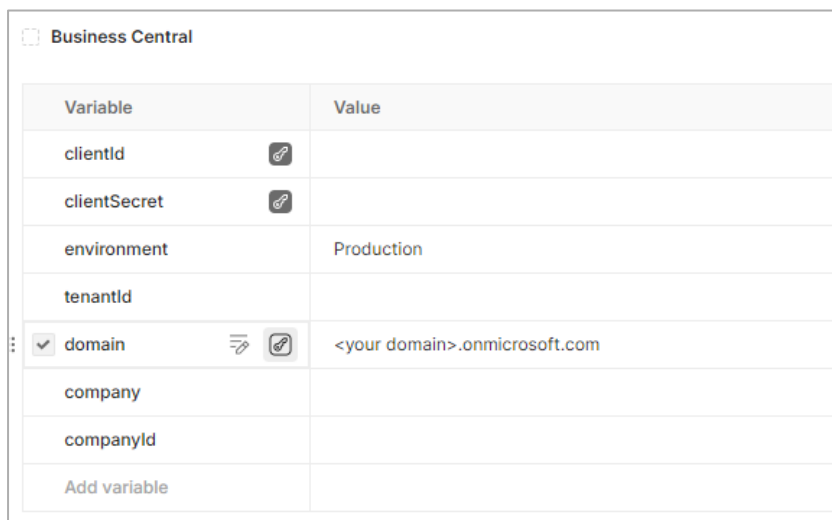
Before integrating with Microsoft Power BI, Microsoft Fabric or any other BI tool, it is recommended to test your endpoints using Postman to verify connectivity and authentication, and to explore the content of the data objects.

#### Download Postman collection

1. Download Postman collection from Datawareness BI Endpoints page in Business central. *Make sure to expand the factbox pane to get access to downloads.*
2. Import collection to Postman.

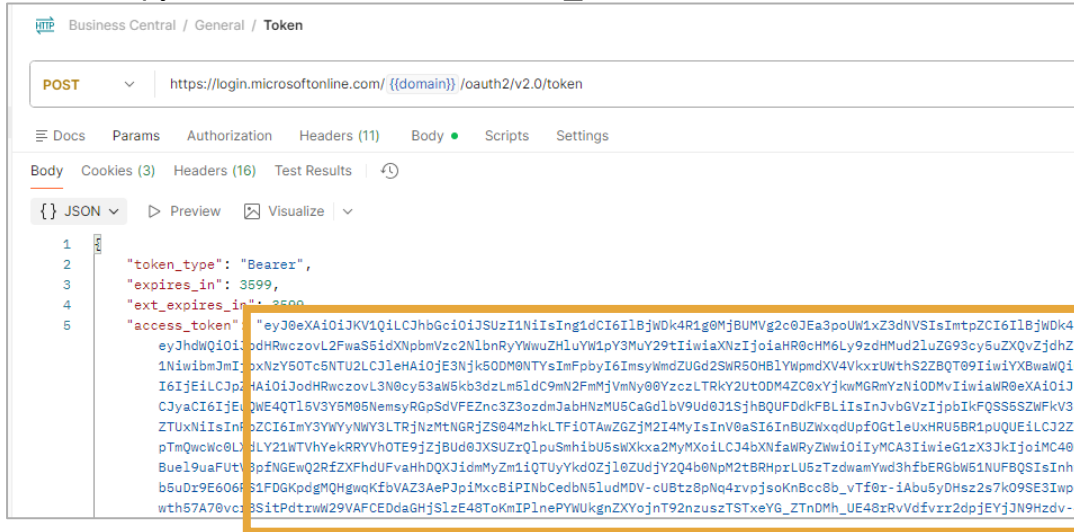


3. Import and fill out environment variables.

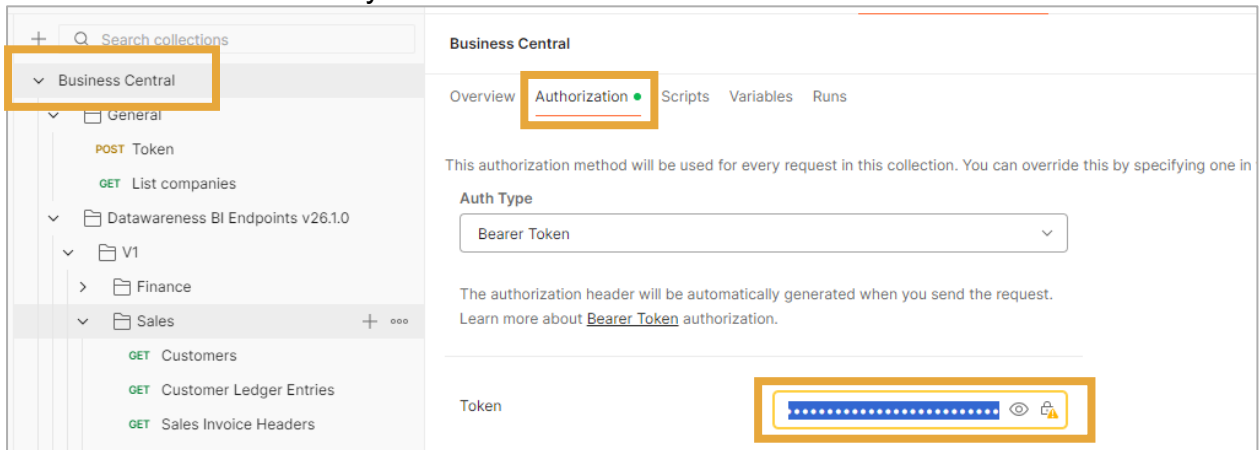


## Get token

1. General > POST Token.
2. Copy out the value of the access\_token.

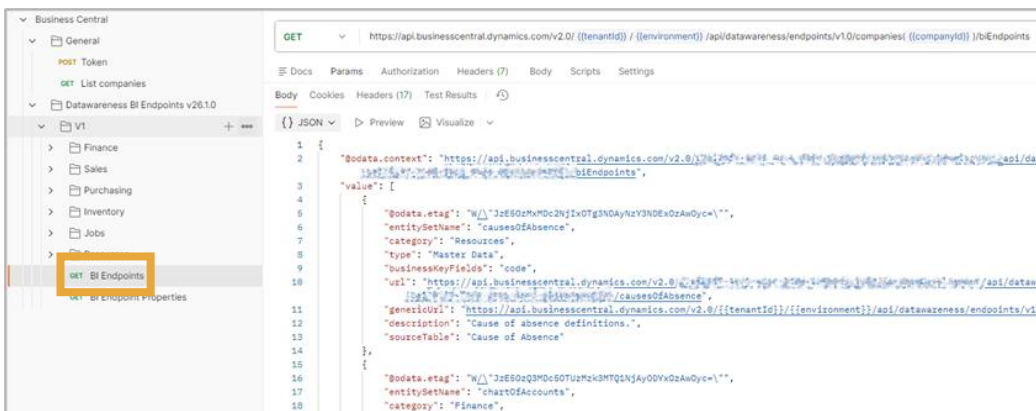


3. Paste the value to your collection Authorization > Token and save.



## Test an Endpoint

1. List definitions of Datawareness BI Endpoints:



## 4.2 Microsoft Power BI

Datawareness BI Endpoints can be consumed directly in Power BI.

Download the Power BI sample and open the Power BI template file in Power BI desktop (give it a minute to load) and fill out the parameters:

The screenshot shows a Power BI parameter form titled "power-bi-finance-datamodel-v1". It contains several input fields with corresponding labels to the right:

- TenantId: f7af25f7-4c73-4d3e-b1a4-1b1000e1c1b2 (Label: Azure Tenant id)
- ClientId: 80c6d87c-a2ce-4115-b507-a3ce13927e1a (Label: Azure App registration - Client id)
- ClientSecret: FT18Q-cfsMw... (Label: Azure App registration - Client secret)
- BCEnvironment: SandboxTest (Label: Business Central environment)
- BCCompanyid: be175197-7bd5-42e2-b9450c956992 (Label: Business Central company id)
- FromDate: 2025-01-01 (Label: GL entry filter - Posting date from)
- ToDate: 2025-12-31 (Label: GL entry filter - Posting date to)

At the bottom right are "Load" and "Cancel" buttons.

The screenshot shows the "Access Web content" dialog. On the left is a sidebar with options: Anonymous, Windows, Basic, Web API, and Organizational account. The main area shows the URL "https://api.businesscentral.dynamics.com/v2.0/f7af2..." and the text "Use anonymous access for this Web content." Below this is a dropdown menu labeled "Select which level to apply these settings to" with the value "https://api.businesscentral.dynamics.com/". At the bottom right are "Connect" and "Cancel" buttons.

Reply "Anonymous" when asked since the parameters are used to authenticate.

The screenshot shows the "Privacy levels" dialog. It contains a warning message: "The privacy level is used to ensure data is combined without undesirable data transfer. Incorrect privacy levels may lead to sensitive data being leaked outside of a trusted scope. More information on privacy levels can be found here." Below this is a checkbox labeled "Ignore Privacy Levels checks for this file. Ignoring Privacy Levels could expose sensitive or confidential data to an unauthorized person." which is checked. At the bottom are two dropdown menus for URLs: "https://api.businesscentral.dynamics.com/" and "https://login.microsoftonline.com/". At the bottom right are "Save" and "Cancel" buttons.

Ignore Privacy levels for testing or set Organizational.

Your data will now be loaded, and you can publish your data model to the Power BI cloud service, or you can apply visuals directly to the report.



Data

»

Q Search

▼

GL Entries

☐

Balance Actual

☐

Balance Change Actual

☐

Finance Actual

☐

PL Actual

▼

Chart Of Accounts

☐

Account

☐

Account Category

☐

Account Sub Category

☐

Account Type

>

Category - Sub - Account

▼

Date

☐

Date

☐

Month

☐

Month Name

☐

Quarter

☐

Quarter Name

☐

Year

>

Year - Month - Date

▼

GL Entries details

☐

Description

>

Dimensions

☐

Document No

☐

Document Type

☐

Entry No

☐

Source No

☐

Source Type



## 5.1 Microsoft Fabric

Datawareness BI Endpoints data can be loaded into Microsoft Fabric Lakehouses using Spark notebooks for scalable analytics.

In your Fabric workspace, create a Lakehouse.

Unzip and upload the Spark notebook to your Fabric workspace.

Replace the parameters and run the notebook to load your data into the Lakehouse.

```
# =====  
# CONFIGURATION - Update these values  
# =====  
  
tenant_id = "YOUR-TENANT-ID"  
client_id = "YOUR-APP-CLIENT-ID"  
client_secret = "YOUR-CLIENT-SECRET" # For production, use Key Vault (see notes below)  
bc_environment = "Production"         # Or "Sandbox"  
bc_company_id = "YOUR-COMPANY-GUID"   # GUID of the company in BC  
  
# Date range for GL Entries  
from_date = "2025-01-01"  
to_date = "2025-12-31"
```

### Incremental Loading

Use the systemModifiedAt field to implement incremental loading:

- Store the last successful extraction timestamp in a control table
- Filter API requests using \$filter=systemModifiedAt ge {last-timestamp}
- Merge changes into delta tables
- This approach minimizes data transfer and processing time



# Troubleshooting

## 401 Unauthorized

- Verify the Azure App Registration is enabled in Business Central
- Check that the client secret has not expired
- Ensure admin consent has been granted for the API permissions
- Verify that you have parsed the Bearer token with your request

## 403 Forbidden

- Verify the appropriate permission sets are assigned in Business Central
- Check that the company ID in the URL is correct

## 404 Not Found

- Verify the extension is installed and enabled
- Check the endpoint name and URL format
- Ensure you are using the correct environment name

## 429 Too Many Requests

- Implement retry logic with exponential backoff
- Spread requests over time for large data extractions
- Limit the number of records returned pr. request with a header  
*prefer : odata.maxpagesize=500*

