

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:
 - o 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/datawareness/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 “Dataawareness BI Endpoints” in Business Central. This will give you a complete list of the BI endpoints available.

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

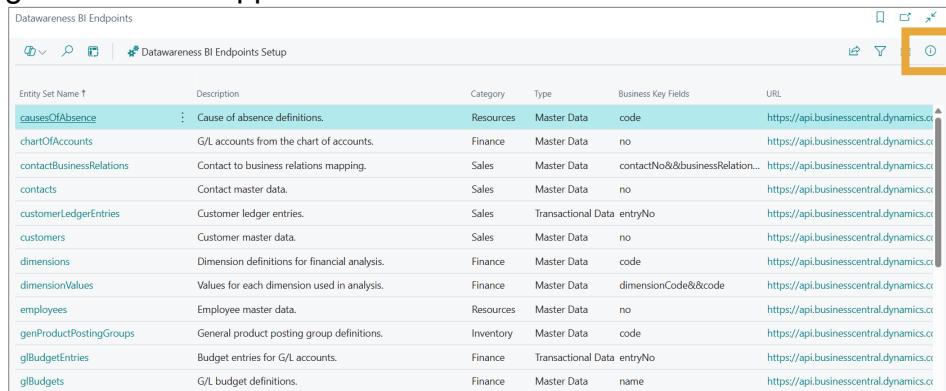
Note: Use Category and Type for filtering to narrow down the list.

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

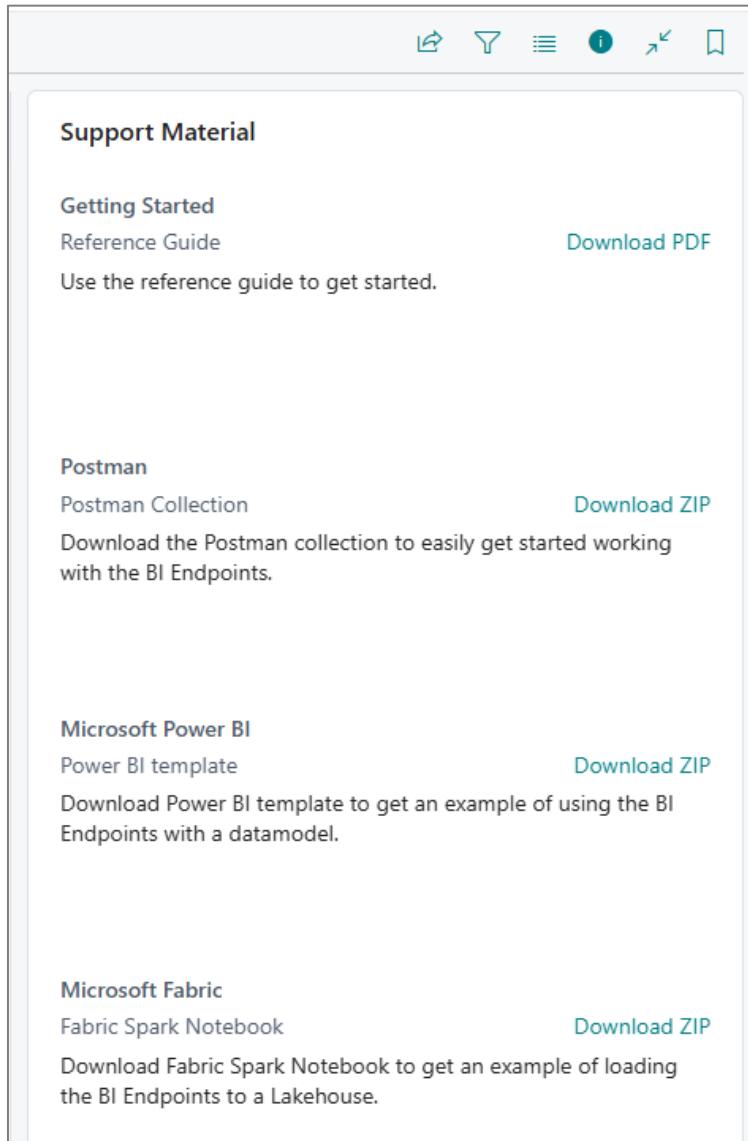
causesOfAbsence	
Export properties to Excel	
Endpoint	
Source Table	Cause of Absence
Description	Cause of absence definitions.
Business Key Fields	code
URL	https://api.businesscentral.dynamics.co
Properties	
Property Name	Property Caption
→ code	: Code
description	Description
systemModifiedAt	System Modified At



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



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



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.



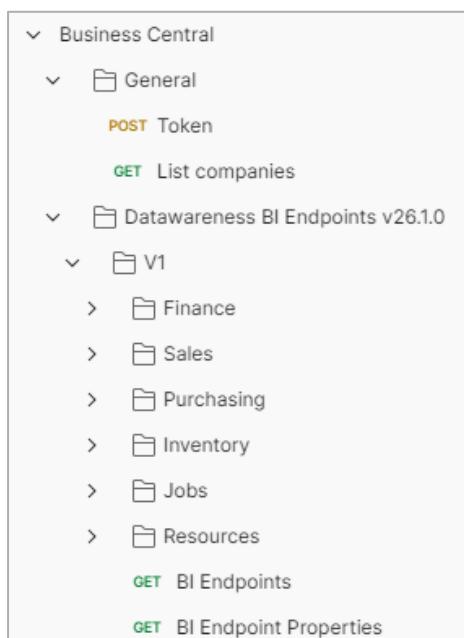
4. Working with the BI endpoints

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

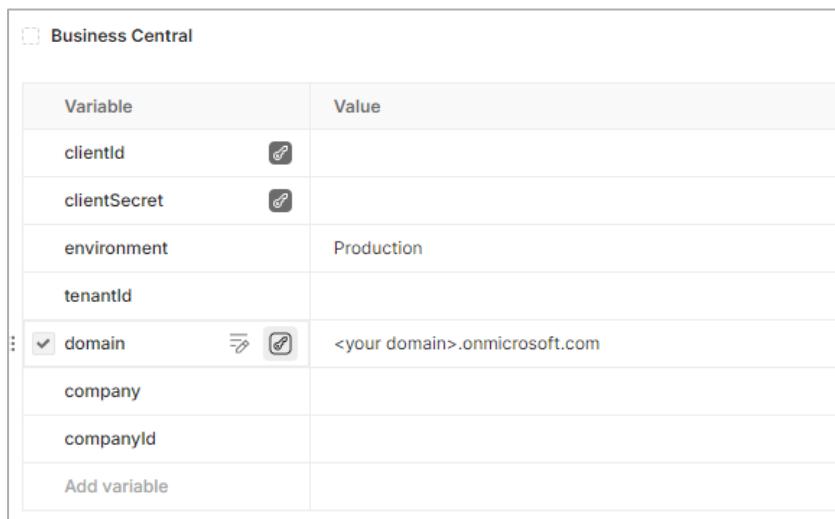
1. Download Postman collection from Dataawareness BI Endpoints page in Business central. *Make sure to expand the factbox pane to get access to downloads.*
2. Import collection to Postman.



The screenshot shows the Business Central factbox pane with the following structure:

- Business Central
 - General
 - POST Token
 - GET List companies
 - Dataawareness BI Endpoints v26.1.0
 - V1
 - Finance
 - Sales
 - Purchasing
 - Inventory
 - Jobs
 - Resources
 - GET BI Endpoints
 - GET BI Endpoint Properties

3. Import and fill out environment variables.

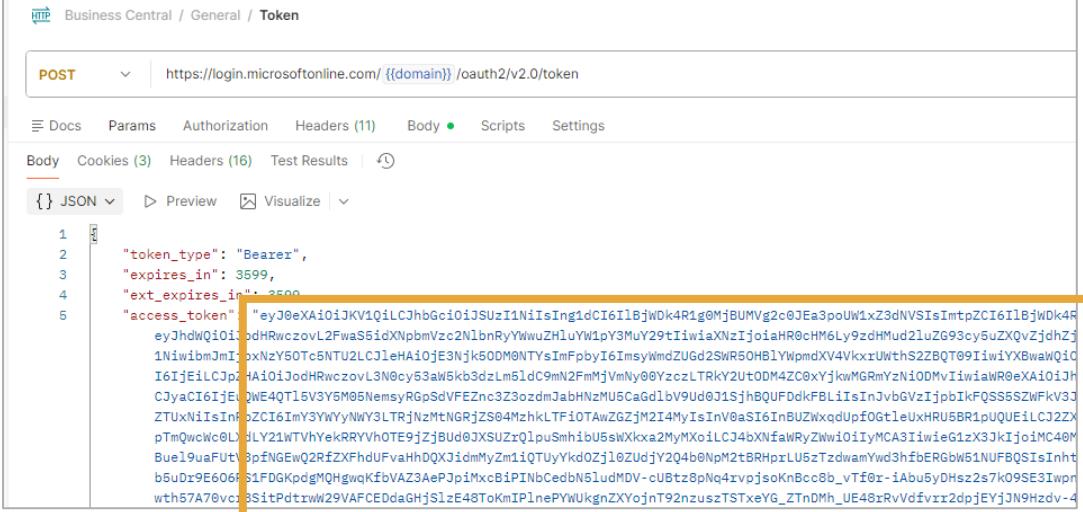


Variable	Value
clientId	<input type="text"/>
clientSecret	<input type="text"/>
environment	Production
tenantId	
domain	<input type="text"/> <input type="button"/> <input type="button"/> <your domain>.onmicrosoft.com
company	
companyId	
Add variable	



Get token

1. General > POST Token.
2. Copy out the value of the access_token.

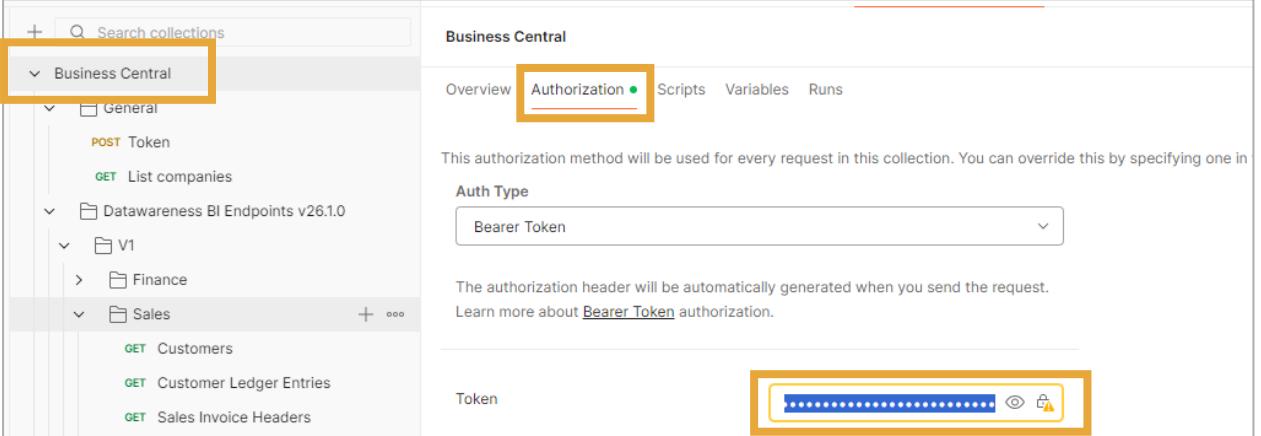


```

1
2   "token_type": "Bearer",
3   "expires_in": 3599,
4   "ext_expires_in": 3599
5   "access_token": "eyJ0eXAiOiJKV1QiLCJhbGciOiJSUzI1NiIsIngldCI6I1Bjw0k4R1g0MjBUMVg2c0JEA3puW1xZ3dNVSIisImpzCI6I1Bjw0k4R
eyJhdWQiOiJodHRwczovL2FwaS5idXNpbVmZc2NlbnRyYwuzH1uYw1pY3MuY29tIiuliaXR0chM6Ly9zdHMud2luZG93cy5uZXQvZjdhZj
1NiwbmJmIjoxNzY50Tc5NTU2LCjleHAi0jE3Njk50DM0NTysImFpbbyI6ImsyWmdZUGd2SwR50Hb1WpmdXV4VkxrUwthsS2ZBQT09IiwiYX
BwawQioI
I6IjEiLCJpIjAi0iJodHRwczovL3N0cy53aW5kb3dLm5ldC9mN2FmMjVmNy00YzczLTrkY2ut0DM4ZC0xYjkWGRmYzNiODMvIiwiawR0eXAi0jH
C3yaC16IjEuDNE4QT15V3YB06NemsyR6p5dVFEznc3Z3ozdmJabNzMU5caGdlv9U0dJ1SjJbQUDkFBLLiisInjvGvZIjpbIkFQSS55ZWfKv33
ZTUxNiIsInIzC16ImY3YwYyNWY3LTrjNzMtNGRjZS04MzhkLTFl0TAwZGjZM2I4MyIsInV@aSI6InBUZwxdUpf0GtleUxHRU5BR1pUQEiLCj2ZX
pTm7wCw@OLjLY21WTvHyekRRYhOTE9jZjBud03XSUzrQpuSmhibU5sWkxa2MyXkoIiLCJ4bXNfawRyZwW10iifyMCA3IiwiieG1zX3kIjoiMC40M
Bue19uaFutl3pfNGEwq2RfZXFhdUvaHHDQXidmMyZn1iQTyUyKdDzj10ZUdjY2Q4bNpM2tBRHpxLU6zTzdwanYwd3fbERGbw51NUFBQStisInht
b5uDr9E606fS1FDGKpdgM0HgwqKibVA23AePj0p1mxB1pINbCedbNSludMDV-cUBtz8pNq4rvpjsoKnBcC8b_vTf0r-1Abu6yDhs2z57k09SE31wpn
wth57A70vcI3S1PdtwW29VACEDdaGhjS1zE48tKmP1nePYWUkgnZXyojnT92nuszTSTxeYg_ZTnDmH_UE48zRvVdfvrr2dpjEYjJN9Hzdv-4

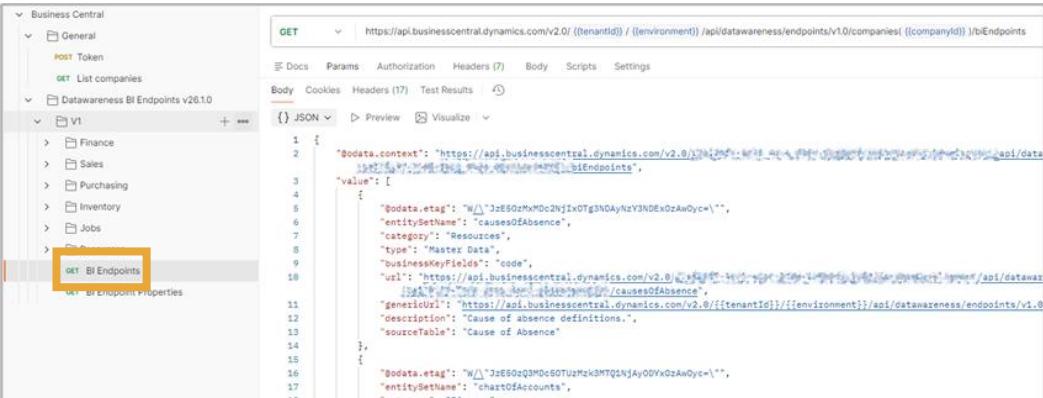
```

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



Test an Endpoint

1. List definitions of Dataawareness BI Endpoints:



```

1 {
2   "odata.context": "https://api.businesscentral.dynamics.com/v2.0/({tenantId})/({environment})/api/dataawareness/endpoints/v1.0/companies/({companyId})/biEndpoints",
3   "value": [
4     {
5       "odata.etag": "W/\"3e50zQ3Mdc6OTUzH2k3MTQ1NjAy0D0xGzAwOyc="",
6       "entitySetName": "causesOfAbsence",
7       "category": "Resources",
8       "type": "Master Data",
9       "businessKeyFields": "code",
10      "url": "https://api.businesscentral.dynamics.com/v2.0/({tenantId})/({environment})/api/dataawareness/endpoints/v1.0/companies/({companyId})/biEndpoints/causesOfAbsence",
11      "genericUrl": "https://api.businesscentral.dynamics.com/v2.0/({tenantId})/({environment})/api/dataawareness/endpoints/v1.0/companies/({companyId})/biEndpoints/causesOfAbsence",
12      "sourceTable": "Cause of Absence"
13    },
14    {
15      "odata.etag": "W/\"JzE50zQ3Mdc6OTUzH2k3MTQ1NjAy0D0xGzAwOyc="",
16      "entitySetName": "chartOfAccounts",
17      "category": "Finance",
18    }
  ]
}

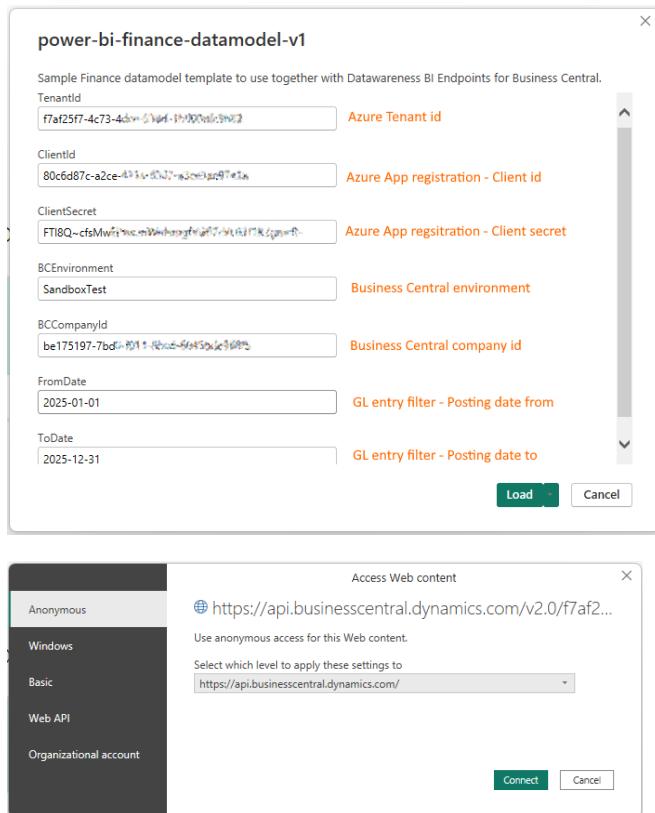
```



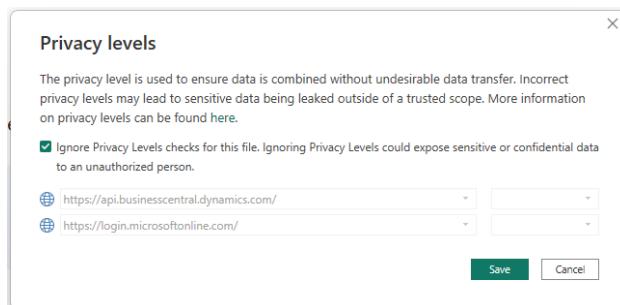
4.2 Microsoft Power BI

Dataawareness 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:



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



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 »

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

Dataawareness 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 per request with a header `prefer: odata.maxpagesize=500`

