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1 What's New

New features in ODBC Driver for Dynamics 365 Business Central 1.0

- Initial release of ODBC Driver for Dynamics 365 Business Central 1.0
- Windows 32-bit is supported
- Windows 64-bit is supported

2 General Information

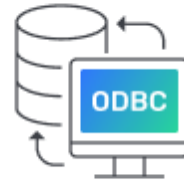
1. [Overview](#)
2. [Features](#)
3. [Compatibility](#)
4. [Requirements](#)
5. [Licensing](#)
6. [Getting Support](#)

2.1 Overview

Overview

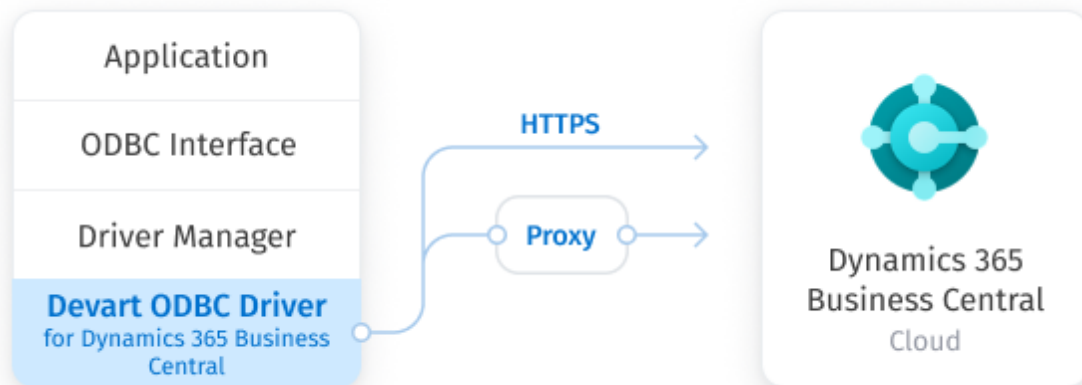
Devart ODBC Driver for Dynamics 365 Business Central is a high-performance connectivity solution with enterprise-level [features](#) for accessing Dynamics 365 Business Central Customer Engagement (formerly known as Dynamics CRM) from ODBC-compliant reporting, analytics, BI, and ETL tools on Windows, macOS, and Linux. Our ODBC driver fully supports standard ODBC API functions and data types and enables easy and secure access to live Dynamics 365 Business Central data from anywhere.

- ✓ ODBC API
- ✓ ODBC Data Types

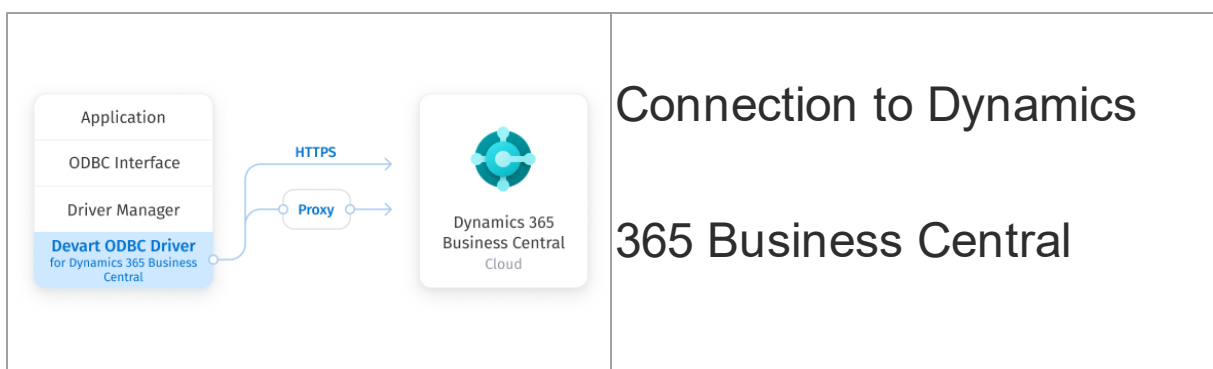


Connection to Dynamics 365 Business Central

Our data connector enables various ODBC-aware applications to [connect](#) to Dynamics 365 Business Central directly via HTTPS. If you have no direct access to Dynamics 365 Business Central via HTTPS, you have the option of establishing a connection through a proxy server.



2.2 Features



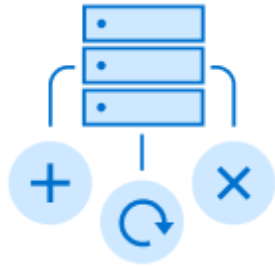
Our connectivity solution enables various ODBC-aware applications to connect to Dynamics 365 Business Central directly via HTTPS. If you have no direct access to Dynamics 365 Business Central, you have the option of establishing a connection through a proxy server.

Extended SQL Syntax

Our ODBC driver provides an unrivalled opportunity to work with [Dynamics 365 Business Central](#) objects just as with SQL tables. The extended SQL syntax allows you to use all the SQL benefits in SQL-92 compatible SELECT statements:

- Complex JOINS
- WHERE conditions
- Subqueries
- GROUP statements
- Aggregation functions
- ORDER statements
- and more.

```
Select a.customersizecode,
       a.territorycode,
       a.name,
       a.accountnumber,
       at.isdocument,
       at.businessunitname
From account a
Left Join (Select ant.objectid,
                  ant.subject,
                  ant.isdocument,
                  b.name as businessunitname
            From annotation ant
            Left Join (Select * From businessunit) b
            On ant.owningbusinessunit = b.businessunitid
          ) at
On at.objectid = a.accountid
Where a.exchangerate = 1
And a.websiteurl Is not Null
Order By a.revenue,
         a.versionnumber,
         a.statecode
```



DML Operations

Devart ODBC Driver for Dynamics 365 Business Central provides support for DML (INSERT, UPDATE, DELETE) operations, which allows you to modify data in Dynamics 365 Business Central in the same way as in SQL databases.



Bulk Updates

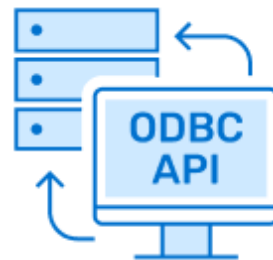
Moreover, with our driver you can perform bulk updates to Dynamics 365 Business Central by combining SQL statements into batches, thus simplifying and speeding up large data modification with Dynamics 365 Business Central.


ODBC Conformance

The driver provides full support for common ODBC interface:

- ODBC API Functions support
- ODBC Data Types support

In addition, we provide support for Advanced Connection String parameters. Thus allowing any desktop and web applications to connect to Dynamics 365 Business Central from various environments and platforms, that support



ODBC.	
<div data-bbox="302 541 831 730"><ul style="list-style-type: none">✓ Dynamics 365 Business Central API✓ Dynamics 365 Business Central Types</div>	<h2 data-bbox="870 382 1377 436">Dynamics 365 Business Central Compatibility</h2> <p data-bbox="870 667 1448 928">Our ODBC driver fully supports all data types defined in the Dynamics 365 Business Central API. Moreover, the driver is compatible with the Dynamics 365 Business Central API itself.</p>
<h2 data-bbox="271 1012 844 1066">Advanced Data Conversion</h2> <p data-bbox="271 1159 824 1423">We have implemented advanced Data Conversion mechanisms that provide bi-directional mapping between any Dynamics 365 Business Central and ODBC data types.</p>	<h2 data-bbox="870 987 1091 1041">Integration</h2> <p data-bbox="870 1138 1461 1339">The driver is compatible with 3rd-party data analysis tools, such as Microsoft Excel, and integrates with various IDEs and systems like Visual Studio, etc.</p> <p data-bbox="870 1360 1455 1453">For a complete list of compatible tools and platforms, see Compatibility.</p>
<h2 data-bbox="271 1528 630 1583">Platforms Variety</h2> <p data-bbox="271 1680 831 1881">Devart ODBC Driver for Dynamics 365 Business Central can be used with 32-bit and 64-bit applications on both x32 and x64 platforms, so there is no need to</p>	<h2 data-bbox="870 1528 1302 1583">Fully Unicode Driver</h2> <p data-bbox="870 1680 1445 1881">With our fully Unicode driver, you can retrieve and work with any data from multi-lingual Dynamics 365 Business Central databases correctly, not depending on</p>

additionally configure the driver, applications or environment.	whether its charset is Latin, Cyrillic, Hebrew, Chinese, etc., in any environment localization.
<h2>High Performance</h2> <p>Every operation with Dynamics 365 Business Central becomes significantly faster using such capabilities of our driver as Local data caching, connection pooling, query optimization and much more.</p>	<h2>Support</h2> <p>Visit our Support page to get instant help from knowledgeable and experienced professionals, a quick resolution of your problems, and nightly builds with hotfixes.</p>

2.3 Compatibility

[Dynamics 365 Business Central](#) Compatibility

Dynamics 365 Business Central API	✓
Dynamics 365 Business Central Data Types	✓

Supported Platforms

- Windows 32-bit and 64-bit (including Windows Terminal Server)
- Compatible with all Windows versions (Windows Vista and higher) that support .NET Framework 4.5.

Compatibility with Third-Party Tools

Application Development Tools

Adobe ColdFusion	✓
Embarcadero Delphi & C++Builder <small>UniDAC, FireDAC, dbGo (ADO), BDE and dbExpress</small>	✓
FileMaker	✓
Lazarus	✓
Microsoft Visual FoxPro	✓
Microsoft Visual Studio <small>Server Explorer and ADO.NET ODBC Provider</small>	✓
Omnis Studio	✓
PHP	✓
PowerBASIC	✓
Python	✓

Database Management

Aqua Data Studio	✓
DBArtisan	✓
dbForge Studio	✓
dBeaver	✓
EMS SQL Management Studio	✓
Informatica Cloud	✓
RazorSQL	✓
SQL Server Data Tools	✓
SQL Server Management Studio	✓
SQL Server Reporting Services	✓

BI & Analytics Software

Alteryx	✓
DBExtra	✓
Dundas BI	✓
FICO Xpress Mosel	✓
IBM SPSS Statistics	✓
MicroStrategy	✓
Oracle BI	✓
Power BI	✓
Qlik Sense	✓
QlikView	✓
RStudio	✓
SAP Crystal Reports	✓
SAS JMP	✓
Tableau	✓
TARGIT	✓
TIBCO Spotfire	✓

Office Software Suites

LibreOffice	✓
Microsoft Access	✓
Microsoft Excel	✓
OpenOffice	✓
StarOffice	✓

2.4 Requirements

The following requirements must be met for ODBC Driver for Dynamics 365 Business Central:

- Only one version of ODBC Driver for Dynamics 365 Business Central is installed on your system.
- .NET Framework 4.5 or later is installed on your system.

2.5 Licensing

ODBC Driver License Agreement

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- the "Perpetual License" allows you to install and use the specific Software product version on a single computer without an active subscription. A subscription provides access to new product releases, regular upgrades, and support for new server versions provided during the subscription term;
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2.6 Getting Support

This document lists several ways you can find help with using ODBC Driver for Dynamics 365 Business Central describes the Priority Support program.

Support Options

There are a number of resources for finding help on installing and using ODBC Driver for Dynamics 365 Business Central:

- You can find out more about ODBC Driver for Dynamics 365 Business Central installation or licensing by consulting [Installation](#) and [License](#) articles of this manual respectively.
- You can get community assistance and technical support on the [Community Forum](#).
- You can get advanced technical assistance by ODBC Driver for Dynamics 365 Business Central developers through the ODBC Driver for Dynamics 365 Business Central Priority Support program.

Subscriptions

The [ODBC Driver for Dynamics 365 Business Central](#) Subscription program is an annual maintenance and support service for ODBC Driver for Dynamics 365 Business Central

users.

Users with a valid ODBC Driver for Dynamics 365 Business Central Subscription get the following benefits:

- Product support through the ODBC Driver for Dynamics 365 Business Central Priority Support program
- Access to new versions of ODBC Driver for Dynamics 365 Business Central when they are released
- Access to all ODBC Driver for Dynamics 365 Business Central updates and bug fixes
- Notifications about new product versions

Priority Support

ODBC Driver for Dynamics 365 Business Central Priority Support is an advanced product support service for getting expedited individual assistance with ODBC Driver for Dynamics 365 Business Central-related questions from the ODBC Driver for Dynamics 365 Business Central developers themselves. Priority Support is carried out over email and has a two business day response policy. Priority Support is available for users with an active ODBC Driver for Dynamics 365 Business Central Subscription.

To get help through the ODBC Driver for Dynamics 365 Business Central Priority Support program, please send an email to support@devart.com describing the problem you are having. Make sure to include the following information in your message:

Your ODBC Driver for Dynamics 365 Business Central Registration number.

- Full ODBC Driver for Dynamics 365 Business Central edition name and version number.
You can find the version number in DLL version information.
- Versions of the Dynamics 365 Business Central server and client you are using.
- A detailed problem description.
- If possible, ODBC Administrator Log, scripts for creating and filling in database objects, and the application using ODBC Driver for Dynamics 365 Business Central.

If you have any questions regarding licensing or subscriptions, please see the FAQ or contact sales@devart.com

3 Using ODBC Driver

1. [Installation](#)
2. [Product Activation](#)
3. [Connecting to Dynamics 365 Business Central](#)
4. [Connection String Parameters](#)
5. [Enabling ODBC Tracing](#)
6. [Supported Data Types](#)
7. [Supported ODBC API Functions](#)

3.1 Installation

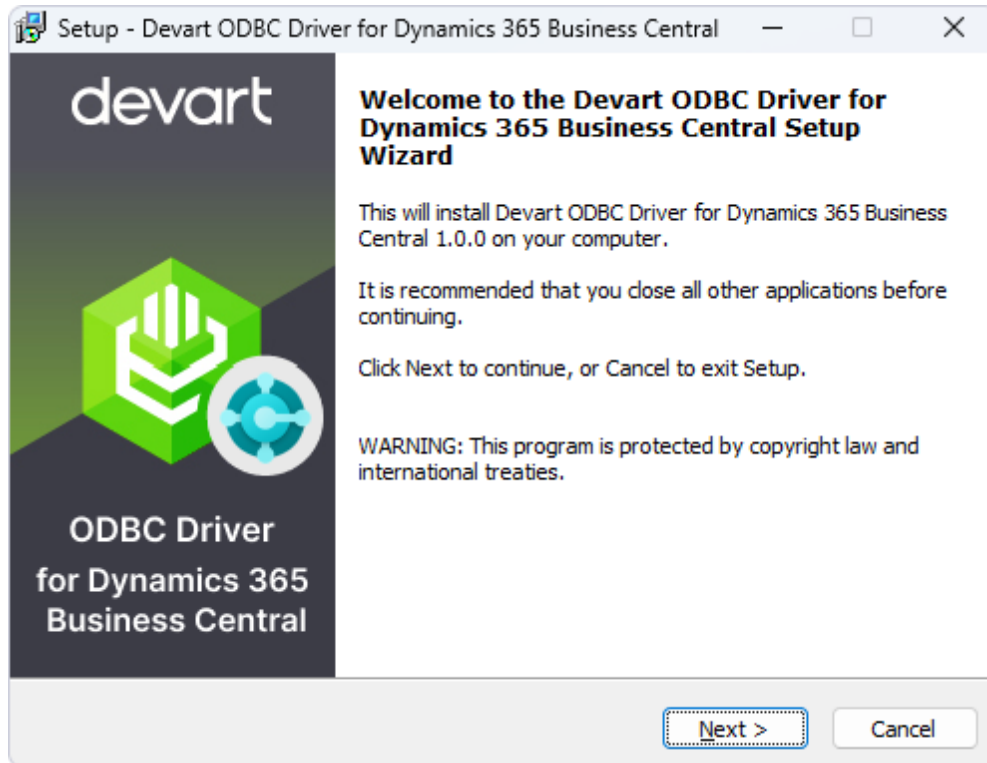
ODBC Driver for Dynamics 365 Business Central currently supports Windows 32-bit and 64-bit.

- [Regular Installation](#)
- [Silent Installation](#)

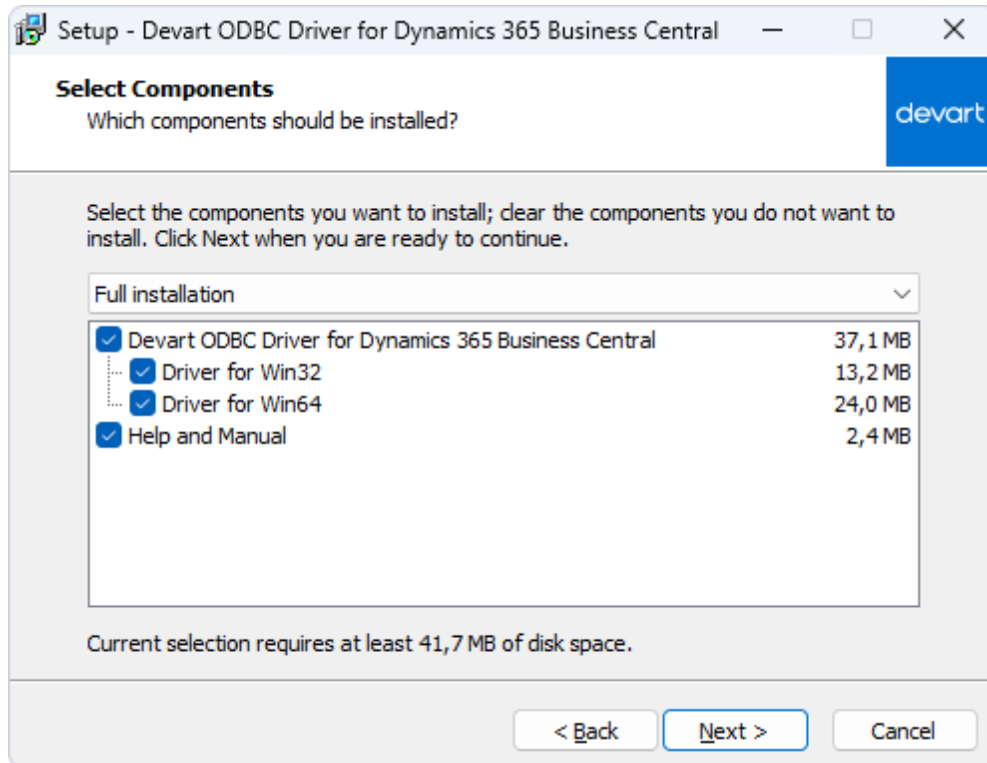
3.1.1 Windows

Installation on Windows

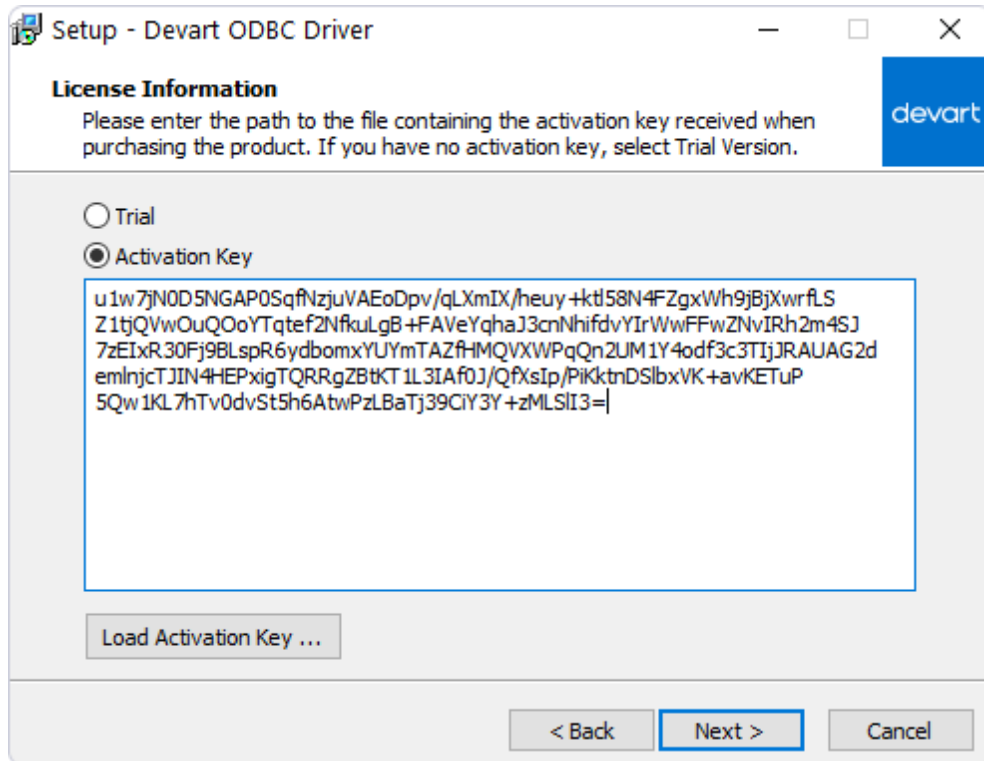
1. [Download](#) and run installer executive file.
2. Follow the instructions in the wizard.



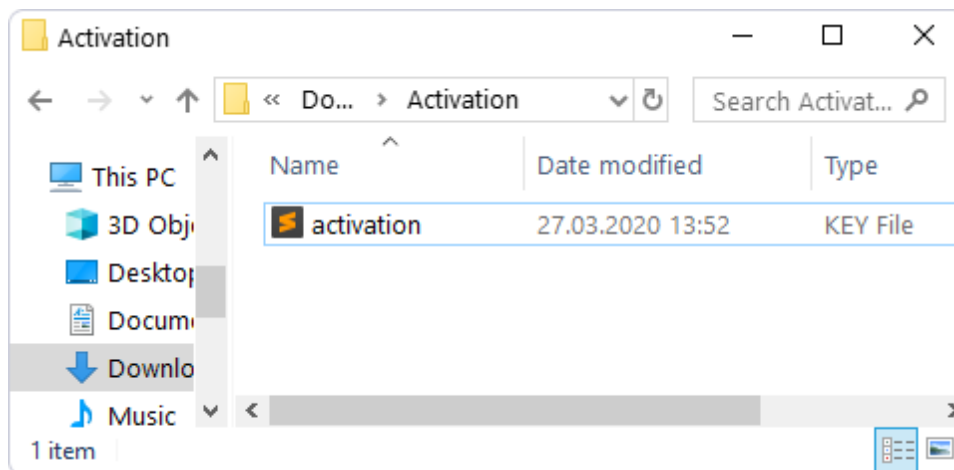
3. In case you already have the specified installation folder on the PC or another Driver version is installed, you will get a warning. Click **Yes** to overwrite the old files with the current installation, but it is recommended to completely uninstall the previous driver version first, and then install the new one.
4. On the Select Components page you can select whether to install the **64-bit** version of the driver or not. Clear the check box if you need no 64-bit installation. There is also a check box on this page, that allows you to select whether to install Help and Manual.



5. In the License Information dialog box, you should select the license type and activate the product. If you have no activation key, you can select Trial and use the driver for evaluation purposes.
6. If you have an activation key, select the Activation Key option. Copy the activation key from the registration email or your Customer Portal account and paste it into the Activation Key edit box.



7. If you have the activation key file, click the Load Activation Key button and browse to it.



8. Click Next.

9. Click Install, then Finish.

10. After the installation is completed, you need to [configure the driver](#).

3.1.2 Silent Windows

Silent Installation with OEM license on Windows

1. Run the Command Prompt as an administrator.
2. Use the following command-lines to perform the driver silent/very silent installation:

```
DevartODBCDynamics 365 Business Central.exe /SILENT /ActivationKey=y1c7nmgdu
```

```
DevartODBCDynamics 365 Business Central.exe /VERYSILENT /ActivationKey=ekhdh
```

Note: The installation is performed by entering a license key.

```
DevartODBCDynamics 365 Business Central.exe /SILENT /ActivationFile=d:\lic.k
```

```
DevartODBCDynamics 365 Business Central.exe /VERYSILENT /ActivationFile=d:\l
```

Note: The installation is performed by specifying the path to a license key file with any name.

When /SILENT is used, the installation progress is displayed, but no user interaction is required during installation.

When /VERYSILENT is used, the installation wizard dialog is hidden and the installation process is performed without user interference.

3.2 Remote Installation

One of the key advantages of Group Policy is the ability to deploy software remotely using MSI files. This section explains how to use Group Policy to remotely install the ODBC Driver for Dynamics 365 Business Central on client computers.

The information is organized into the following sections:

- [Creating the MST File Using Orca](#)
- [Remote Deployment and Activation](#)
- [Upgrading Driver Version and License Key](#)

3.2.1 Package Transformation

Creating the MST File Using Orca

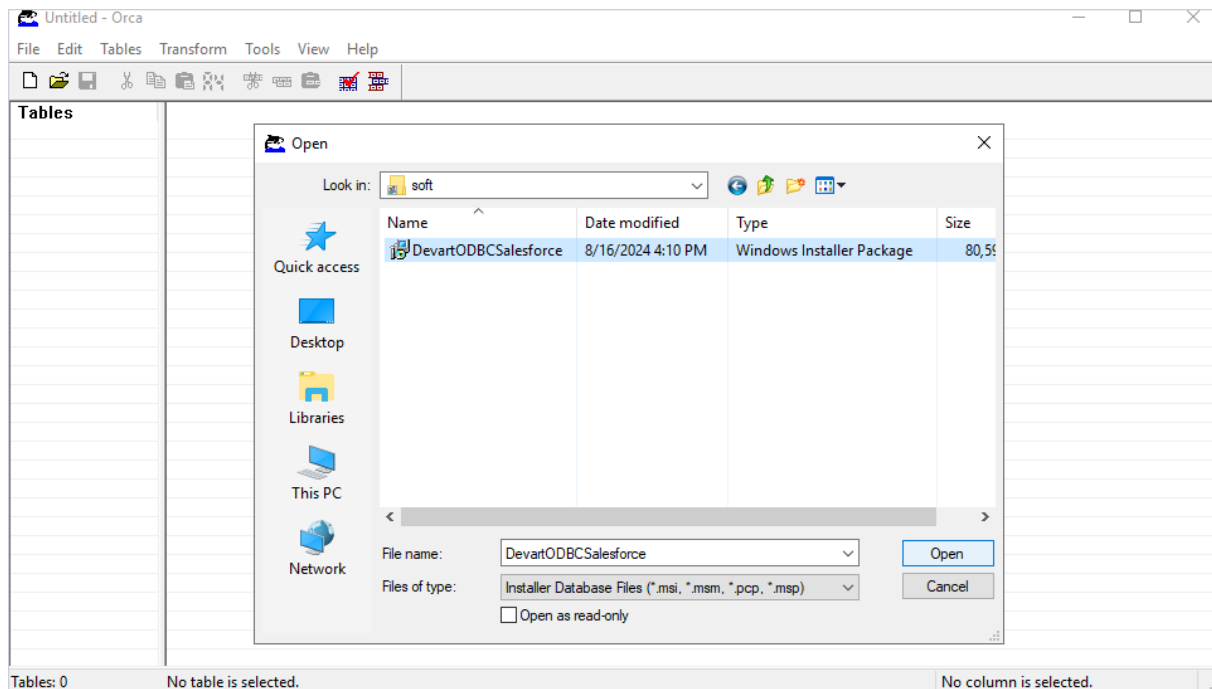
To customize the installation of the ODBC Driver for Dynamics 365 Business Central, you first need to edit the Windows Installer Package (MSI) by creating an MST file. This will allow for customized installation of an original Windows Installer (MSI) Package.

An MST file, or Windows Installer Setup Transform file, contains program configuration settings. In our case, the MST file for the ODBC Driver for Dynamics 365 Business Central will include the correct license information. This MST file is used together with the original MSI package in the Group Policy software distribution system.

There are many tools available for customizing MSI file settings, so you can choose the one that best suits your needs. In this example, we'll be using **Orca**, which is available as part of the Windows SDK Components for Windows Installer Developers. For more information about Orca, visit the official [Microsoft website](#)

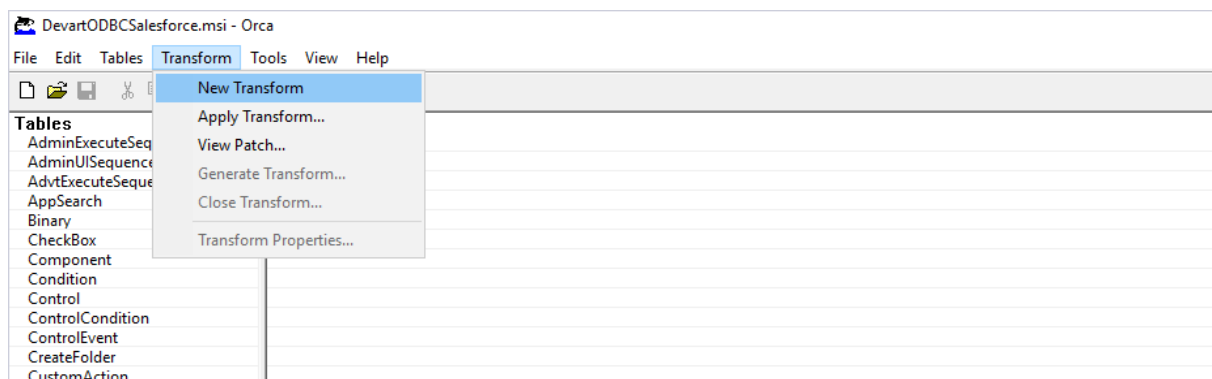
To start the process of MST file generation using the Orca editor, follow the steps below:

1. Launch the Orca application, then open the required MSI file by selecting **Open** in the **File** menu or click the **Open** icon on the toolbar below.

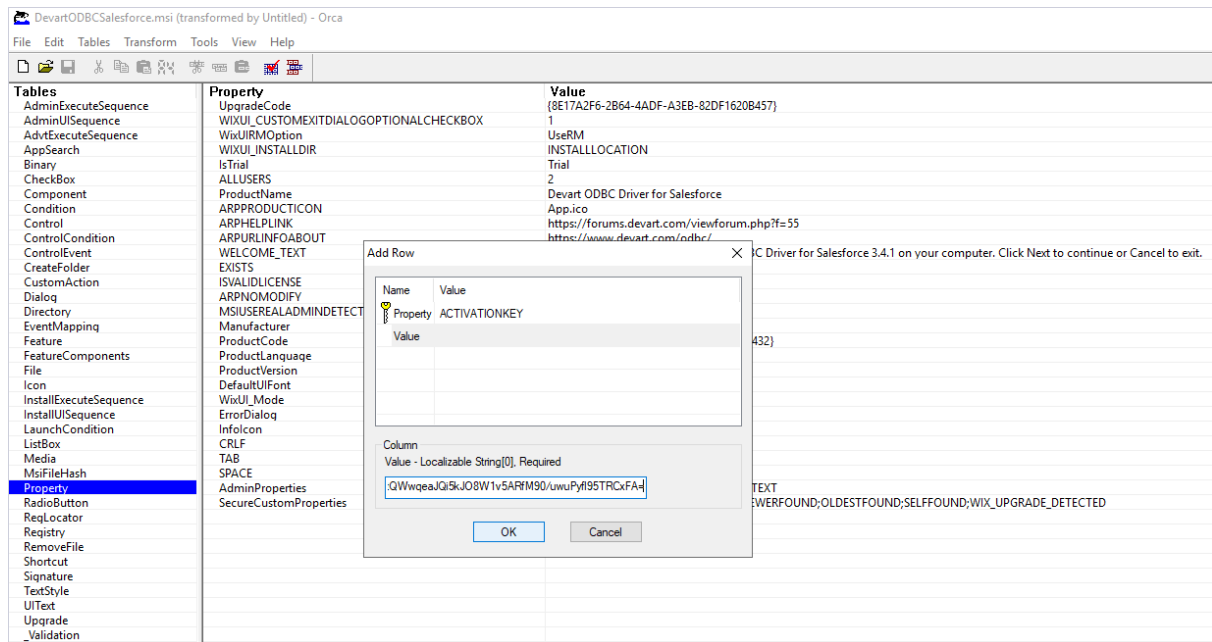


The MSI file for the ODBC Driver for Salesforce is taken as an example to illustrate the Group Policy installation process. Use the same steps described in this section when installing the ODBC Driver for Dynamics 365 Business Central.

2. As a result, the **Tables** menu on the left side of the main application window will display the properties of the selected MSI file.
3. Next, navigate **Transform -> New Transform**.



4. To proceed, select **Property** from the **Tables** menu, then double-click any empty row on the right side of the application window.

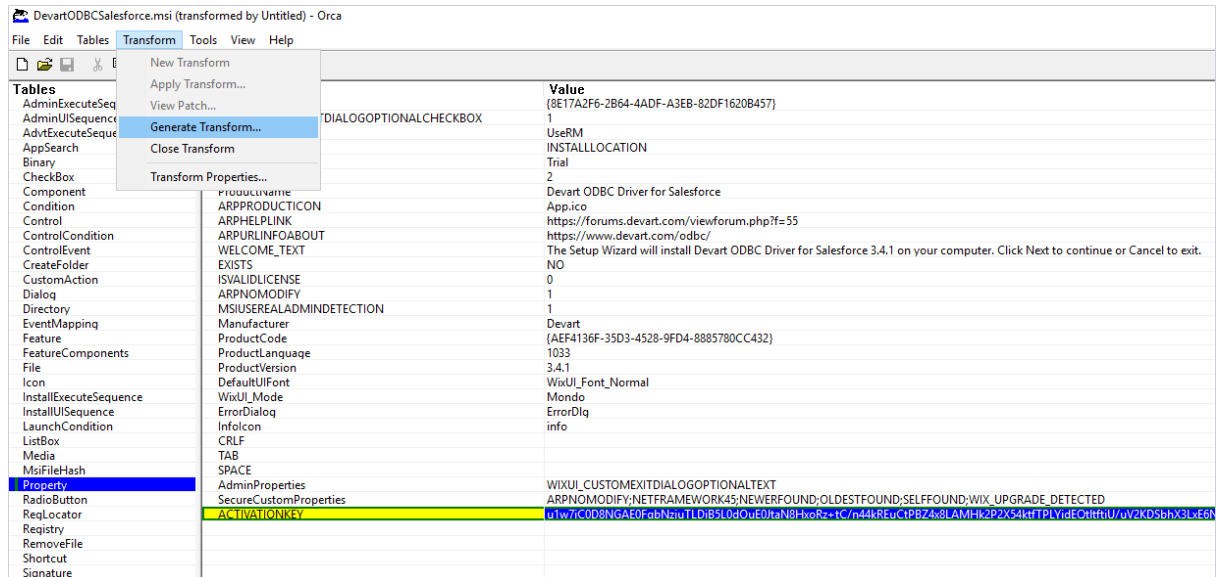


In the **Add Row** dialog that opens, make the following settings and press **OK** to apply the changes:

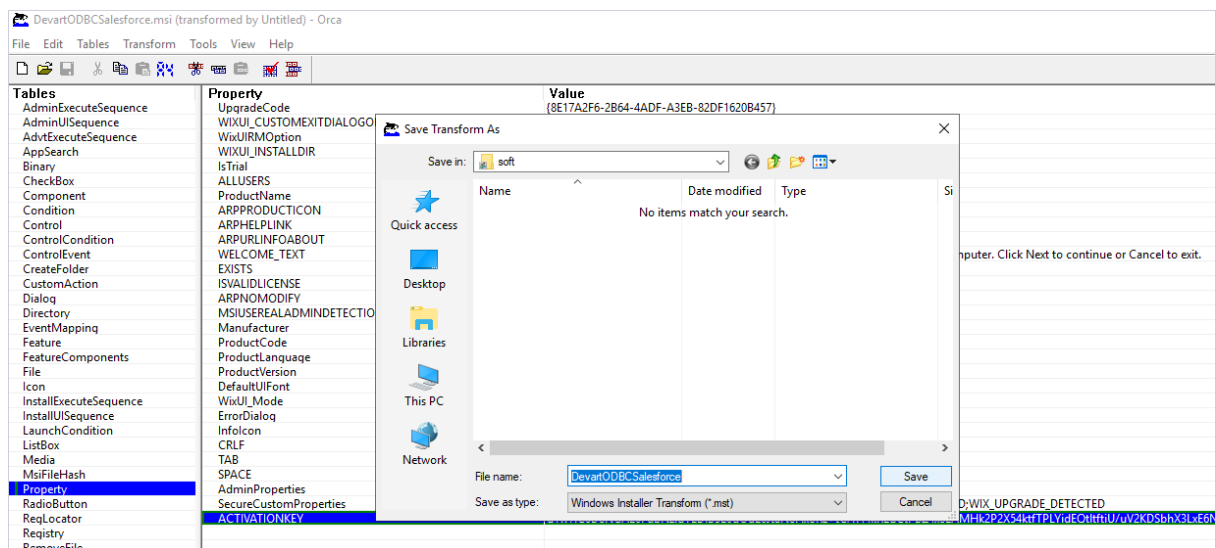
- **Property** - enter **ACTIVATIONKEY** with capital letters only.
- **Value** - enter the valid OEM license key for the ODBC Driver for Dynamics 365 Business Central.

As shown in the following screen, a new property, **ACTIVATIONKEY**, has been added, with the license key displayed in the value column next to it.

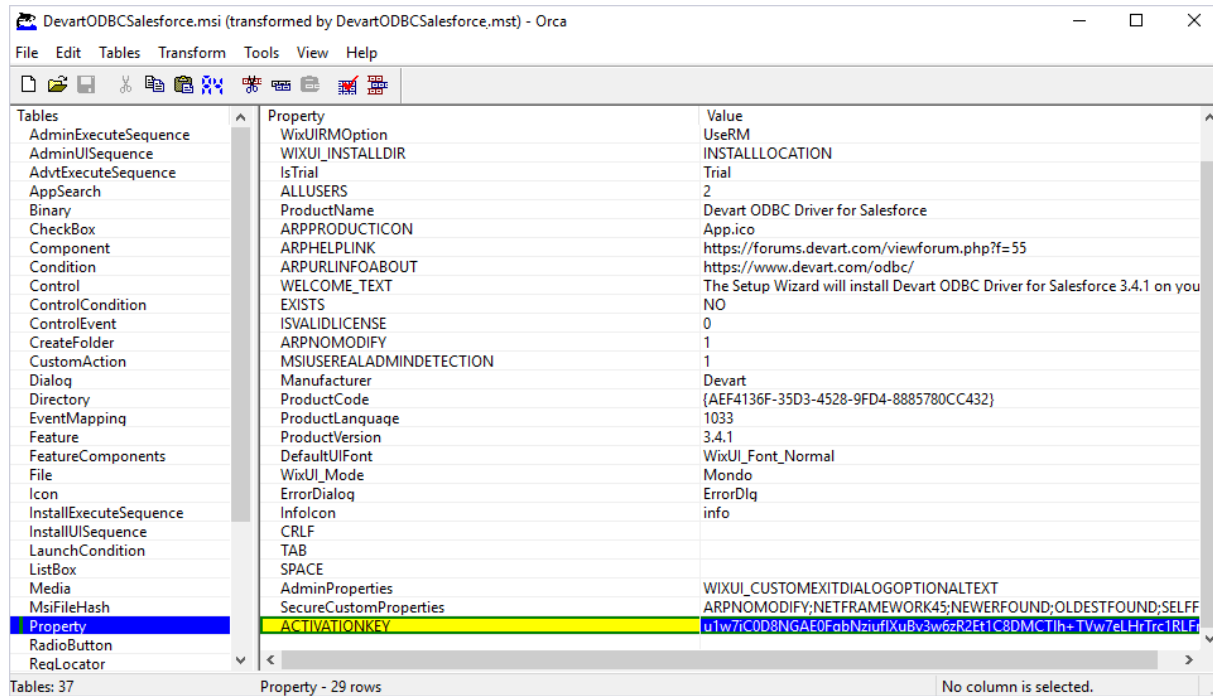
5. Once the configuration changes have been made, select **Transform -> Generate Transform**.



6. In the **Save Transform As** dialog that appears, enter a suitable name for the new MST file and click **Save** to apply your settings.



7. If successful, the encryption message *DevartODBCSalesforce.msi (transformed by DevartODBCSalesforce.mst)* - Orca will be displayed at the top of the Orca application window.



In case of a positive outcome, the newly created MST file will be located in the folder you specified, alongside the MSI file.

3.2.2 Deployment and Activation

Installing and Activating Software Remotely

Group Policy automated-program installation is specifically designed for deploying Windows Installer packages (MSI files). Therefore, when deploying the ODBC Driver for Dynamics 365 Business Central using Group Policy, be sure to use the corresponding MSI file for the ODBC Driver for Dynamics 365 Business Central.

Prerequisites: Locating the MSI Installation File

Prior to making configuration settings in the Group Policy, you'll need to create a distribution folder:

1. Create a shared network folder on the publishing server.
2. Set the appropriate sharing permissions on this folder to allow read access to the driver

installation package for all domain users.

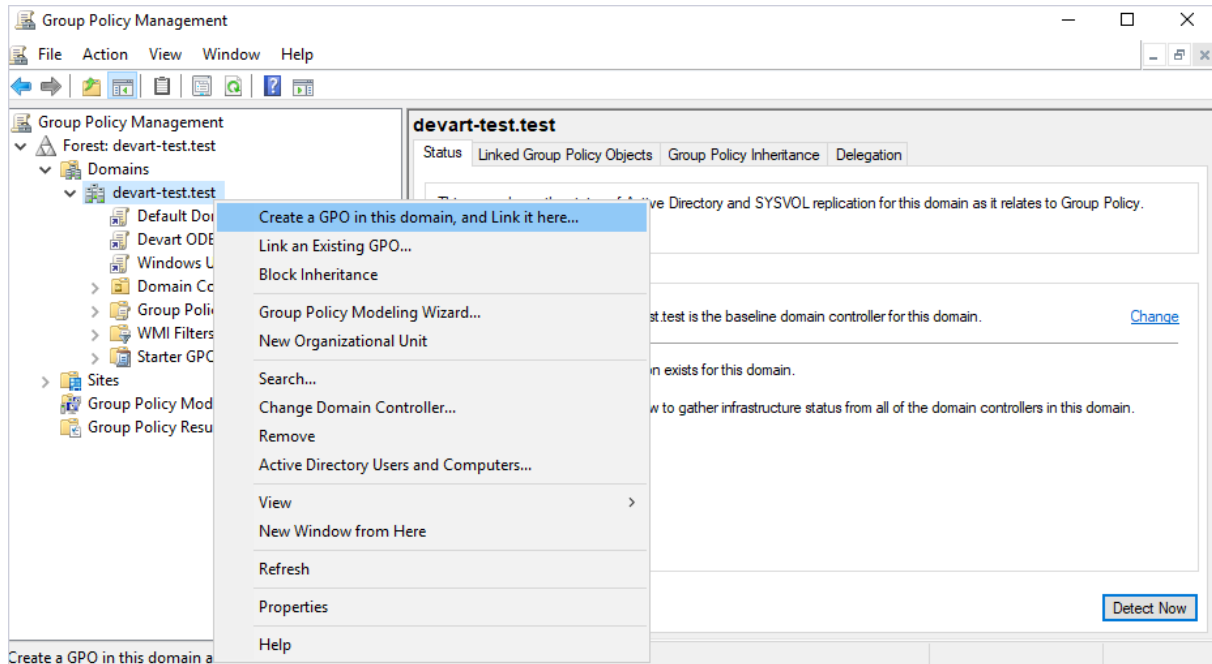
3. Download the ODBC Driver for Dynamics 365 Business Central MSI file, and place it in the network folder.

The MSI file for the ODBC Driver for Salesforce is taken as an example to illustrate the Group Policy installation process. Use the same steps described in this section when installing the ODBC Driver for Dynamics 365 Business Central.

Further in this section, you'll find more detailed information on how to deploy and activate the ODBC Driver for Dynamics 365 Business Central on remote client computers using Group Policy.

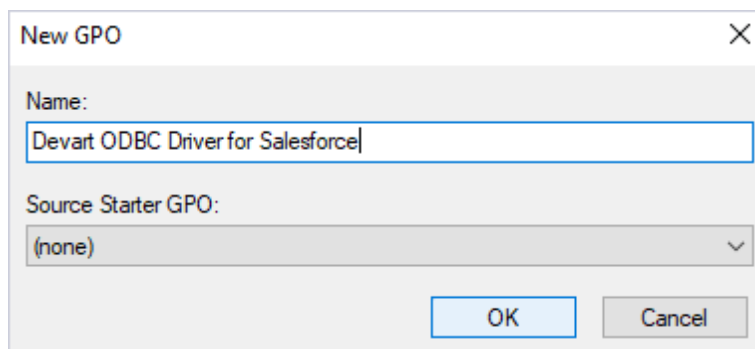
Server-Side Actions

1. Open the **Group Policy Management** desktop application.
2. In the **Group Policy Management** window, navigate to the desired forest node, then expand the appropriate option under the **Domains** node. For this example, we'll select **devart-test.test**. Right-click the Domains node, and from the context menu, select **Create a GPO in this domain, and Link it here**.



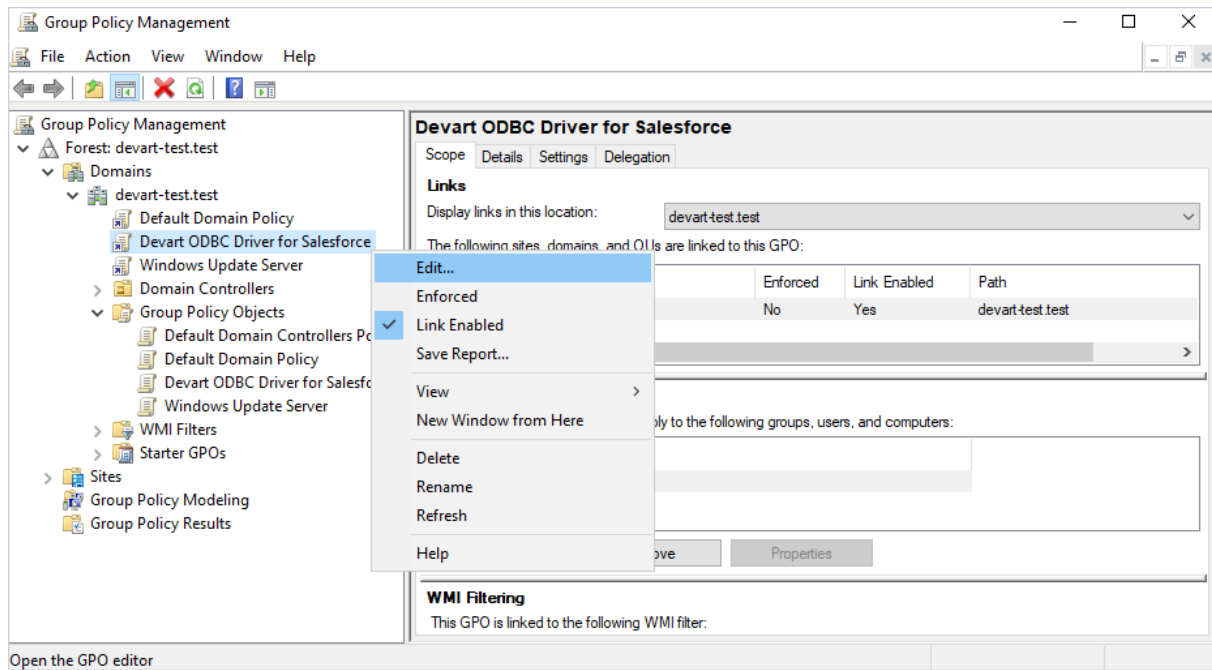
3. You can now create a New Group Policy Object. In the **New GPO** dialog enter a name for the new object and click **OK**. The new GPO will then appear within the **Group Policy Management** container.

For example, let's create a GPO named after the ODBC driver name.

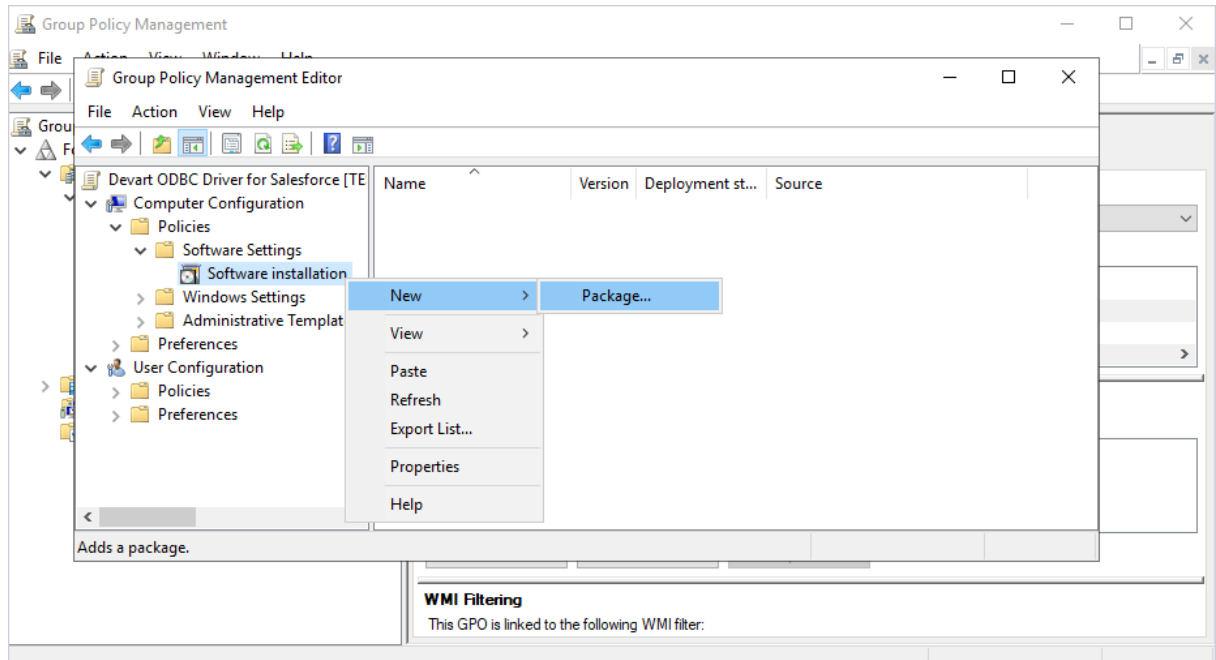


Keep in mind that each ODBC Driver for Dynamics 365 Business Central Windows installation package corresponds to one Group Policy Object (GPO), which is important for managing future software upgrades. To install multiple drivers using Group Policy, you need to create a separate GPO for each driver you want to deploy.

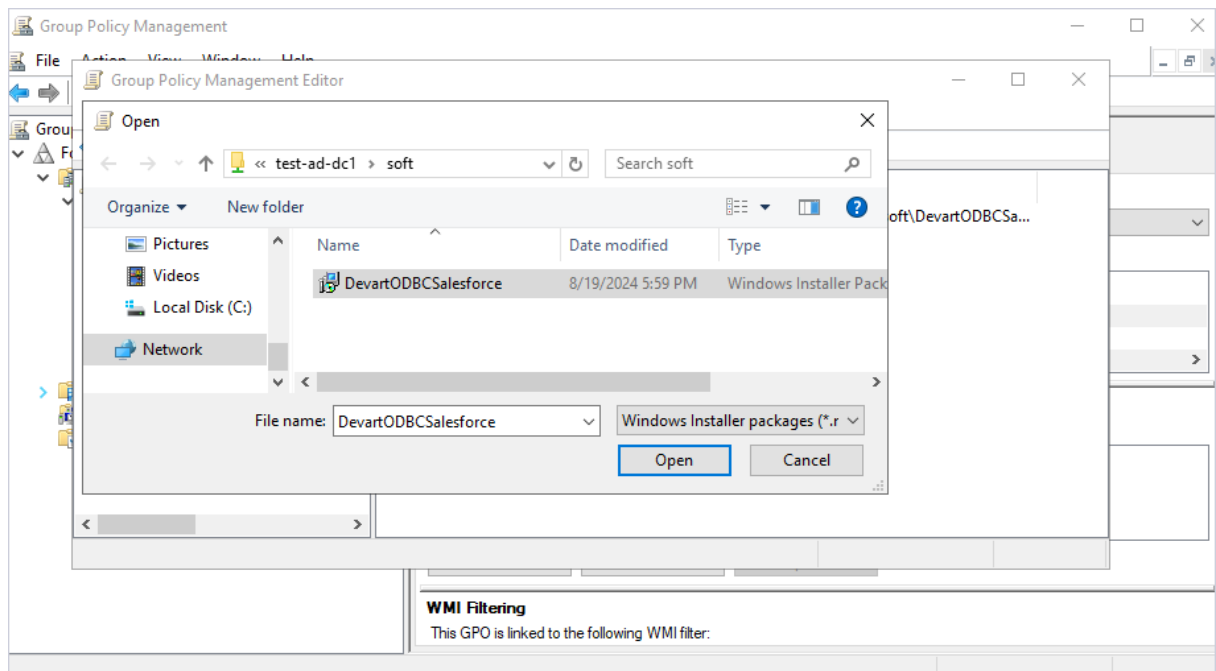
4. Right-click the new object and select **Edit** from the context menu.



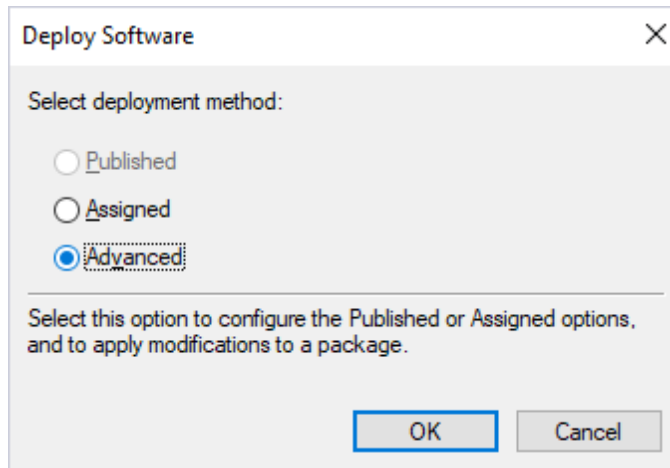
5. In the left pane of the **Group Policy Management Editor**, navigate to **Computer Configuration --> Policies --> Software Settings --> Software installation**. Your current deployment package will appear in the right pane. Right-click **Software installation**, then select **New --> Package**.



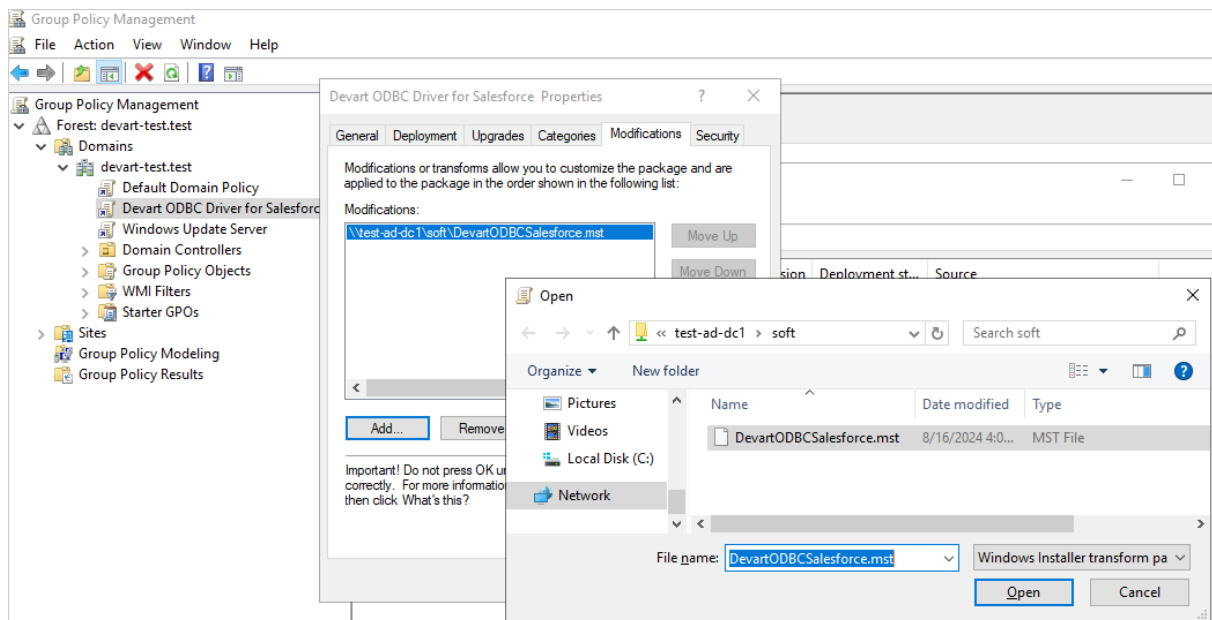
6. In the **Group Policy Management Editor** dialog that opens, select the desired MSI installation file and click **Open**.



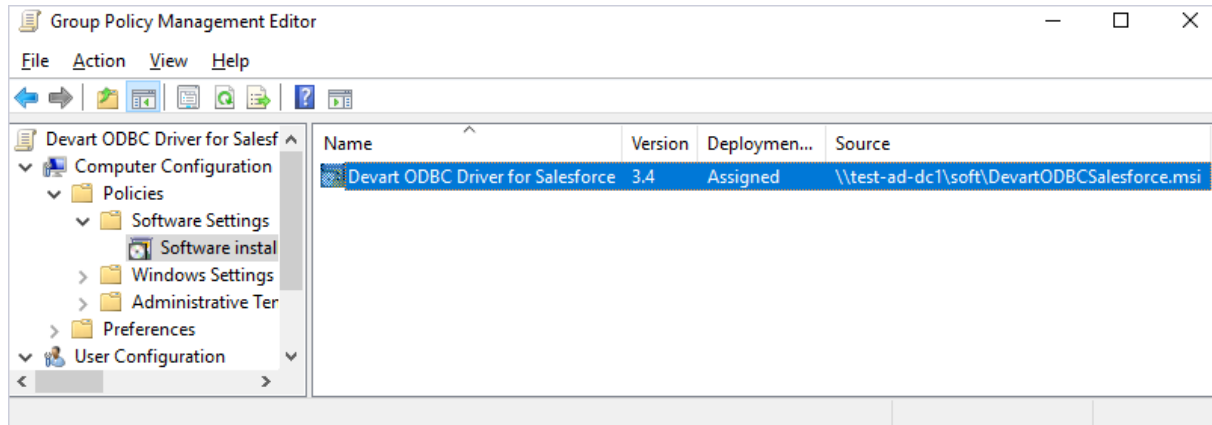
7. In the **Deploy Software** dialog, select **Advanced** to specify the software deployment method. The **Advanced** deployment method allows you to make necessary modifications to the MSI file, such as [creating the MST file in Orca](#).



8. In the **Properties** dialog of the installation package that opens, go to the **Modifications** tab and select **Add**. Browse for the corresponding MST file, select it, and click **Open** to apply the settings.



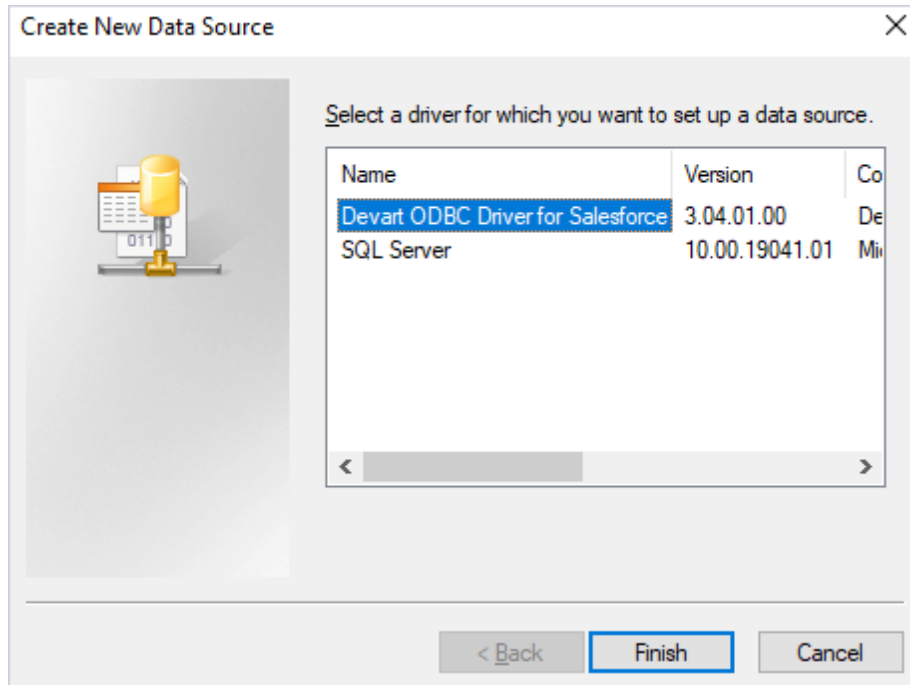
9. If configured correctly, the **Group Policy Management Editor** window should look as follows:



Client-Side Actions

For the ODBC Driver for Dynamics 365 Business Central to be successfully installed on remote client machines, all domain users must restart their computers after logging in for the first time.

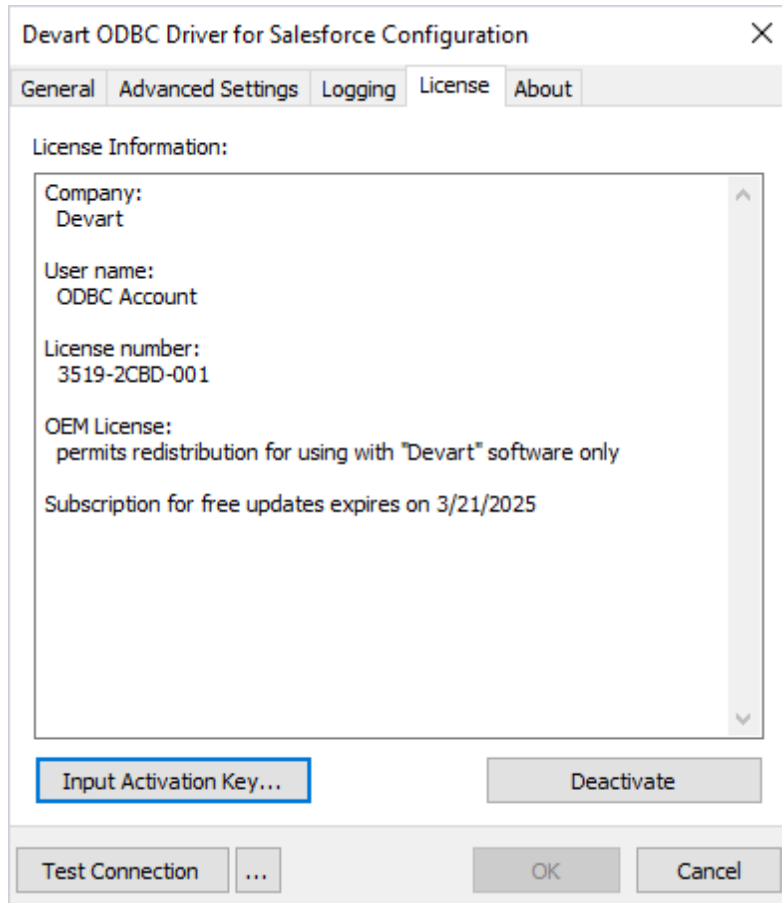
In case of successful deployment, the ODBC driver will be installed on the client's computer. To verify, open the [ODBC Data Source Administrator](#) on the client's machine and add the deployed ODBC driver.



All information on the deployed driver is accessible upon clicking the **About** tab.



Similarly, the valid license key will be automatically activated after the successful installation of the ODBC Driver for Dynamics 365 Business Central.



See Also

- [Creating the MST File Using Orca](#)
- [Activating on Windows - ODBC Driver for Dynamics 365 Business Central](#)
- [License Information - ODBC Driver for Dynamics 365 Business Central](#)

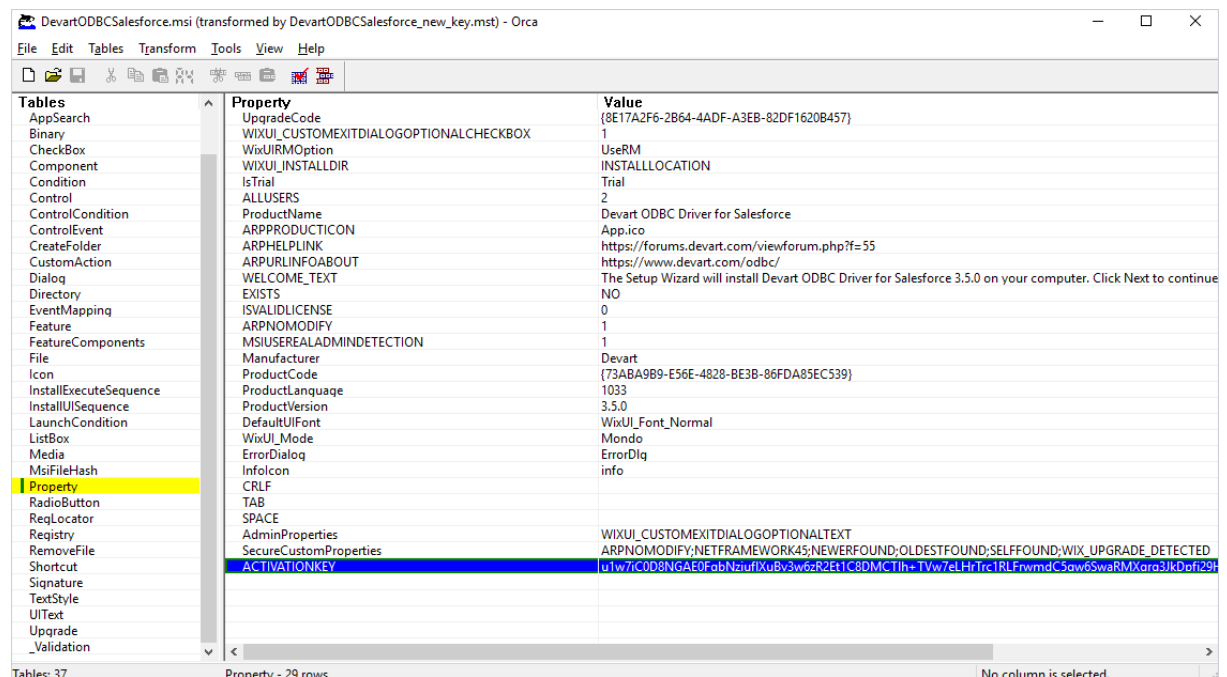
3.2.3 Software Upgrade

Automatic Software Update Using Group Policy

If the ODBC Driver for Dynamics 365 Business Central was initially deployed through Group Policy, it can be easily updated to a newer version. Follow the steps below to update both the ODBC Driver for Dynamics 365 Business Central and the license to newer versions on all remote computers in the domain.

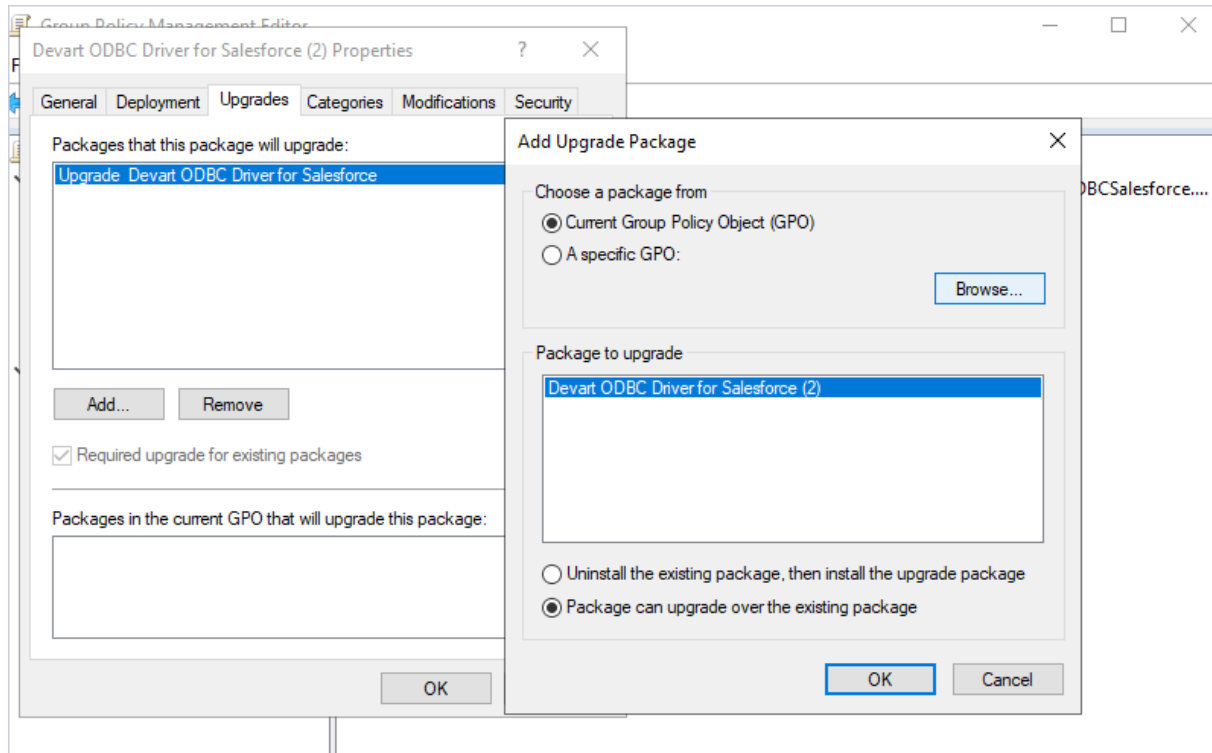
1. Download the ODBC Driver for Dynamics 365 Business Central installation MSI file of a newer version and place it in the [shared network folder](#).
2. [Create a new MST file](#) with a new license key using Orca.

If your license is still valid, there's no need to create a new MST file. Use the current MST file instead.



The MSI file for the ODBC Driver for Salesforce is taken as an example to illustrate the Group Policy installation process. Use the same steps described in this section when installing the ODBC Driver for Dynamics 365 Business Central.

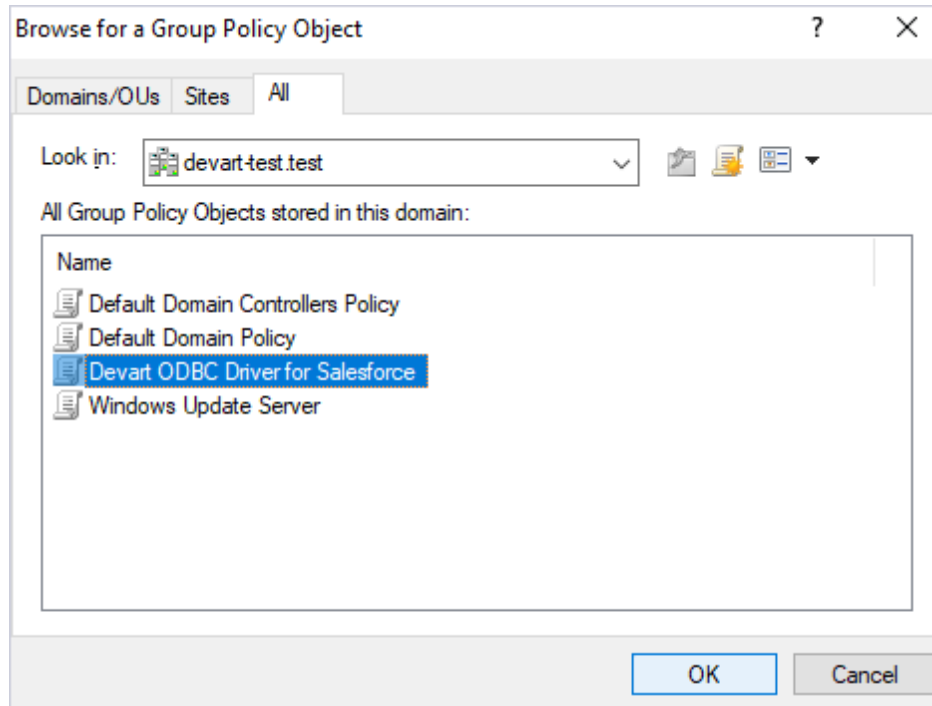
3. Follow the same workflow as outlined in [Step 4 to Step 7](#) of the [ODBC Driver for Dynamics 365 Business Central Remote Deployment and Activation](#) section.
4. In the **Properties** dialog that appears after selecting the **Advanced** deployment method, go to the **Upgrades** tab and click **Add**.



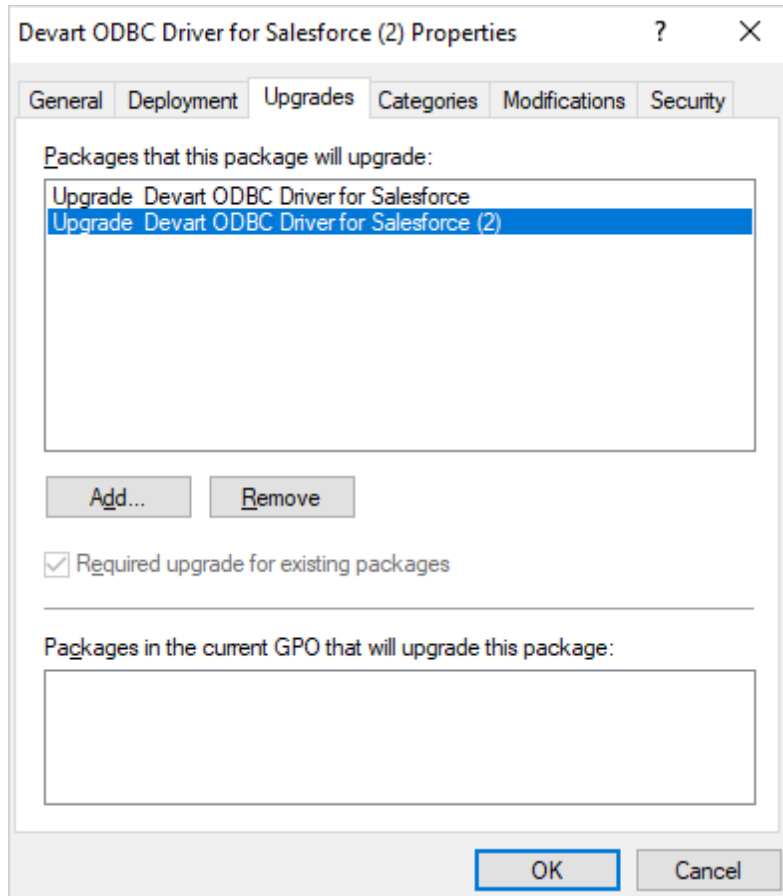
Make sure to select the following check boxes while adding the package:

- **Current Group Policy Object**
- **Package can upgrade over the existing package**

5. Browse for the corresponding GPO object and click **OK** to apply the settings.

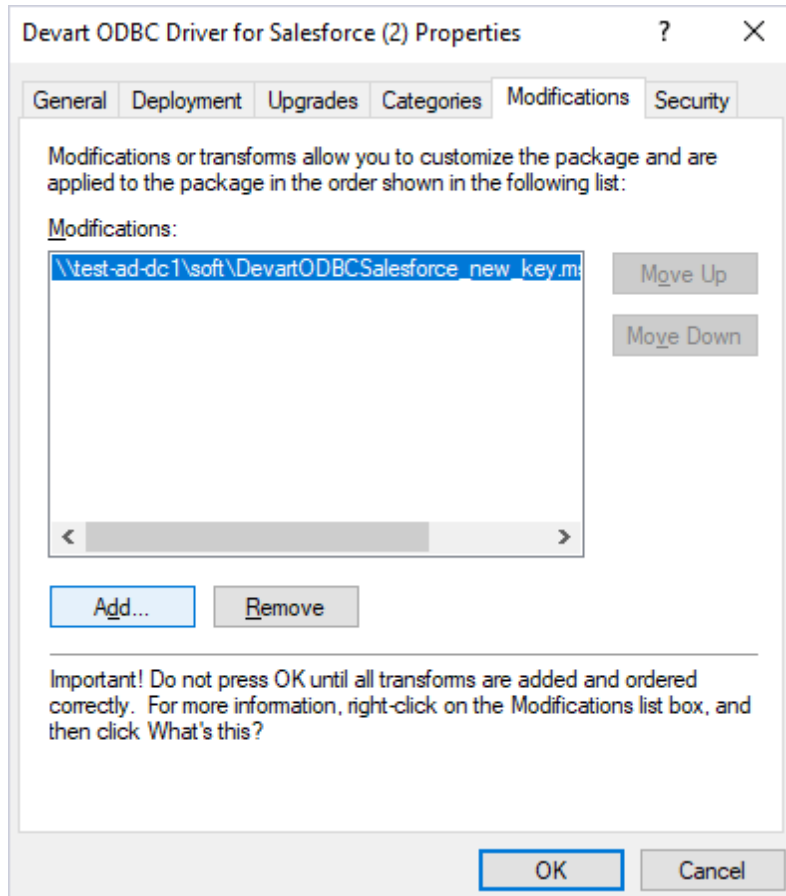


6. Now the **Upgrades** tab of the **Properties** dialog will list a new package with a newer version.

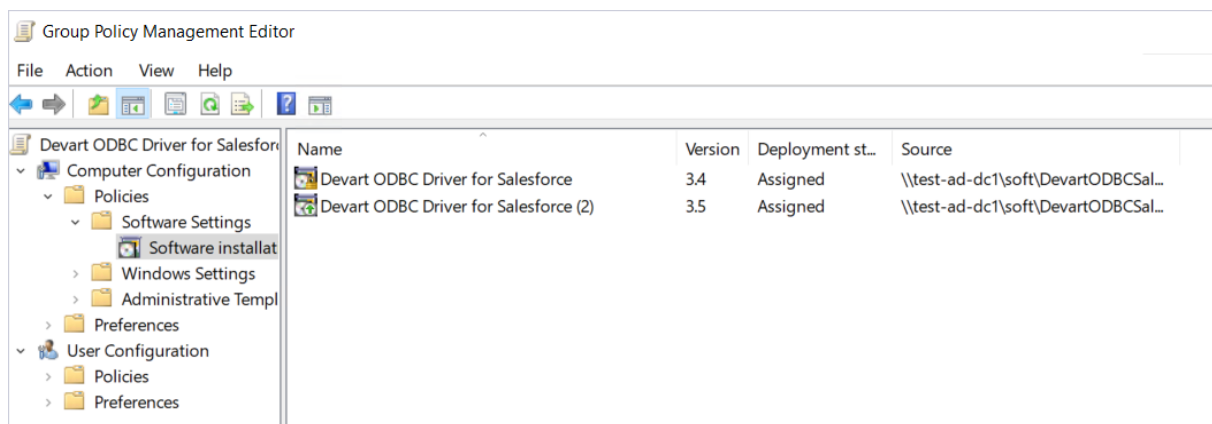


7. Go to the **Modifications** tab in the same properties dialog, click **Add** and browse to the MST file.

We have already created a new MST file with a new license key in [Step 2](#).



8. In case of a positive outcome both the old and new versions of the driver package will be displayed in the Group Policy Management Editor.



Once the GPO configuration on the server is complete, the ODBC Driver for Dynamics 365

Business Central will automatically update to the latest version each time a client computer restarts.

Client-Side Actions

To update the ODBC Driver for Dynamics 365 Business Central to a newer version on remote client machines, all domain users must restart their computers after their first login.

If successful, both the driver and the license key will be automatically updated to the new version on remote computers. For detailed instructions on how to view the technical details of the ODBC Driver for Dynamics 365 Business Central after upgrading, refer to [Client-Side Actions](#).

See Also

- [Creating the MST File Using Orca](#)
- [Remote Deployment and Activation - ODBC Driver for Microsoft Access](#)
- [Activating on Windows - ODBC Driver for Dynamics 365 Business Central](#)
- [License Information - ODBC Driver for Dynamics 365 Business Central](#)

3.3 Product Activation

See how to activate Devart ODBC Driver for Dynamics 365 Business Central:

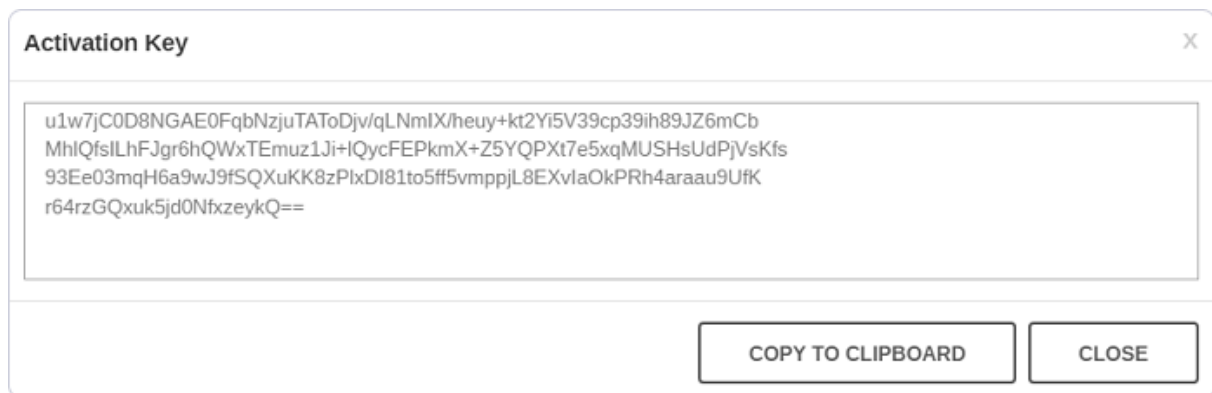
- [Obtaining Activation Key](#)
- [Activation on Windows](#)
- [Where to see the license information](#)

3.3.1 Obtaining Activation Key

To obtain a product activation key, follow these instructions:

1. After purchasing the license, you receive a registration email to the email address, specified when ordering the product.
2. This email contains a Driver Activation Key and Login Credentials for the [Customer Portal](#).
Keep this information secret.

3. You can copy the Activation Key either from the registration email or at the Customer Portal account.
4. To login to the Customer Portal, use your Username and Password from the registration email.
5. To obtain your Activation Key, click the View link on the right. You will get the following dialog box:



6. Copy the Activation Key with the Copy to Clipboard button.

See also:

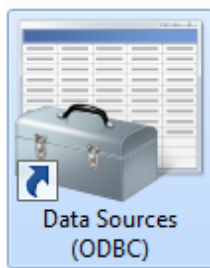
- [Activation on Windows](#)

3.3.2 Activation on Windows

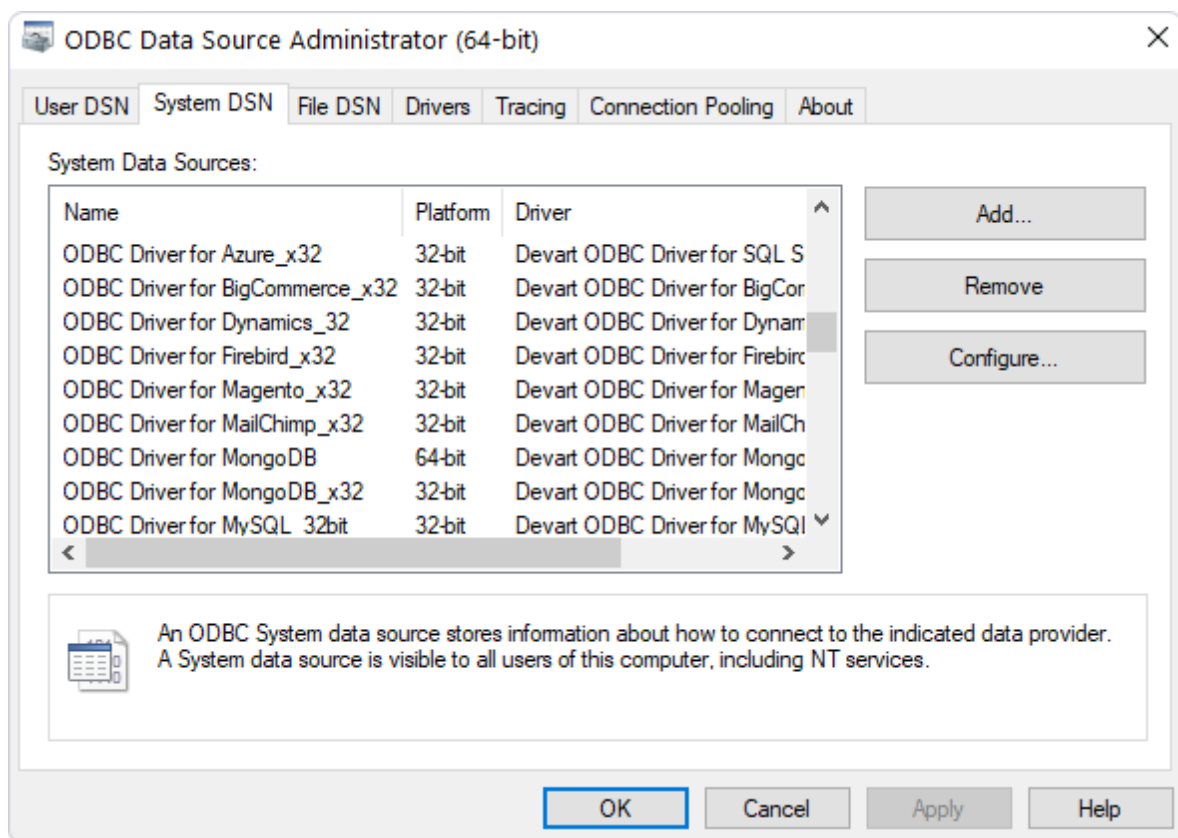
Driver Activation After Installation

To activate your installed driver using ODBC Administrator, perform the following steps:

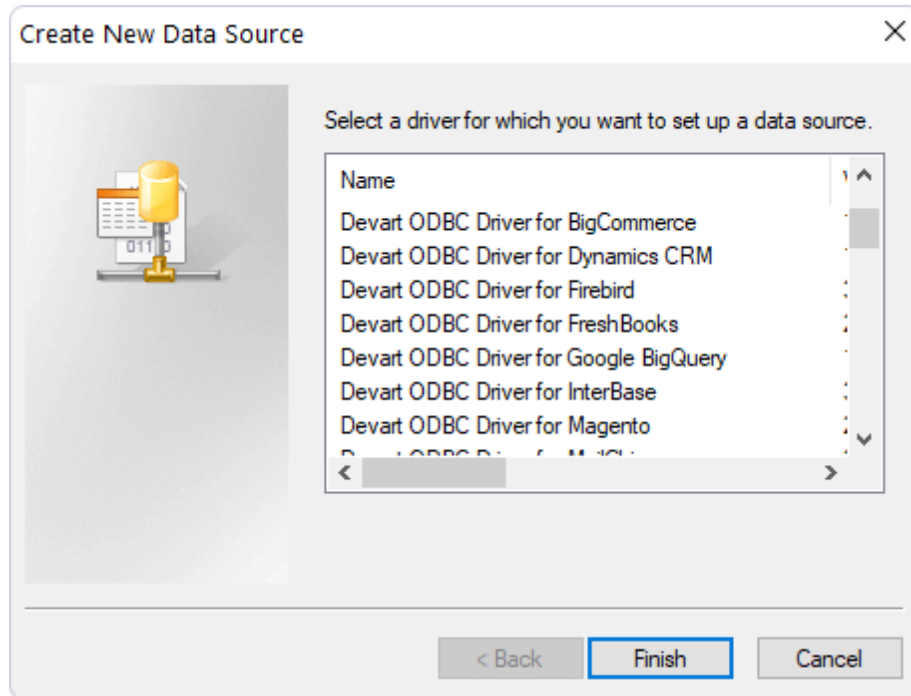
1. Run ODBC Administrator.



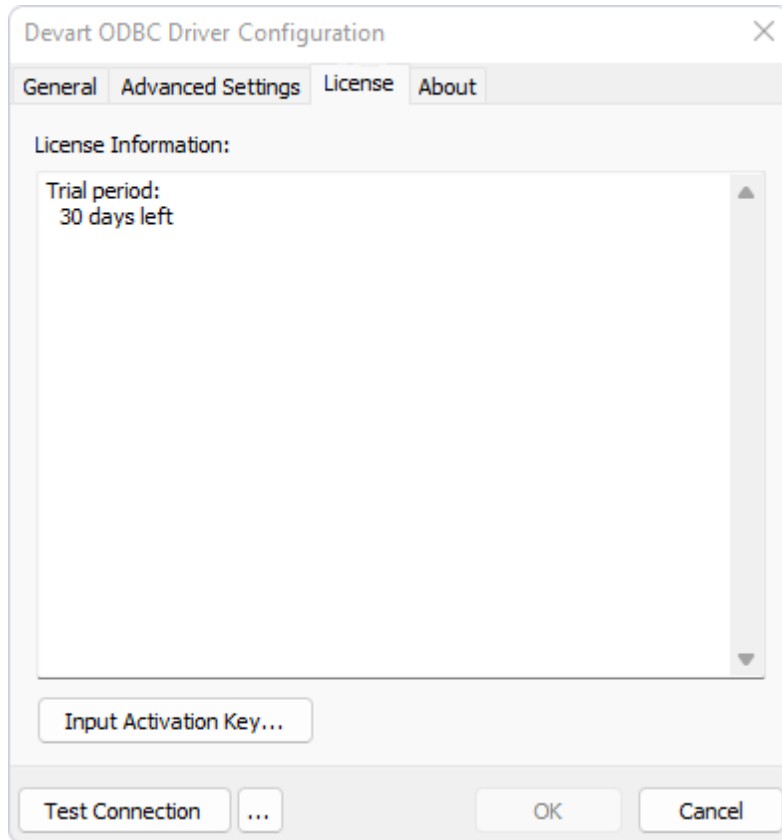
2. In the System DSN tab click the Add button.



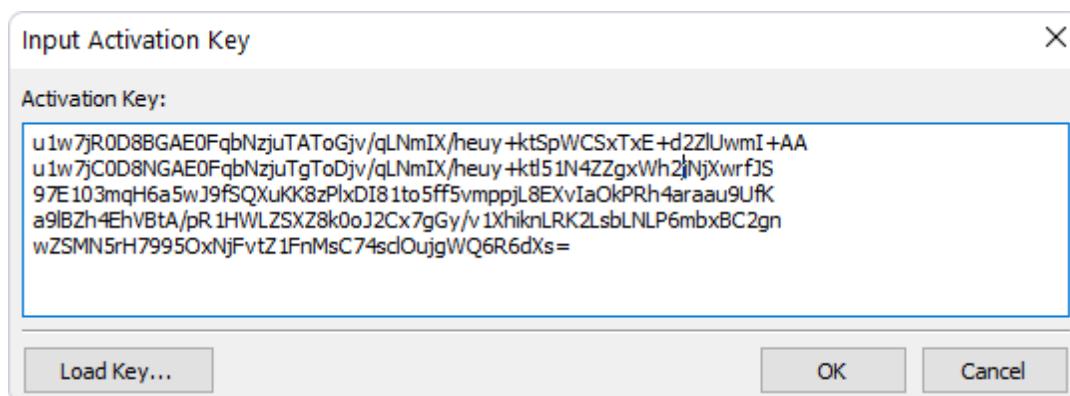
3. In the appeared dialog box, select the installed driver, click Finish.



4. In the Driver Configuration dialog box, on the License tab, click the Input Activation Key button.



5. Copy the activation key from the registration email carefully and paste it into the Input Activation Key edit box.

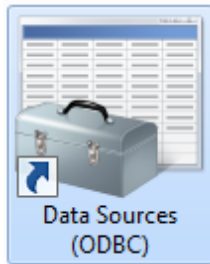


6. If you have the activation key file, click the Load Key button and browse to it.
7. Click OK.

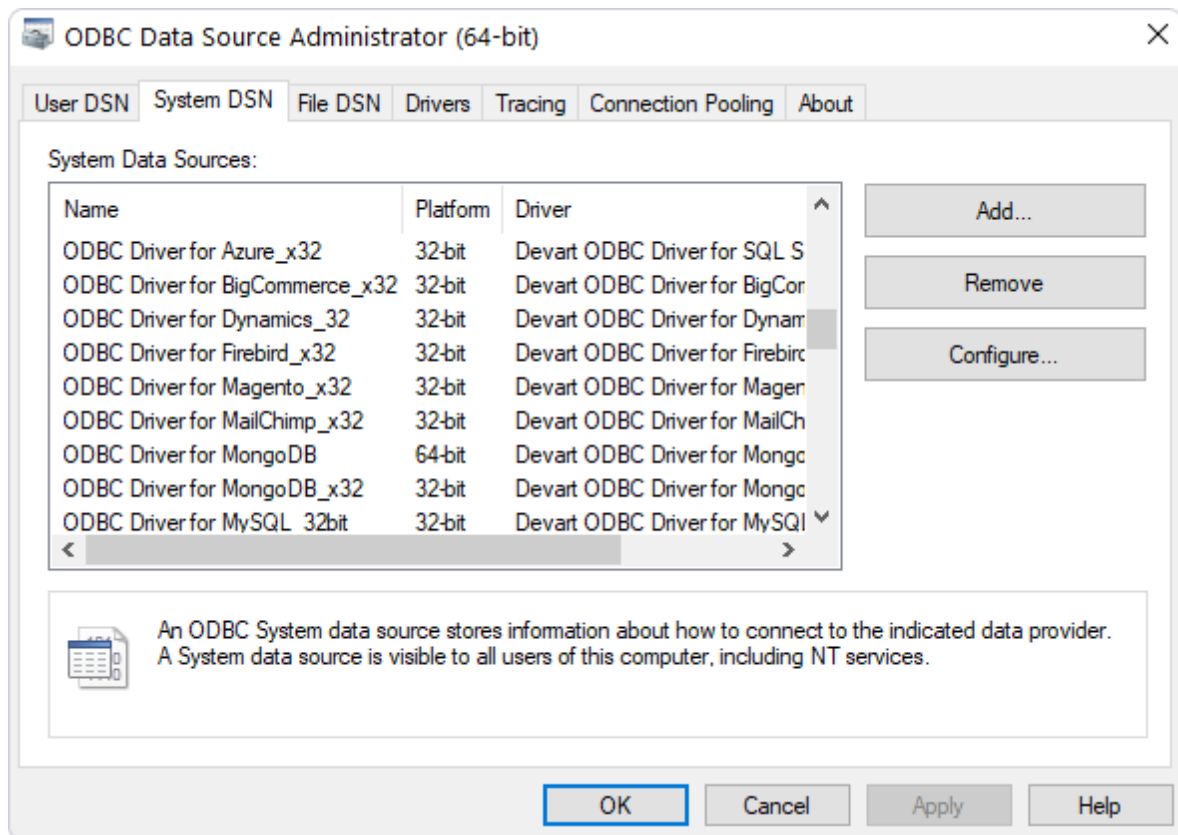
3.3.3 Where to See the License Information?

To see the license information of your installed driver, do the following:

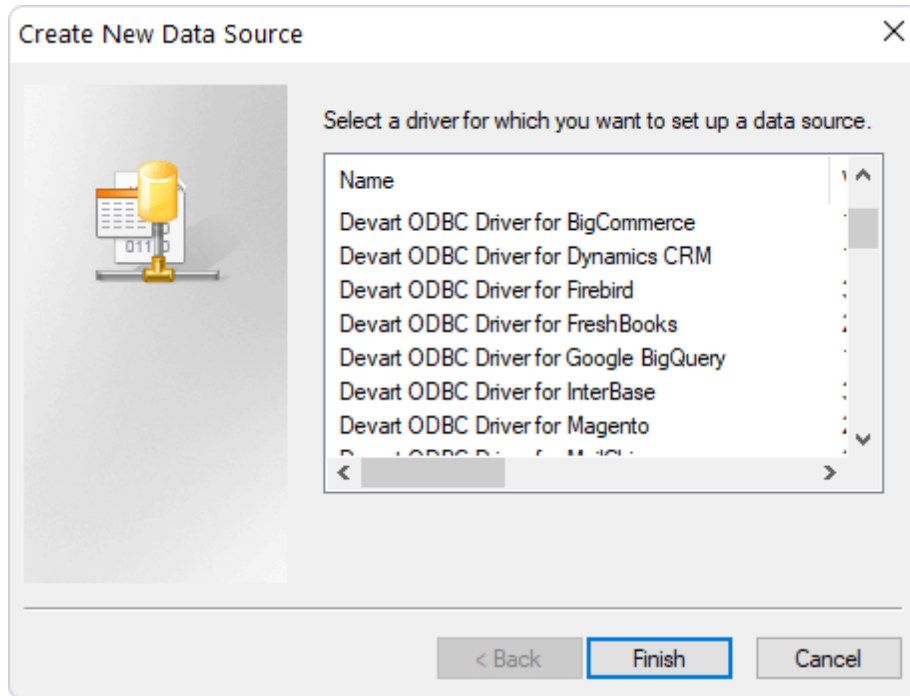
1. In the Control Panel run ODBC Administrator



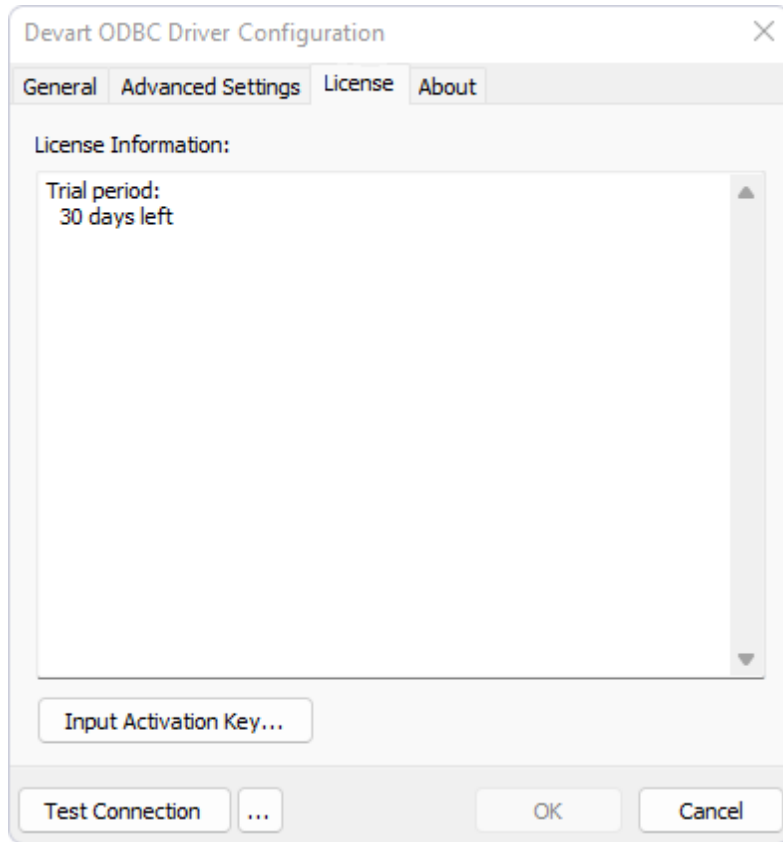
2. Open the System DSN tab and click the Add button



3. Select the driver and click Finish



4. In the appeared dialogue, select the License tab



See also

- [Product Activation](#)

3.4 Connecting to Dynamics 365 BC

This section describes how to connect to Dynamics 365 Business Central using ODBC Driver for Dynamics 365 Business Central

1. [Driver Configuration](#)
2. [Obtaining an Access Key](#)
3. [Obtaining a Refresh Token](#)

3.4.1 Driver Configuration

Windows DSN Configuration

After installing the driver, create a DSN for ODBC Driver for Dynamics 365 Business Central in the ODBC Data Source Administrator.

1. Open the ODBC Data Source Administrator.
 - Type `ODBC Data Sources` in the Windows search box and choose the application that matches the bitness of the third-party application (32-bit or 64-bit). You can also open **ODBC Data Sources** from **Control Panel > Administrative Tools**. Note that before Windows 8, the icon was named **Data Sources (ODBC)**.
 - Alternatively, you can run `C:\Windows\SysWOW64\odbcad32.exe` to create a 32-bit DSN or `C:\Windows\System32\odbcad32.exe` to create a 64-bit DSN.
2. Select the **User DSN** or **System DSN** tab. Most applications work with both types, yet some applications require a specific type of DSN.
3. Click **Add**. The **Create New Data Source** dialog will appear.
4. Select **Devart ODBC Driver for Dynamics 365 Business Central** and click **Finish**. The driver setup dialog will open.
5. Enter the connection information in the appropriate fields. Finally, click **OK** to save the DSN.

Basic Authentication

If you choose this authentication type, enter the username and password for your Dynamics 365 Business Central account.

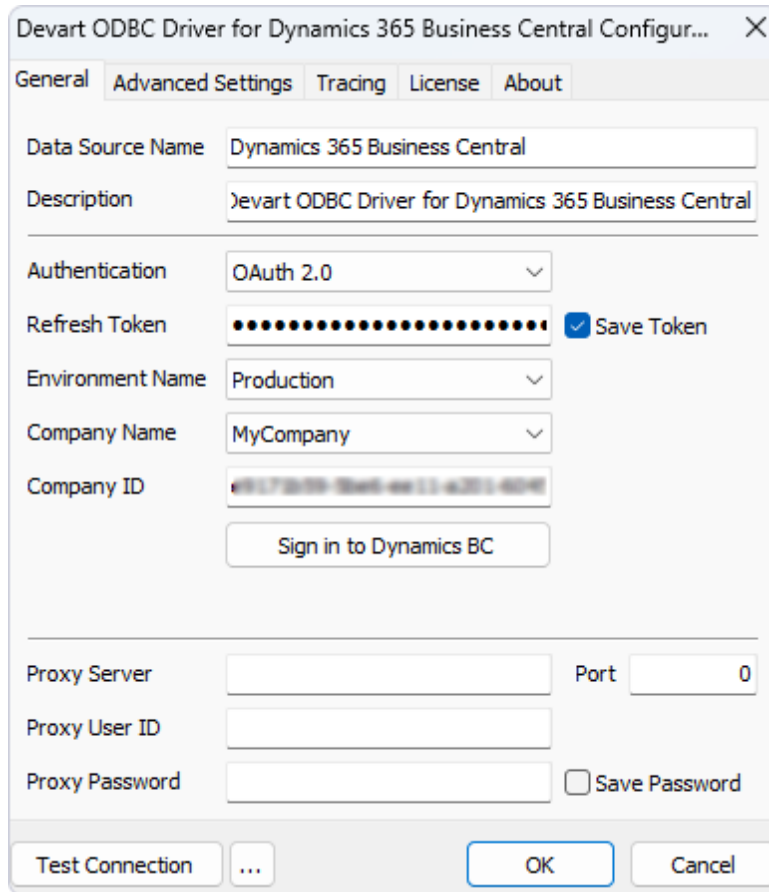
The screenshot shows the 'Devart ODBC Driver for Dynamics 365 Business Central Configur...' dialog box. It has five tabs: 'General', 'Advanced Settings', 'Tracing', 'License', and 'About'. The 'General' tab is selected. The fields are as follows:

- Data Source Name:** Dynamics 365 Business Central
- Description:** Devart ODBC Driver for Dynamics 365 Business Centra
- Authentication:** Basic (dropdown)
- Server:** http://localhost:7049/BC230
- User ID:** D365BC\ADMINISTRATOR
- Access Key:** [Redacted] ☒ Save Key
- Company Name:** CRONUSUSA (dropdown)
- Company ID:** 21077764-8863-4413-B079-6049E
- Proxy Server:** [Empty] **Port:** 0
- Proxy User ID:** [Empty]
- Proxy Password:** [Empty] ☐ Save Password

At the bottom, there is a 'Test Connection' button with an ellipsis, and 'OK' and 'Cancel' buttons.

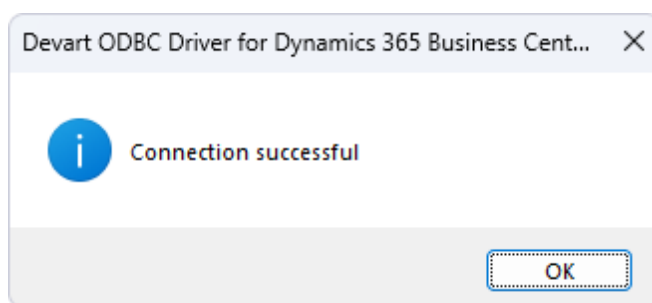
Token-Based Authentication

If you authenticate with OAuth2, click **Sign in to Dynamics BC**, enter your credentials, and grant the requested permissions to generate a refresh token.



The screenshot shows the 'Devart ODBC Driver for Dynamics 365 Business Central Configur...' dialog box. It has tabs for 'General', 'Advanced Settings', 'Tracing', 'License', and 'About'. The 'General' tab is active. Fields include: 'Data Source Name' (Dynamics 365 Business Central), 'Description' (Devart ODBC Driver for Dynamics 365 Business Central), 'Authentication' (OAuth 2.0), 'Refresh Token' (masked with dots and a 'Save Token' checkbox), 'Environment Name' (Production), 'Company Name' (MyCompany), and 'Company ID' (a GUID). A 'Sign in to Dynamics BC' button is below the Company ID field. At the bottom, there are fields for 'Proxy Server', 'Proxy User ID', and 'Proxy Password' (with a 'Save Password' checkbox), and a 'Port' field set to 0. At the very bottom are 'Test Connection', '...', 'OK', and 'Cancel' buttons.

For both authentication types, you may test the connectivity by clicking **Test Connection**.



See Also

[Connection String Parameters](#)

[Obtaining an Access Key](#)

[Obtaining a Refresh Token](#)

3.4.2 Obtaining Connection Details - Basic

To start the process of obtaining a web service access key, follow the steps below:

1. Access the web client of your Dynamics 365 Business Central instance by logging in.
2. In the **Search** field, type *users* and select the **Users** page.

The screenshot shows the Dynamics 365 Business Central search interface. At the top, there is a search bar with the placeholder text 'Tell me what you want to do' and a close button. Below the search bar, the word 'users' is entered. Underneath, there is a section titled 'Go to Pages and Tasks' with a 'Show all (19)' link. A list of search results is displayed, with the first result, 'Users', highlighted. This result shows a chevron icon, the text 'Users', the category 'Administration', and a bookmark icon. Below this, two other results are visible: 'ADCS Users' and 'Security Groups', both categorized as 'Lists'. At the bottom of the search results, there is a section titled 'Search for 'users'' with a 'Search company data' button. Finally, a message at the bottom says 'Didn't find what you were looking for? Try [exploring pages](#) or [exploring reports](#)'.

Go to Pages and Tasks		Show all (19)
>	Users	Administration
>	ADCS Users	Lists
>	Security Groups	Lists

Search for 'users'

[Search company data](#)

Didn't find what you were looking for? Try [exploring pages](#) or [exploring reports](#)

3. Select the required user and then click **User Name**.

← Users | Work Date: 1/23/2025

Users: All ▾

Search

Analyze

+ New

Manage

Home

Navigate

More options

Effective Permissions

Send Email

User Name ↑	Full Name	Status	Windows User Name	License Type
D365BC\AD...	:	Enabled	D365BC\Administrator	Full User

4. Copy the existing Web Service Access Key or generate a new one instead.

Work Date: 1/23/2025

+

User Card

Effective Permissions

ACS Setup

Change Password

Send Email

Sent Emails

More options

General Show more

User Name	D365BC\ADMINISTRATOR	Microsoft 365	
Full Name		Authentication Email	
License Type	Full User ▾	Application ID	
Status	Active ▾	Authentication Status	Disabled
Expiry Date	<div></div>	Web Service	
Contact Email		Web Service Access ...	<div></div>

Windows Authentication

Windows User Name	D365BC\Administrator
-------------------	----------------------

5. Now, you can access your Dynamics 365 Business Central account data.

See Also

[Configuring ODBC Driver for Dynamics 365 Business Central](#)

3.4.3 Obtaining Connection Details - OAuth 2.0

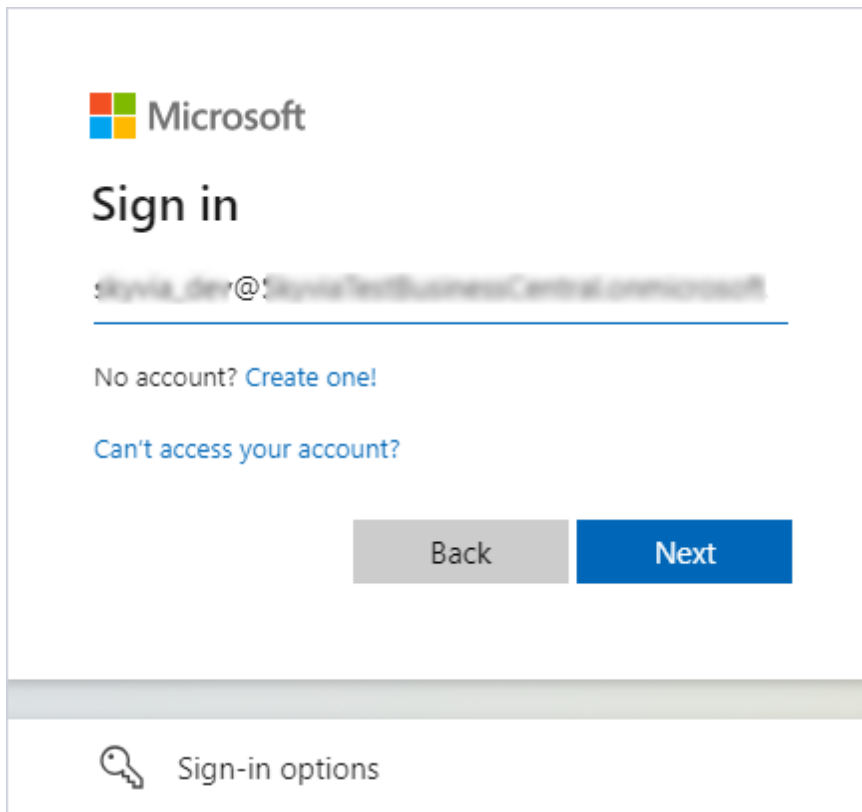
To start the process of generating a refresh token for the ODBC driver for Dynamics 365 Business Central, follow the steps below:

1. Run the ODBC Administrator utility and [make proper settings in the driver's Configuration dialog](#).
2. Click **Sign in to Dynamics BC**.

The screenshot shows the 'Devart ODBC Driver for Dynamics 365 Business Central Configur...' dialog box. It has tabs for 'General', 'Advanced Settings', 'Tracing', 'License', and 'About'. The 'General' tab is active. It contains the following fields and controls:

- Data Source Name:** Dynamics 365 Business Central
- Description:** Devart ODBC Driver for Dynamics 365 Business Centra
- Authentication:** OAuth 2.0 (dropdown menu)
- Refresh Token:** (text input field) with a ☐ Save Token checkbox.
- Environment Name:** (dropdown menu)
- Company Name:** (dropdown menu)
- Company ID:** (text input field)
- Sign in to Dynamics BC:** (blue button)
- Proxy Server:** (text input field) and **Port:** (text input field with value 0)
- Proxy User ID:** (text input field)
- Proxy Password:** (text input field) with a ☐ Save Password checkbox.
- Test Connection:** (button) with an ellipsis (...)
- OK:** (button)
- Cancel:** (button)

3. Specify your credentials or select a different sign-in option to log in and click **Next**.

A screenshot of the Microsoft sign-in interface. At the top left is the Microsoft logo. Below it, the text "Sign in" is displayed in a large, bold font. Underneath, there is a text input field containing the email address "skynia_dev@ServiceTextBusinessCentral.com". Below the input field, there are two links: "No account? Create one!" and "Can't access your account?". At the bottom right, there are two buttons: a grey "Back" button and a blue "Next" button. At the bottom left, there is a key icon followed by the text "Sign-in options".

Microsoft


Sign in

skynia_dev@ServiceTextBusinessCentral.com

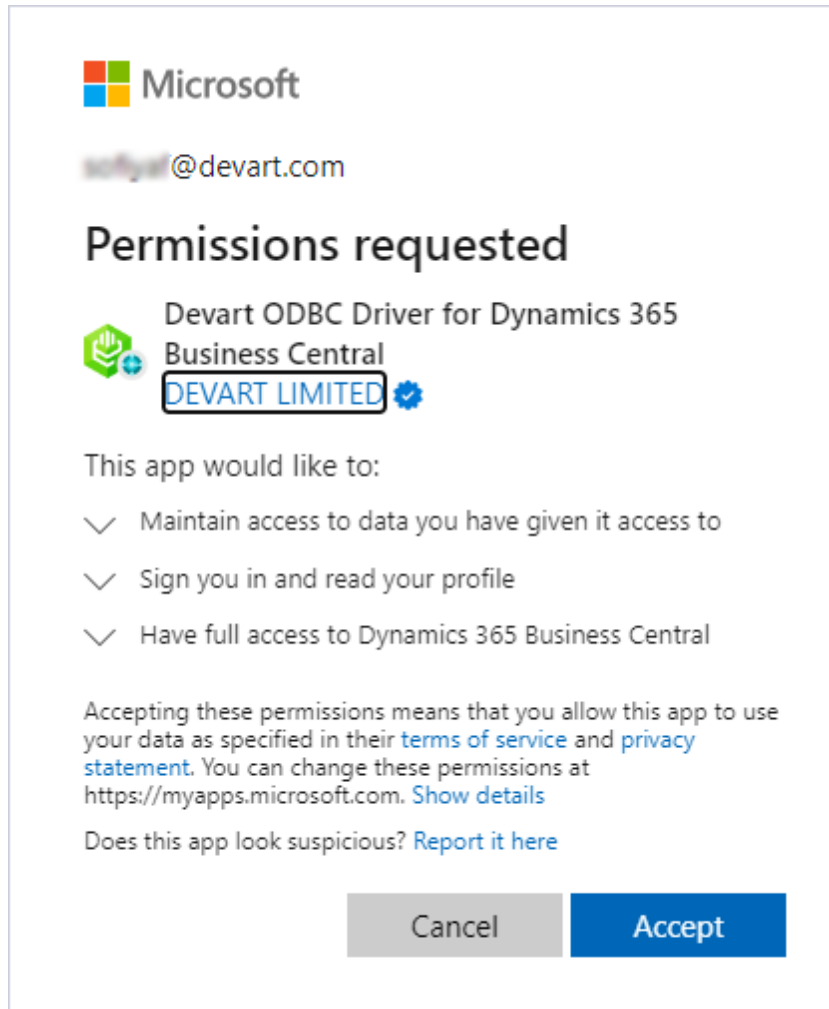
No account? [Create one!](#)

[Can't access your account?](#)

Back Next

 Sign-in options

4. Now, click **Accept** to give permission for data access.



If the process is successful, the refresh token will be automatically generated and inserted in the corresponding field of the driver configuration window.

5. Therefore, click **OK** to save your configuration settings.

Devart ODBC Driver for Dynamics 365 Business Central Configur... X

General Advanced Settings Tracing License About

Data Source Name Dynamics 365 Business Central

Description Devart ODBC Driver for Dynamics 365 Business Central

Authentication OAuth 2.0

Refresh Token Save Token

Environment Name Production

Company Name MyCompany

Company ID 4811730259-28a65-4ea-113-a2011-40248

Sign in to Dynamics BC

Proxy Server Port 0

Proxy User ID

Proxy Password Save Password

Test Connection ... OK Cancel

6. Finally, you can access your Dynamics 365 Business Central account data.

See Also

[Configuring ODBC Driver for Dynamics 365 Business Central](#)

3.5 Connection String Parameters

Dynamics 365 Business Central ODBC Connection String Parameters

The following table lists the connection string parameters for Dynamics 365 Business Central.

Parameter	Description
-----------	-------------

Authentication	<p>The authentication type to use when connecting to Dynamics 365 Business Central.</p> <p>The possible values are:</p> <ul style="list-style-type: none"> • Basic - The basic user/password authentication type. • OAuth 2.0 - The OAuth 2.0 authentication type.
Server	The URL of the Dynamics 365 Business Central server.
User ID	The Dynamics 365 Business Central username. Available when the User ID and Password authentication type is selected.
Access Key	The web service access key generated in the user account allowing authorization of a specific application to access Dynamics 365 Business Central data. To save your access token in the DSN settings, select Save Key.
Company Name	Specify a custom company name by selecting the appropriate option from the drop-down menu.
Company Id	Custom Company Id for the Dynamics 365 Business Central OAuth 2.0.
Environment Name	Specify a custom environment name by selecting the appropriate option from the drop-down menu.
Refresh Token	The Dynamics 365 Business Central OAuth 2.0 token. Available when the OAuth 2.0 authentication type is selected.

Proxy Settings	
Proxy Server	The proxy hostname or IP address.
Proxy User ID	The proxy hostname or IP address.
Proxy Password	The proxy password.
Proxy Port	The proxy port.
Advances Settings	
AllowNullStringsInMetadata	Some parameters don't accept null values when retrieving metadata. If a third-party tool passes a null value to such a parameter, the driver returns an error. By default, these options are enabled for compatibility with such third-party tools.
EmptyStringsAsNullInMetadata	
Cache Metadata	<p>This is a configurable parameter, which allows caching and storing metadata in a temporary database. The parameter settings specify the frequency of resetting cached metadata ranging from 1 hour...to 1 month.</p> <ul style="list-style-type: none"> • False - The metadata caching is disabled. • Hour - Cached metadata is reset one time per hour. • Day - Cached metadata is reset once a day (i.e. every 24 hours). • Month - Cached metadata is reset once per month. • True - Metadata caching won't reset until the driver is unloaded.
Connection Timeout	The time (in seconds) to wait for a connection

	to open before terminating an attempt. The default value is 60.
ODBC Behavior	<p>Sets the behavior corresponding to the ODBC specification version expected by a third-party tool. The behavior of the ODBC driver can be changed by calling the <code>SQLSetEnvAttr</code> function to set the <code>SQL_ATTR_ODBC_VERSION</code> environment attribute. Some third-party tools expect the driver to exhibit ODBC 2.x behavior, but forget to call <code>SQLSetEnvAttr</code> with the needed version, or pass the incorrect value. In this case, the behavior can be explicitly set in the Connection String.</p> <ul style="list-style-type: none"> • 0 - The default value. ODBC behavior is determined by a third-party tool. • 2 - ODBC 2.x behavior is explicitly set. • 3 - ODBC 3.x behavior is explicitly set.
QueryTimeout	The time to wait for a query execution result before terminating and generating an error.
RegionalNumberSettings	Enables the use of local regional settings when converting numbers to strings.
RegionalDateTimeSettings	Enables the use of local regional settings when converting dates and times to strings.
ReturnForeignKeys	Use the parameter to specify whether the driver must return foreign keys. Retrieving metadata about foreign key constraints is a time-consuming operation; many third-party tools request foreign key metadata even when they do not actually need this information. Note that enabling the option may degrade performance of data access operations. The default value is False.

String Types	<p>Sets the string value types returned by the driver as Default, ANSI, or Unicode.</p> <ul style="list-style-type: none"> • Default - The driver defines the string types. • Ansi - All string types are returned as SQL_CHAR, SQL_VARCHAR, and SQL_LONGVARCHAR. • Unicode - All string types are returned as SQL_WCHAR, SQL_WVARCHAR, and SQL_WLONGVARCHAR. <hr/> <p>Set the parameter to Ansi or Unicode, if your third-party tool supports only Ansi or Unicode strings.</p>
UTC Dates	<p>Specifies whether all the datetime values retrieved from the data source are returned as UTC values or converted to local time and whether the date values specified on the application side (e.g., in SQL statements) are considered UTC or local. The default value is false.</p>

Sample Dynamics 365 Business Central ODBC Connection String

```
DRIVER={Devart ODBC Driver for Dynamics 365 Business Central};Refresh Token=mytoken
```

3.6 Enabling ODBC Tracing

Creating an ODBC Trace Log on Windows

When you start or stop tracing in the 64-bit ODBC Administrator, the tracing is also enabled or disabled in the 32-bit ODBC Administrator, and vice versa.

If the ODBC client application you need to trace runs under Local System account or any other user login than your own, select `Machine-Wide tracing for all user identities`. For example, this option may be necessary for SSMS.

To generate a trace file using ODBC Source Administrator on Windows, follow the steps below.

1. Type `ODBC Data Sources` in the Windows 10 search box (in earlier versions of Windows, open `Control Panel > Administrative Tools`) and choose the application of the needed bitness.
2. Select the `Tracing` tab.
3. If necessary, change the default `Log File Path`. Make sure that the path is writable by the application, then click `Apply`.
4. Click `Start Tracing Now`.
5. Restart all application processes.
6. Click `Test Connection` in the DSN settings to make sure the driver is able to connect.
7. Reproduce the issue.
8. Click `Stop Tracing Now` on the `Tracing` tab.
9. Send us the obtained log file (for example, `devart.log`).

Creating an ODBC Trace Log on macOS

To enable the trace option on macOS, use the `Tracing` tab within ODBC Administrator.

1. Open the ODBC Administrator.
2. Select the `Tracing` tab.
3. If necessary, change the default `Log file path`.
4. Select `All the time` in the `When to trace` option.

Creating an ODBC Trace Log on Linux

To trace the ODBC calls on Linux, set the `Trace` and `TraceFile` keyword/value pairs in the `[ODBC]` section of the `/etc/odbcinst.ini` file, for example:

```
[ODBC]
Trace=Yes
TraceFile=/home/test/devart.log
```

Make sure to disable logging after obtaining a log file since it affects the read/write speed.

3.7 Supported Data Types

Data Type Mapping

The Devart ODBC Driver for Dynamics 365 Business Central supports all Dynamics 365 Business Central data types.

The following table describes how the Dynamics 365 Business Central data types are mapped to the ODBC data types.

Dynamics Data Types	ODBC Data Types
BINARY	SQL_VARBINARY
STRING	SQL_VARCHAR
	SQL_LONGVARCHAR
	SQL_WVARCHAR
	SQL_WLONGVARCHAR
BOOLEAN	SQL_BIT
INT	SQL_INTEGER
LONG	SQL_BIGINT
DOUBLE	SQL_FLOAT
	SQL_DOUBLE
DECIMAL	SQL_DECIMAL
TIME	SQL_TYPE_TIME
DATE	SQL_TYPE_DATE
DATETIME	SQL_TYPE_TIMESTAMP
GUID	SQL_GUID

3.8 Supported ODBC API Functions

Supported ODBC Functions

The SQLGetInfo function returns information about the driver and data source. To find out whether a specific function is supported in the driver, call SQLGetFunctions.

For more information about the ODBC interface, see the [ODBC Programmer's Reference](#).

ODBC Driver for Dynamics 365 Business Central supports all deprecated functions for backward compatibility.

The following table lists the currently supported ODBC functions.

Function Name	Support	Standard	Purpose
SQLAllocHandle	✓	ISO 92	Obtains an environment, connection, statement, or descriptor handle.
SQLConnect	✓	ISO 92	Connects to a specific driver by data source name, user ID, and password.
SQLDriverConnect	✓	ODBC	Connects to a specific driver by connection string or requests that the Driver Manager and driver display connection dialog

			boxes for the user.
SQLAllocEnv	✓	Deprecated	Obtains an environment handle allocated from driver.
SQLAllocConnect	✓	Deprecated	Obtains a connection handle

ODBC API Calls for Obtaining Information about a Driver and Data Source

Function Name	Support	Standard	Purpose
SQLDataSources	✓	ISO 92	Returns the list of available data sources, handled by the Driver Manager
SQLDrivers	✓	ODBC	Returns the list of installed drivers and their attributes, handles by Driver Manager
SQLGetInfo	✓	ISO 92	Returns information about a specific driver and data source.
SQLGetFunctions	✓	ISO 92	Returns the functions supported by the driver.
SQLGetTypeInfo	✓	ISO 92	Returns information about supported data types.

ODBC API Calls for Setting and Retrieving Driver Attributes

Function Name	Support	Standard	Purpose
SQLSetConnectAttr	✓	ISO 92	Sets a connection attribute.
SQLGetConnectAttr	✓	ISO 92	Returns the value of a connection attribute.
SQLSetConnectOption	✓	Deprecated	Sets a connection option
SQLGetConnectOption	✓	Deprecated	Returns the value of a connection option
SQLSetEnvAttr	✓	ISO 92	Sets an environment attribute.
SQLGetEnvAttr	✓	ISO 92	Returns the value of an environment attribute.
SQLSetStmtAttr	✓	ISO 92	Sets a statement attribute.
SQLGetStmtAttr	✓	ISO 92	Returns the value of a statement attribute.
SQLSetStmtOption	✓	Deprecated	Sets a statement option
SQLGetStmtOption	✓	Deprecated	Returns the value of a statement option

ODBC API Calls for Preparing SQL Requests

Function Name	Support	Standard	Purpose
---------------	---------	----------	---------

SQLAllocStmt	✓	Deprecated	Allocates a statement handle
SQLPrepare	✓	ISO 92	Prepares an SQL statement for later execution.
SQLBindParameter	✓	ODBC	Assigns storage for a parameter in an SQL statement.
SQLGetCursorName	✓	ISO 92	Returns the cursor name associated with a statement handle.
SQLSetCursorName	✓	ISO 92	Specifies a cursor name.
SQLSetScrollOptions	✓	ODBC	Sets options that control cursor behavior.

ODBC API Calls for Submitting Requests

Function Name	Support	Standard	Purpose
SQLExecute	✓	ISO 92	Executes a prepared statement.
SQLExecDirect	✓	ISO 92	Executes a statement
SQLNativeSql	✓	ODBC	Returns the text of an SQL statement as translated by the driver.
SQLDescribeParam	✓	ODBC	Returns the

			description for a specific parameter in a statement.
SQLNumParams	✓	ISO 92	Returns the number of parameters in a statement.
SQLParamData	✓	ISO 92	Used in conjunction with SQLPutData to supply parameter data at execution time. (Useful for long data values.)
SQLPutData	✓	ISO 92	Sends part or all of a data value for a parameter. (Useful for long data values.)

ODBC API Calls for Retrieving Results and Information about Results

Function Name	Support	Standard	Purpose
SQLRowCount	✓	ISO 92	Returns the number of rows affected by an insert, update, or delete request.
SQLNumResultCols	✓	ISO 92	Returns the number of columns in the result set.
SQLDescribeCol	✓	ISO 92	Describes a column in the result set.

SQLColAttribute	✓	ISO 92	Describes attributes of a column in the result set.
SQLColAttributes	✓	Deprecated	Describes attributes of a column in the result set.
SQLFetch	✓	ISO 92	Returns multiple result rows.
SQLFetchScroll	✓	ISO 92	Returns scrollable result rows.
SQLExtendedFetch	✓	Deprecated	Returns scrollable result rows.
SQLSetPos	✓	ODBC	Positions a cursor within a fetched block of data and enables an application to refresh data in the rowset or to update or delete data in the result set.
SQLBulkOperations	✓	ODBC	Performs bulk insertions and bulk bookmark operations, including update, delete, and fetch by bookmark.

ODBC API Calls for Retrieving Error or Diagnostic Information

Function Name	Support	Standard	Purpose
SQLError	✓	Deprecated	Returns additional error or status information
SQLGetDiagField	✓	ISO 92	Returns additional diagnostic information (a single field of the diagnostic data structure).
SQLGetDiagRec	✓	ISO 92	Returns additional diagnostic information (multiple fields of the diagnostic data structure).

ODBC API Calls for Obtaining Information About Database Objects (Catalog Functions)

Function Name	Support	Standard	Purpose
SQLColumnPrivileges	✓	ODBC	Returns a list of columns and associated privileges for one or more tables.
SQLColumns	✓	X/Open	Returns the list of column names in specified tables.
SQLForeignKeys	✓	ODBC	Returns a list of

			column names that make up foreign keys, if they exist for a specified table.
SQLPrimaryKeys	✓	ODBC	Returns the list of column names that make up the primary key for a table.
SQLProcedureColumns	✓	ODBC	Returns the list of input and output parameters, as well as the columns that constitute the result set for the specified procedures.
SQLProcedures	✓	ODBC	Returns the list of procedure names stored in a specific data source.
SQLSpecialColumns	✓	X/Open	Returns information about the optimal set of columns that uniquely identifies a row in a specified table, or the columns that are automatically updated when any value in the row is

			updated by a transaction.
SQLStatistics	✓	ISO 92	Returns statistics about a single table and the list of indexes associated with the table.
SQLTablePrivileges	✓	ODBC	Returns a list of tables and the privileges associated with each table.
SQLTables	✓	X/Open	Returns the list of table names stored in a specific data source.

ODBC API Calls for Performing Transactions

Function Name	Support	Standard	Purpose
SQLTransact	✓	Deprecated	Commits or rolls back a transaction
SQLEndTran	✓	ISO 92	Commits or rolls back a transaction.

ODBC API Calls for Terminating a Statement

Function Name	Support	Standard	Purpose
SQLFreeStmt	✓	ISO 92	Ends statement processing, discards pending results, and,

			optionally, frees all resources associated with the statement handle.
SQLCloseCursor	✓	ISO 92	Closes a cursor that has been opened on a statement handle.
SQLCancel	✓	ISO 92	Cancels an SQL statement.

ODBC API Calls for Terminating a Connection

Function Name	Support	Standard	Purpose
SQLDisconnect	✓	ISO 92	Closes the connection.
SQLFreeHandle	✓	ISO 92	Releases an environment, connection, statement, or descriptor handle.
SQLFreeConnect	✓	Deprecated	Releases connection handle.
SQLFreeEnv	✓	Deprecated	Releases an environment handle.

4 Using in Third-Party Tools

This section discusses how to use ODBC Driver for Dynamics 365 Business Central with ODBC-compliant tools.

- [DBever](#)
- [Oracle Database Link](#)
- [Microsoft Access](#)
- [SQL Server Management Studio](#)
- [Microsoft Excel](#)
- [Microsoft Visual Studio](#)
- [OpenOffice and LibreOffice](#)
- [PHP](#)
- [Power BI](#)
- [Python](#)
- [QlikView](#)
- [SSIS](#)
- [Tableau](#)

4.1 Using in DBever

DBever Overview

DBever is a free, open source multiplatform database management tool and SQL client for developers and database administrators. DBever can be used to access any database or cloud application that has an ODBC or JDBC driver, such as Oracle, SQL Server, MySQL, Salesforce, or Mailchimp. DBever provides you with the most important features you'd need when working with a database in a GUI tool, such as:

- SQL queries execution
- Metadata browsing and editing
- SQL scripts management
- Data export/import
- Data backup
- DDL generation

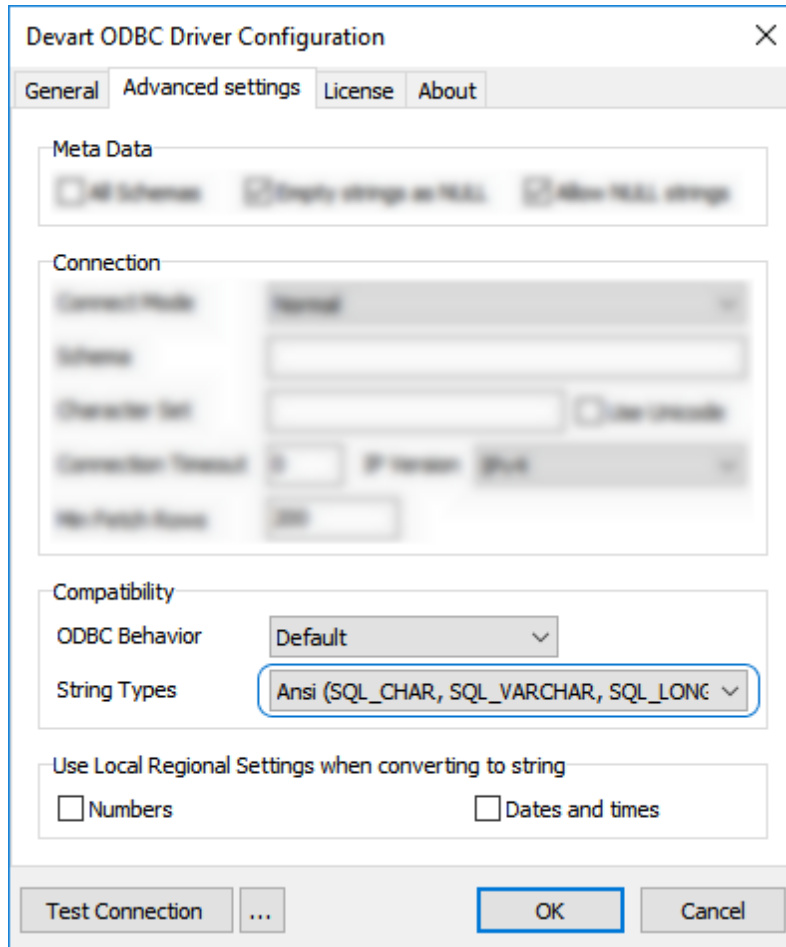
- ER diagrams rendering
- Test data generation
- BLOB/CLOB support
- Database objects browsing
- Scrollable resultsets

The tool comes in two editions — Community and Enterprise. Enterprise Edition supports NoSQL databases, such as MongoDB or Cassandra, persistent query manager database, SSH tunneling, vector graphics (SVG) and a few other enterprise-level features. Note though that you can access a MongoDB database from DBeaver Community Edition using the respective Devart ODBC driver. For the purposes of this guide, we'll use the Community Edition of DBeaver to retrieve data from Dynamics 365 Business Central via the Open Database Connectivity driver.

Creating an ODBC Data Source to Use Dynamics 365 Business Central Data in DBeaver

1. Click the **Start** menu and select **Control Panel**.
2. Select **Administrative Tools**, then click **ODBC Data Sources**.
3. Click on the **System DSN** tab if you want to set up a DSN name for all users of the system or select **User DSN** to configure DSN only for your account.
4. Click the **Add** button and double-click Devart ODBC Driver for Dynamics 365 Business Central in the list.
5. Give a name to your data source and set up the connection parameters.
6. Click the **Test Connection** button to verify that you have properly configured the DSN.

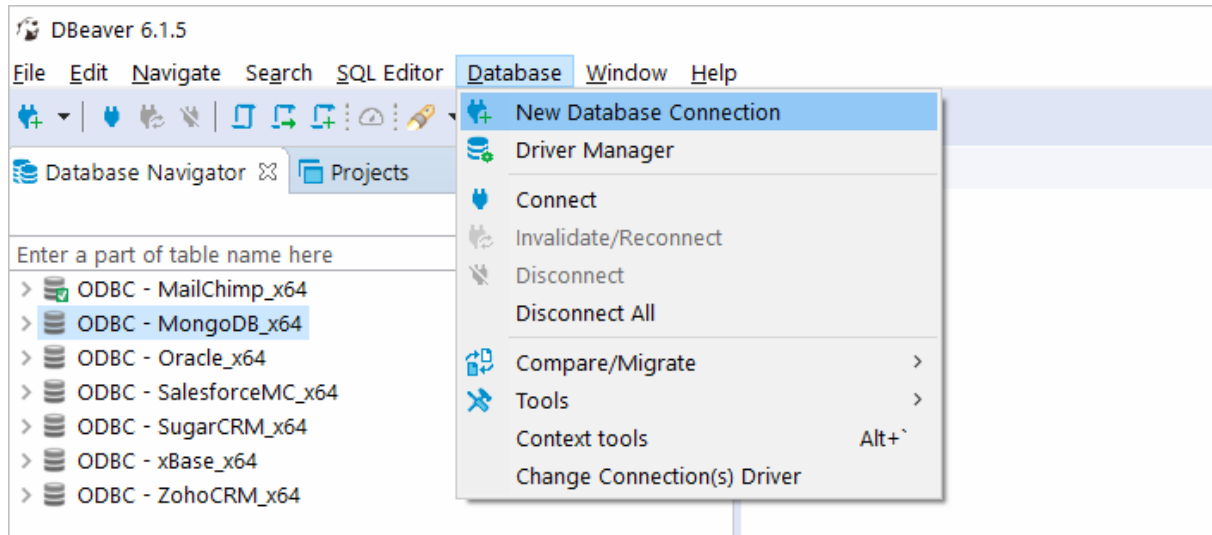
When using ODBC driver for Dynamics 365 Business Central with DBeaver, SQL_WVARCHAR data types may be displayed incorrectly in DBeaver. To prevent this, you need to set the string data types to Ansi either in the **Advanced Settings** tab of the driver configuration dialog or directly in the connection string (String Types=Ansi) — all string types will be returned as SQL_CHAR, SQL_VARCHAR and SQL_LONGVARCHAR.



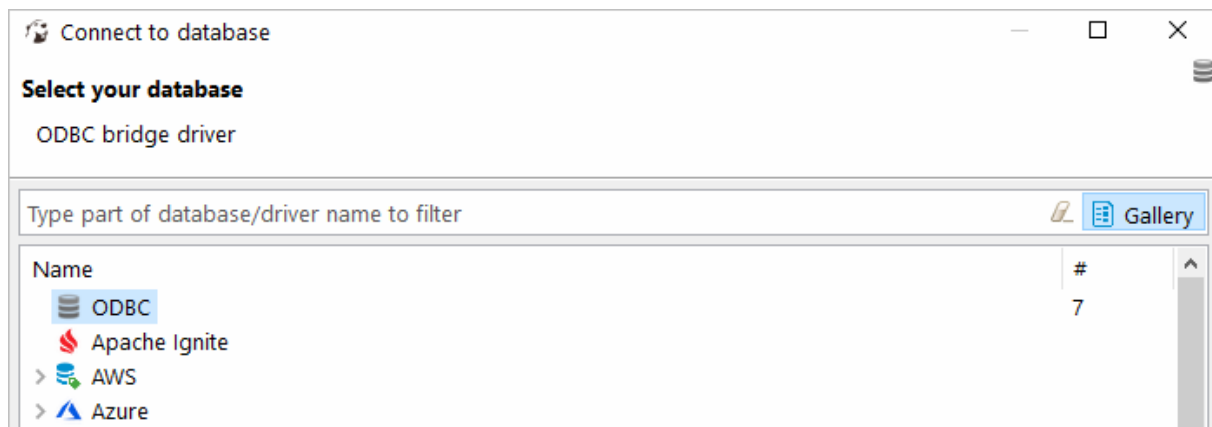
Connecting to Dynamics 365 Business Central Data from DBeaver via ODBC Driver for Dynamics 365 Business Central

Follow the steps below to establish a connection to Dynamics 365 Business Central in DBeaver.

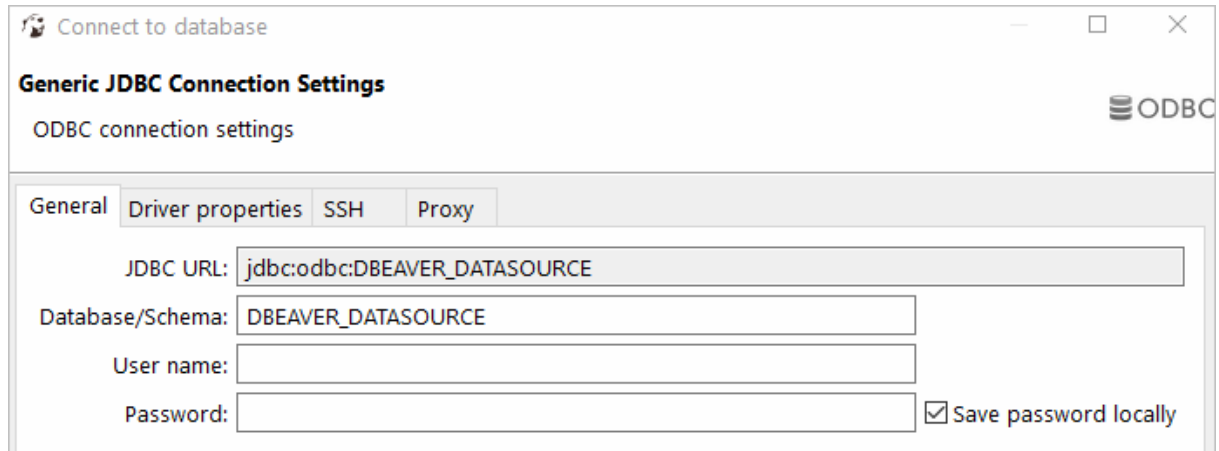
1. In the **Database** menu, select **New Database Connection**.



2. In the **Connect to database** wizard, select **ODBC** and click **Next**.



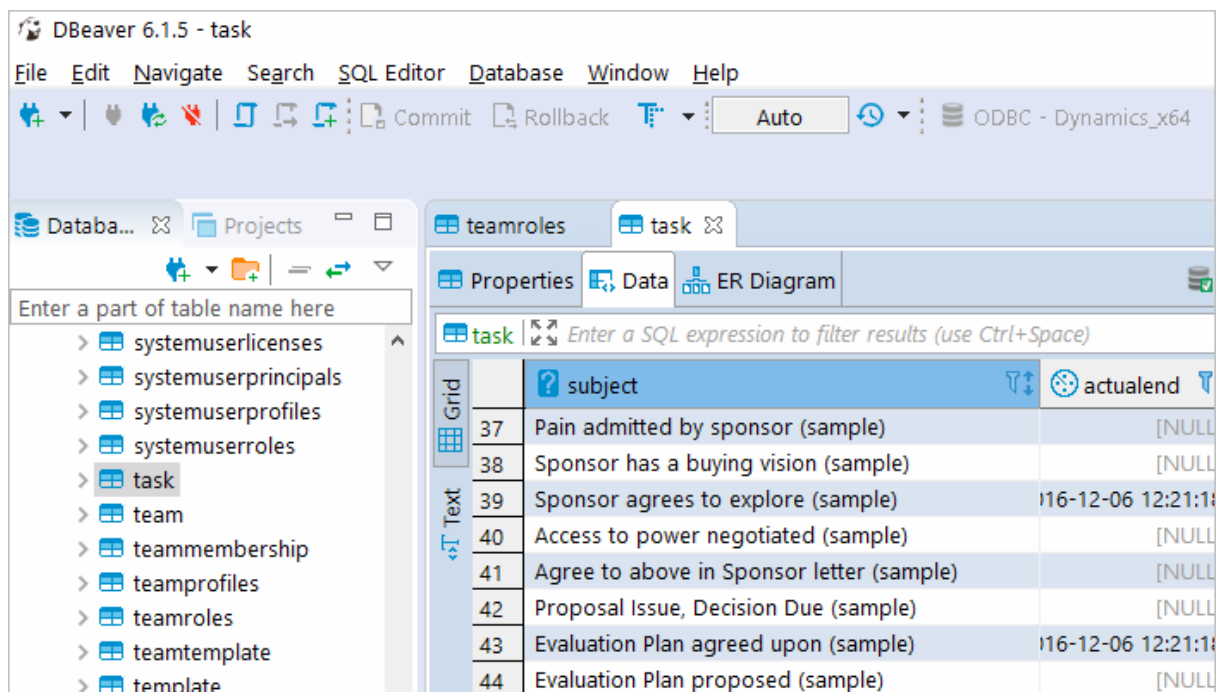
3. Enter the previously configured DSN in the **Database/Schema** field.



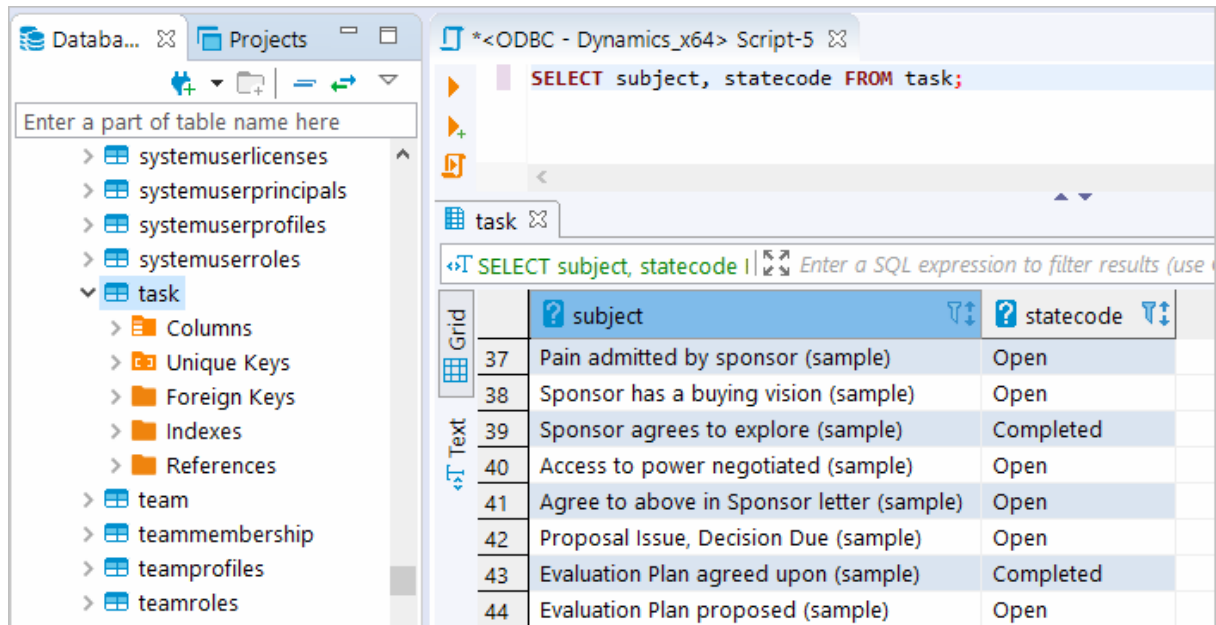
4. Click **Test Connection**. If everything goes well, you'll see the **Success** message.

Viewing Dynamics 365 Business Central Database Objects and Querying Data

You can expand out the database structure in DBeaver's **Database Navigator** to visualize all the tables in Dynamics 365 Business Central database. To view and edit the data in a table, you need to right-click on the target table name and select **View data**. The content of the table will be displayed in the main workspace.



If you want to write a custom SQL query that will include only the necessary columns from the table, you can select **New SQL Editor** in the **SQL Editor** main menu. Create your query and run it by clicking **Execute SQL Statement** to view the results in the same window.



4.2 Using in Oracle DBLink

Configuring Oracle Database Gateway for ODBC

This article explains how to configure Oracle Database Gateway for ODBC. If your data is stored in a non-Oracle database system or cloud application, and you need to access it from an Oracle Database server, you can create a database link to an Oracle Database Gateway for ODBC. The gateway works with an ODBC driver to access non-Oracle systems or other, remote Oracle servers. Any ODBC-compatible data source can be accessed using the gateway and the appropriate ODBC driver. The driver must be installed on the same machine as the gateway. The non-Oracle system can run on the same machine as the Oracle server or on a different machine. The gateway can be installed on the machine running the non-Oracle system, the machine running the Oracle database or on a third machine as a standalone.

Configure the Initialization File

After installing the gateway and the [ODBC driver for Dynamics 365 Business Central](#), create an initialization file for your Oracle Database Gateway for ODBC. The sample file `initdg4odbc.ora` is stored in the `ORACLE_HOME\hs\admin` directory. To create an initialization file for the gateway, copy the sample initialization file and rename it. The name must be prefixed with `init` — for example, `initDynamics 365 Business Central.ora`. You need a separate initialization file for each ODBC data source. After creating the file, set the `HS_FDS_CONNECT_INFO` parameter to the system DSN that you created earlier, for example:

```
HS_FDS_CONNECT_INFO=Dynamics 365 Business Central
```

Configure Oracle Net Listener

After configuring the gateway, you need to configure Oracle Net Listener to communicate with the Oracle database. Information about the gateway must be added to the `listener.ora` configuration file which is located in the `ORACLE_HOME\NETWORK\ADMIN\` directory. The following example is the address on which the Oracle Net Listener listens (`HOST` is the address of the machine on which the gateway is installed):

```
LISTENER =
  (DESCRIPTION_LIST =
    (DESCRIPTION =
      (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1521))
    )
  )
```

Add an entry to the `listener.ora` file to start the gateway in response to connection requests. The SID of the gateway (`SID_NAME`) must be the same in `listener.ora` and `tnsnames.ora`. `ORACLE_HOME` is the Oracle home directory where the gateway resides. To apply the new settings, stop and restart the Oracle Net Listener service.

```
SID_LIST_LISTENER=
  (SID_LIST=
    (SID_DESC=
      (SID_NAME=Dynamics 365 Business Central)
      (ORACLE_HOME=D:\ORACLE_HOME)
      (PROGRAM=dg4odbc)
    )
  )
```

Configure Oracle for Gateway Access

Add a connect descriptor for the gateway to the `tnsnames.ora` file, which is located in `ORACLE_HOME\NETWORK\ADMIN` directory. The `SID` must match the value specified in the `listener.ora` file.

```
Dynamics 365 Business Central =
```

```
(DESCRIPTION =  
  (ADDRESS = (PROTOCOL = tcp)(HOST = localhost)(PORT = 1521))  
  (CONNECT_DATA =  
    (SID = Dynamics 365 Business Central)  
  )  
  (HS = OK)  
)
```

Create Database Links

To access an ODBC data source, you must create a database link using a database tool like SQL Plus or dbForge Studio for Oracle: connect to your database server and execute the `CREATE DATABASE LINK` statement, as follows:

```
CREATE DATABASE LINK dblink CONNECT TO "username" IDENTIFIED BY "password"
```

`dblink` is the complete database link name. `tns_name_entry` is the Oracle Net connect descriptor specified in the `tnsnames.ora` file.

When you create the database link in [dbForge Studio for Oracle](#), you can see your newly created link in Database Links on the left panel. After creating the database link, you can run a query against the ODBC data source using the following syntax:

```
SELECT * FROM table_name@"dblink_name"
```

See also

[Configuring Oracle Database Gateway for ODBC](#)

4.3 Using in DBxtra

Troubleshooting Dynamics 365 Business Central ODBC Connection in DBxtra

This page explains how to troubleshoot your ODBC connection to Dynamics 365 Business Central in DBxtra.

Due to incompatibilities between DBxtra and Dynamics 365 Business Central, leaving the `sql dialect` property to its default might present various issues. To resolve compatibility issues, set the property to `MS Access 2000/XP/2003` or `ANSI SQL/2003` for DBxtra version 11.0.1 or newer, and to `ANSI SQL/2003` for versions prior to 11.0.1.

Connect through ODBC

NOTE:
Important!
Due to incompatibles, selecting the Auto SQL dialect might present various problems using the Auto SQL dialect with some database servers.
Please be sure to select the right SQL dialect for your connection.

Connection name: MyData

Data source: DataSource1

User:

Password:

Connection timeout: 15 SQL dialect: MS Access 2000/X...

☐ Enable Offline Mode

☐ Get columns descriptions

Select User Groups who can view this Connection

- ☒ Accounting
- ☒ Controlling
- ☒ Guest Group
- ☒ Legal
- ☒ Management
- ☒ Manufacturing
- ☒ Marketing
- ☒ Purchasing

Select All Unselect All Ok Cancel

4.4 Using in Microsoft Access

Connecting Microsoft Access to Dynamics 365 Business Central Using an ODBC Driver

This article explains how to connect Microsoft Access to Dynamics 365 Business Central through the standard ODBC interface. Microsoft Access is a database management system that combines the relational database engine with a graphical user interface. Access can be used as a substitution for spreadsheet applications like Excel to organize, store, and retrieve

large amounts of related data that can be difficult to manage in spreadsheets.

In Microsoft Access, you can connect to your Dynamics 365 Business Central data either by importing it or creating a table that links to the data. Devart ODBC drivers support all modern versions of Access. It is assumed that you have already installed and configured a DSN for ODBC driver for Dynamics 365 Business Central. For the purpose of this article, we tested an [ODBC connection to Dynamics 365 Business Central](#) through our ODBC drivers in Microsoft Access 2003, Microsoft Access 2007, Microsoft Access 2010, Microsoft Access 2013, Microsoft Access 2016, Microsoft Access 2019. The following steps describe how to use Microsoft Access 2019 to import or link to your data in Dynamics 365 Business Central.

Importing Dynamics 365 Business Central Data Into Microsoft Access Through an ODBC Connection

1. Open your Microsoft Access database.
2. Select the **External Data** tab in the ribbon.
3. Expand the **New Data Source** drop-down and select **From Other Sources**, then select **ODBC Database**.
4. In the **Get External Data - ODBC Database** dialog box, select **Import the source data into a new table in the current database**, and click **OK**.
5. In the **Select Data Source** dialog box, select the **Machine Data Source** tab.
6. Select the DSN that you have configured for Dynamics 365 Business Central and click **OK**.
7. In the **Import Objects** dialog box, select the tables that you want to import, and click **OK**.
8. If the database objects have been successfully imported, you should see the corresponding message in the dialog box. If you want to save the import steps to quickly repeat the process without using the wizard at a later time, select the **Save import steps** checkbox. Click **Close**.
9. The imported tables should appear in the **Tables** navigation pane on the left.
10. Double-click on the needed table to display its contents.

Linking to Dynamics 365 Business Central Data in Microsoft Access Through an ODBC Connection

1. Open your Microsoft Access database.

2. Select the **External Data** tab in the ribbon.
3. Expand the **New Data Source** drop-down and select **From Other Sources**, then select **ODBC Database**.
4. In the **Get External Data - ODBC Database** dialog box, select **Link to the data source by creating a linked table**.
5. In the **Select Data Source** dialog box, select the **Machine Data Source** tab.
6. Select the DSN that you have configured for Dynamics 365 Business Central and click **OK**.
7. In the **Link Tables** dialog box, select the table or tables that you want to link to, and click **OK**.
8. The **Select Unique Record Identifier** dialog box will prompt you to choose a field or fields that uniquely identify each record in the table. To avoid inconsistencies, it is recommended to select the primary key in the Dynamics 365 Business Central table as the unique record identifier. You are linking multiple tables, you will be prompted to select unique record identifiers for each of the selected tables.
9. The linked tables should appear in the **Tables** navigation pane on the left.
10. Double-click on the needed table to display its contents.

4.5 Using in Microsoft Excel

Connecting to Dynamics 365 Business Central from Microsoft Excel using ODBC Driver for Dynamics 365 Business Central

You can use Microsoft Excel to access data from a Dynamics 365 Business Central database using ODBC connector. With ODBC Driver, you can import the data directly into an Excel Spreadsheet and present it as a table. Make sure that you use matching Excel and ODBC Driver, e.g. if you have installed a 64-bit ODBC Driver, you will need to use the 64-bit version of Excel.

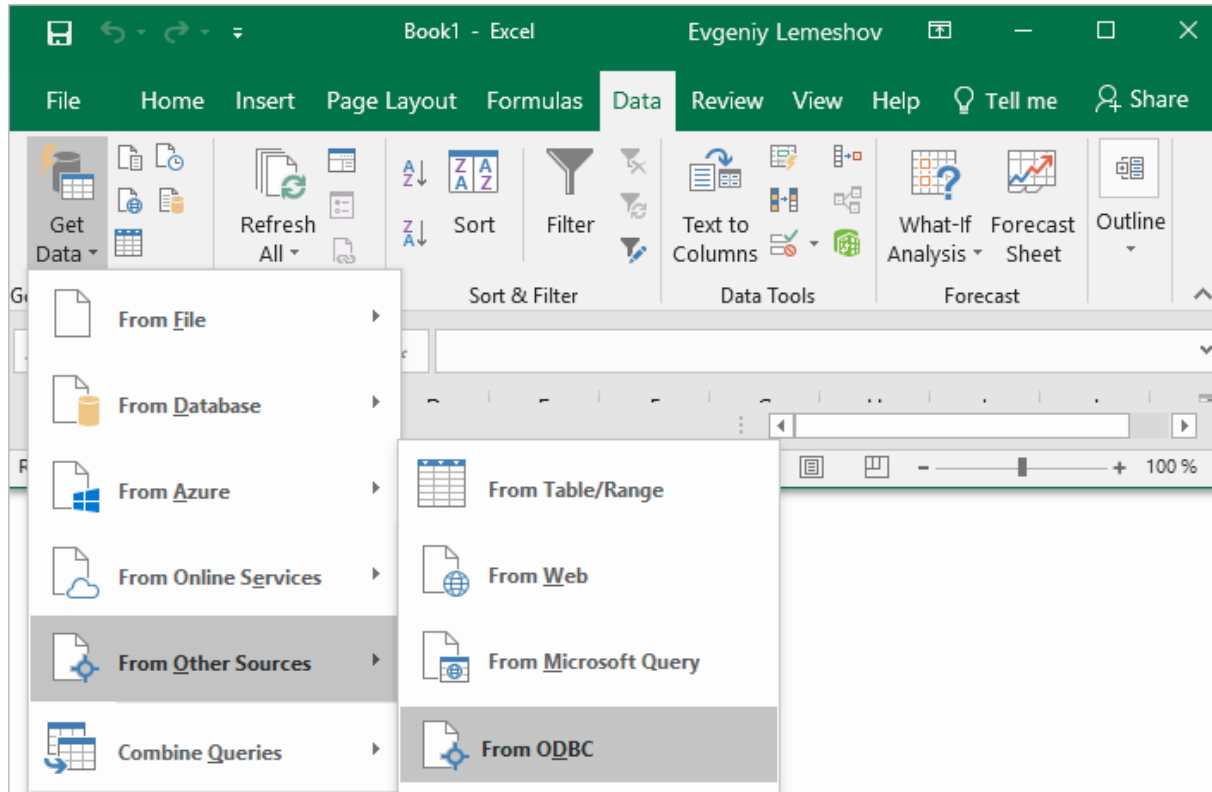
When working with Microsoft Excel, there are different ways of retrieving data from various data sources using our ODBC drivers.

- [Connecting Excel to Dynamics 365 Business Central with Get & Transform \(Power Query\)](#)
- [Connecting Excel to Dynamics 365 Business Central with Data Connection Wizard \(Legacy Wizard\)](#)
- [Connecting Excel to Dynamics 365 Business Central with the Query Wizard](#)
- [Connecting Excel to Dynamics 365 Business Central with Microsoft Query](#)
- [Connecting Excel to Dynamics 365 Business Central with PowerPivot](#)

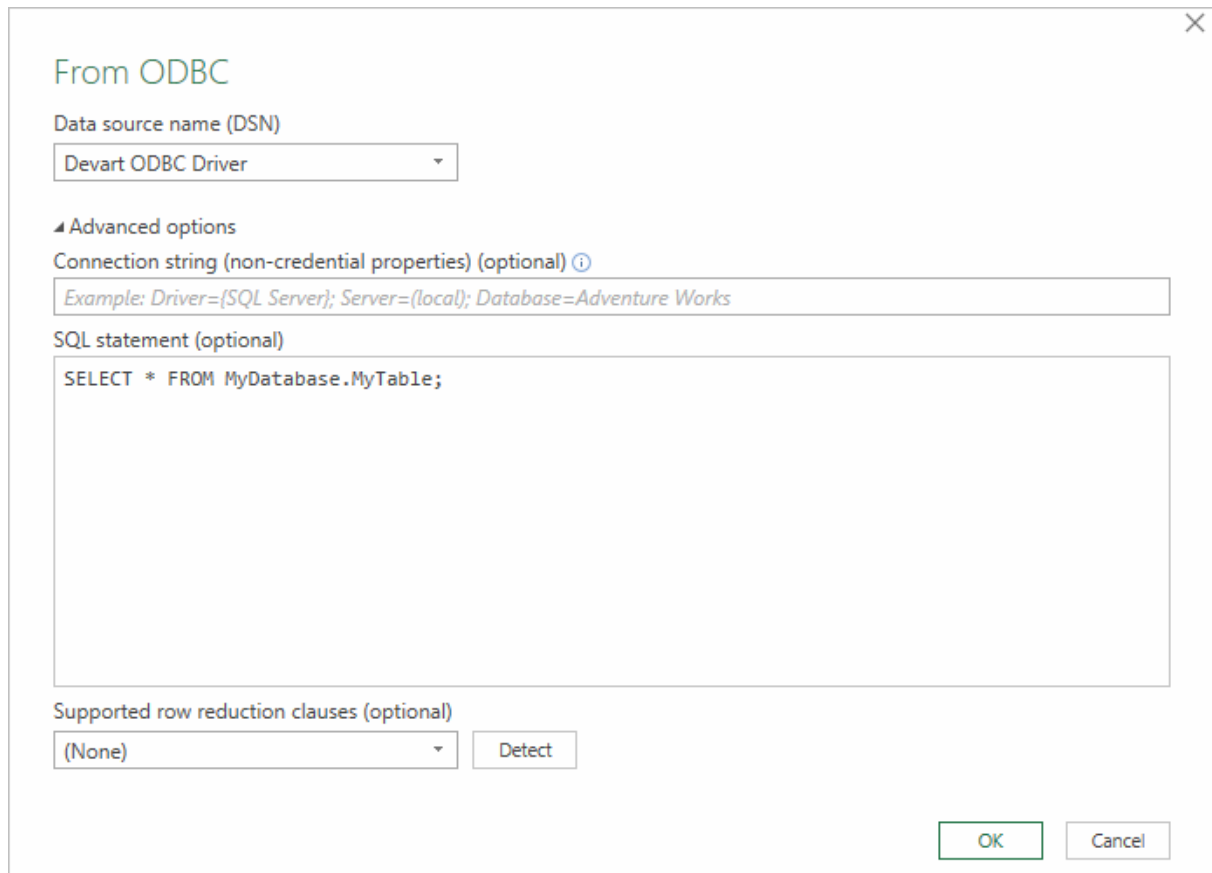
Connecting Excel to Dynamics 365 Business Central with Get & Transform (Power Query)

You can use Get & Transform (Power Query) to connect to Dynamics 365 Business Central from Excel with ODBC. This method assumes that you've installed an ODBC driver for Dynamics 365 Business Central.

1. Click the **Data** in Excel, then expand the **Get Data** drop-down list. Click **From Other Sources > From ODBC**.



2. In the **From ODBC** dialog, choose your data source name (DSN). If you haven't configured your ODBC driver yet, you can expand the **Advanced Options** dialog box and enter the connection string for your data source (without credentials, which are defined in the credentials dialog box in the next step). Additionally, you can enter an SQL statement that will be executed right after establishing a connection to the data source. Click **OK**.



From ODBC

Data source name (DSN)
Devart ODBC Driver

Advanced options

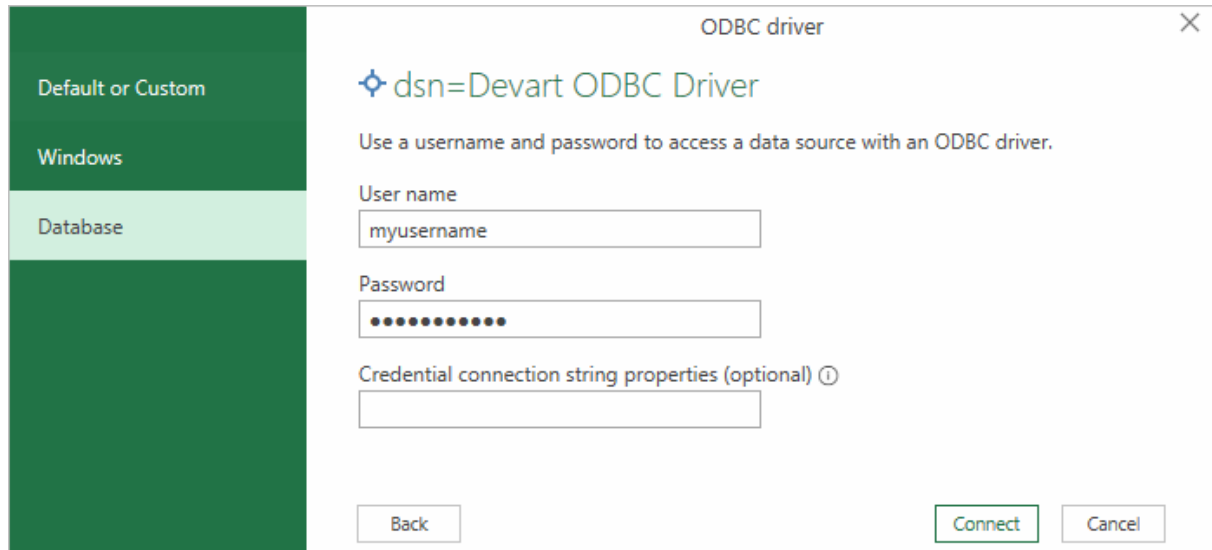
Connection string (non-credential properties) (optional) ⓘ
Example: Driver={SQL Server}; Server={local}; Database=Adventure Works

SQL statement (optional)
SELECT * FROM MyDatabase.MyTable;

Supported row reduction clauses (optional)
(None) Detect

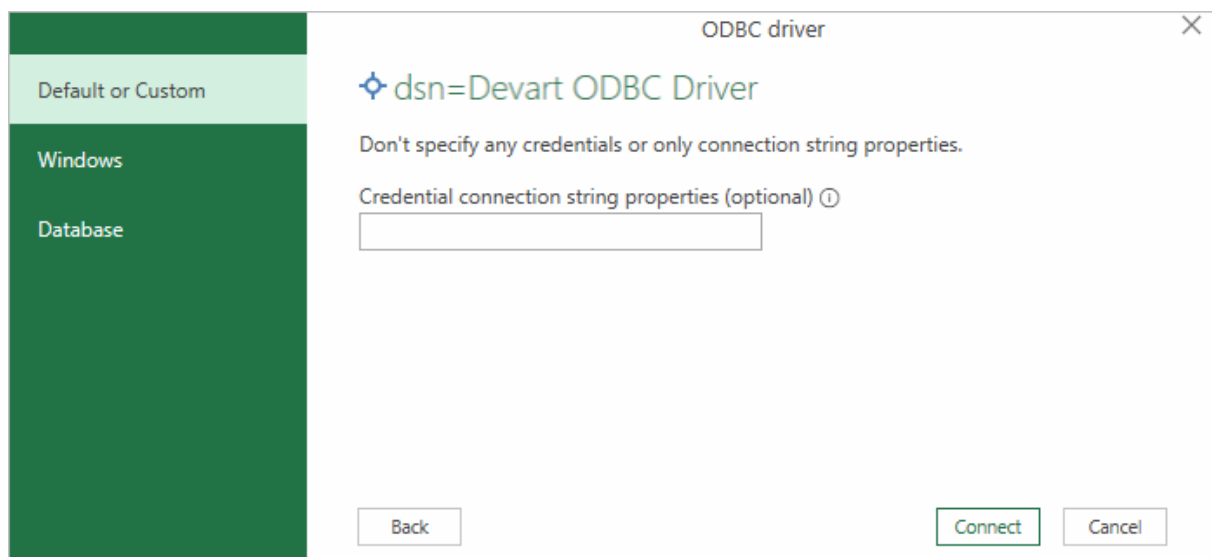
OK Cancel

3. If you're using a database username or password, select **Database** and enter your credentials in the dialog box, then click **Connect**.



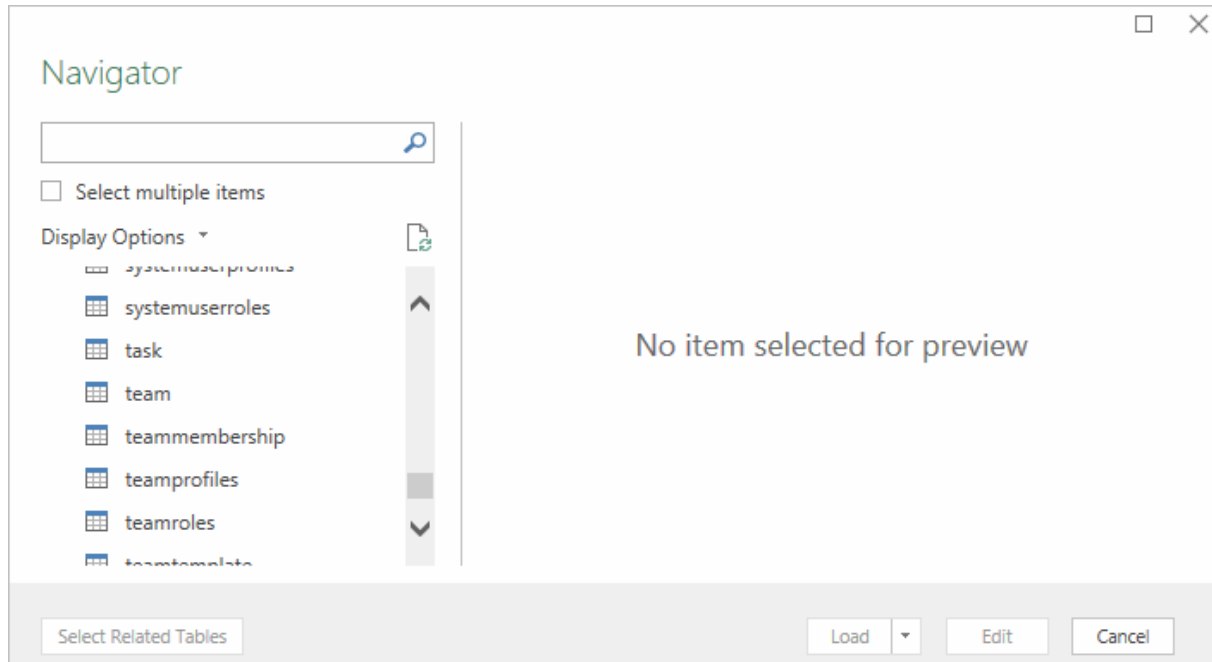
The screenshot shows the 'ODBC driver' window with the 'Database' tab selected in the left sidebar. The main area displays the driver name 'dsn=Devart ODBC Driver' and instructions to use a username and password. The 'User name' field contains 'myusername', and the 'Password' field is masked with dots. There is an optional field for 'Credential connection string properties'. At the bottom, there are 'Back', 'Connect', and 'Cancel' buttons.

If your database is not password-protected or you've already specified your credentials in the ODBC data source settings, select **Default or Custom** and press **Connect**



The screenshot shows the 'ODBC driver' window with the 'Default or Custom' tab selected in the left sidebar. The main area displays the driver name 'dsn=Devart ODBC Driver' and instructions to not specify any credentials or only connection string properties. There is an optional field for 'Credential connection string properties'. At the bottom, there are 'Back', 'Connect', and 'Cancel' buttons.

4. In the window that appears, select the table you want to retrieve data from, and click **Load**.



The data from the table will be displayed in an Excel spreadsheet where you can further work with it.

	subject	actualend	scheduledstart	regardingobjectid
32	Pain admitted by sponsor (sample)		07.12.2016 22:00	
33	Sponsor has a buying vision (sample)		08.12.2016 14:00	
34	Sponsor agrees to explore (sample)	06.12.2016 12:21	09.12.2016 10:00	
35	Access to power negotiated (sample)		10.12.2016 10:00	
36	Agree to above in Sponsor letter (sample)		11.12.2016 10:00	
37	Proposal Issue, Decision Due (sample)		12.12.2016 10:00	
38	Evaluation Plan agreed upon (sample)	06.12.2016 12:21	07.12.2016 10:00	
39	Evaluation Plan proposed (sample)		14.12.2016 10:00	
40	Verbal approval received (sample)	06.12.2016 12:21	05.12.2016 12:00	
41	Evaluation Plan agreed upon (sample)		04.12.2016 10:00	

Connecting Excel to Dynamics 365 Business Central

with Data Connection Wizard (Legacy Wizard)

You can use this option to connect to OLE DB or ODBC external data source that has already been defined.

1. In Excel, go to the **Data** tab. Click **From Other Sources**, and then click **From Data Connection Wizard**.
2. In the opened dialog, select **ODBC DSN** and click **Next** to continue.
3. Now select a data source you want to connect to, and click **Next**.
4. To connect to the table containing the required data, select its name and click **Next** to enter and save information about your new file or click **Finish**.
5. In the **Import data** dialog, you can select the way your data will be viewed in Excel and the place where to put it in the worksheet, and click **OK**.
6. The required data is now displayed in the existing Excel worksheet.

Connecting Excel to Dynamics 365 Business Central with the Query Wizard

You can use this option to create a simple query for retrieving data from Dynamics 365 Business Central to Excel via ODBC driver.

1. Open Excel, in the main menu, click the **Data** tab.
2. Click the **From Other Sources** dropdown menu, and then click **From Microsoft Query**.
3. In the appeared dialog, you can choose the data source you want to connect to.
4. After a successful connection, you can select the data you want to be displayed in Excel and click **Next**.
5. The next two steps allow filtering and sorting the data. Click **Next** to skip these procedures.
6. If you plan to further use the query, you can save it by clicking the **Save** button on the right.
7. Select **Return Data To Microsoft Excel** and click **Finish**.
8. In the **Import data** dialog, you can select the way your data will be viewed in Excel and the place where to put it in the worksheet, and click **OK**.
9. The required data is successfully imported to Excel.

Connecting Excel to Dynamics 365 Business Central with Microsoft Query

You can use this option to create a more complex query for retrieving Dynamics 365 Business Central data to Excel via ODBC driver.

1. Start Excel, click the **Data** tab.
2. In the appeared ribbon, click **From Other Sources**, and then click **From Microsoft Query**.
3. In the next dialog, choose the data source you want to connect to (e.g., using data source name - Devart ODBC Dynamics 365 Business Central). Uncheck **Use the Query Wizard to Create/Edit Queries** and click **OK**.
4. Now you can select the tables you want to add to your query. When you finish, just click the **Add** button.
5. In the graphical editor, you can filter rows or columns of data, sort data, join multiple tables, create a parameter query, etc.

Connecting Excel to Dynamics 365 Business Central with PowerPivot

You can use PowerPivot - an Excel add-in to perform data analysis and create complex data models. To load the required data, do the following:

1. In Excel, click the **PowerPivot** tab, then click **Manage** to go to the PowerPivot window.
2. In the opened window, click **From Other Sources**.
3. When the **Table Import Wizard** opens, select **Others (OLEDB/ODBC)** and click **Next**.
4. In the **Specify a Connection String** window, click the **Build** button.
5. In the **Data Link Properties** dialog, specify the data source you want to connect (e.g., using data source name - Devart ODBC Dynamics 365 Business Central), and then click **Next**.
6. Now you should choose how to import the data (either select a table from the list or write a query to specify the data to be imported).
7. When the Import operation succeeded, click the **Close** button. The retrieved data is inserted in the active worksheet.

4.6 Using in Microsoft Visual Studio

Importing Dynamics 365 Business Central Data into Visual Studio Through an ODBC Connection

A Visual Studio is a powerful tool containing features that allow editing, debugging, and compiling the code and creating applications that can be connected to any databases product and services on a local machine and network, and any type of cloud (private, public, or hybrid). To connect Visual Studio to a data source such as Dynamics 365 Business Central, you can use an appropriate ODBC driver.

This guide describes how to connect to Dynamics 365 Business Central and retrieve data importing them to Visual Studio with an ODBC driver. It is assumed that you have already installed and configured a DSN for ODBC driver for Dynamics 365 Business Central.

1. Run Visual Studio Desktop and click **Tool** and select **Connect to Database**.
2. In the **Add connection** dialog box, select the **Microsoft ODBC Data Source** as a data source.
3. In the **Data source specification** point expand the **Data Source Name (DSN)** drop-down list and select the previously configured DSN for Dynamics 365 Business Central. Alternatively, you can connect to the database by entering the DSN in a **Use connection string** field. To check whether your connection is successful, click **Test connection**. Click **OK**.
4. If your data source is password-protected, Visual Studio will prompt you for user credentials. Type your **Username** and **Password** in the respective fields and click **OK**.
5. In the Server Explorer you can see the database structure. Choose **Tables**, right-click the table you want to view the data of and select **Retrieve Data**. You can also preview the contents of the database objects by clicking on them.

4.7 Using in SQL Server Management Studio

This section describes how to establish and troubleshoot a connection to Dynamics 365 Business Central from SQL Server Management Studio using ODBC Driver for Dynamics

365 Business Central.

- [Creating a Linked Server](#)
- [Troubleshooting in SSMS](#)

4.7.1 Creating a Linked Server

Requirements

In order to avoid incorrect integration with MS SSMS, the working environment must meet the following conditions:

- The data source must be a configured system DSN. Refer to the [Driver Configuration](#) article to learn how to configure a System DSN
- The driver, studio, and SQL Server must be of the same bitness. For example, if you are using 64-bit SQL Server Management Studio on 64-bit Windows platform, then configure the 64-bit version of the driver using ODBC Administrator launched from %windir%\system32\odbcad32.exe. Otherwise, configure the driver using the 32-bit version of ODBC Administrator - launch it from %windir%\SysWOW64\odbcad32.exe.
- ODBC Driver for Dynamics 365 Business Central and SQL Server must be installed on the same computer.
- .NET Framework 4.5 must be installed on the computer.

Connecting to Dynamics 365 Business Central from SQL Server Management Studio using ODBC Driver for Dynamics 365 Business Central

You can use the Microsoft SQL Server Management Studio to connect your Dynamics 365 Business Central data to an SQL Server instance. Linked Server is a tool of MS SQL Server that allows to execute distributed queries to refer tables stored on non-SQL Server database in a single query. With linked servers, you can execute commands against different data sources such as Dynamics 365 Business Central and merge them with your SQL Server database. You can create a linked server with one of these methods: by using the options in the Object Explorer or by executing stored procedures.

Below are major advantages of using SQL Server Linked Servers to connect to Dynamics 365 Business Central:

1. The ability to connect other database instances on the same or remote server.
2. The ability to run distributed queries on heterogeneous data sources across the organization.
3. The ability to work with diverse data sources in the same way.

How to configure a SQL Server Linked Server to connect to Dynamics 365 Business Central

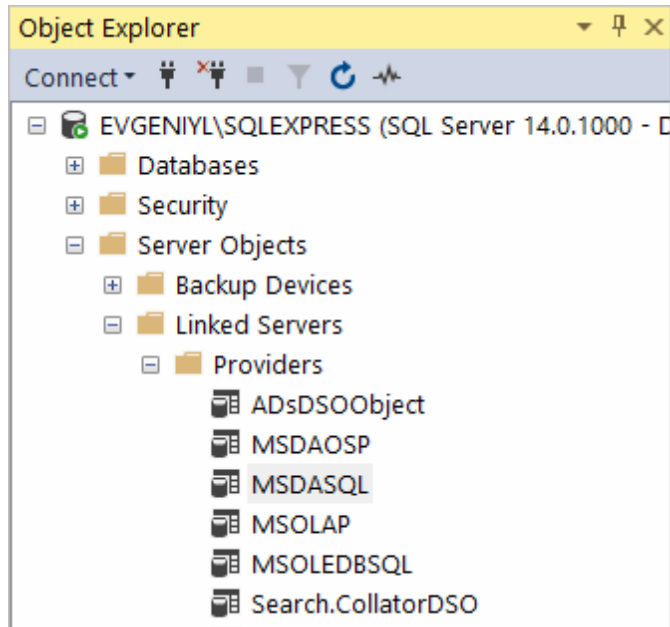
You can follow the steps to create a linked server for Dynamics 365 Business Central in SQL Server Management Studio by using Object Explorer:

1. Start your Management Studio and choose your SQL Server instance.
2. In the **Object Explorer pane**, expand the **Server Objects**, right-click on **Linked Servers** and then click on **New Linked Server**.
3. Configure your linked server in the dialog box:
 - Give a name for your server in the **Linked server** field.
 - Under **Server type**, select **Other data source**.
 - Choose **Microsoft OLE DB Provider for ODBC Drivers** in the **Provider** drop-down list.
 - In the **Data source** field, enter the name of your DSN, e.g. Devart ODBC Driver for Dynamics 365 Business Central. Alternatively, you can input the ODBC Driver connection string in the **Provider** field.

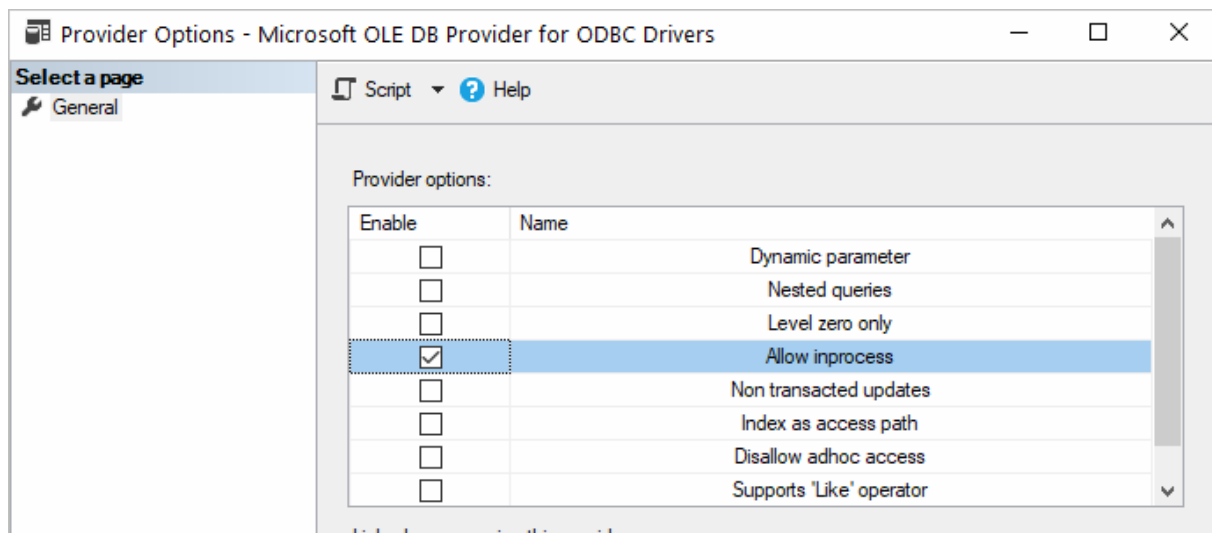
The linked server will appear under the Linked Servers in the Object Explorer Pane. You can now issue distributed queries and access Dynamics 365 Business Central databases through SQL Server.

Retrieving Data From Dynamics 365 Business Central

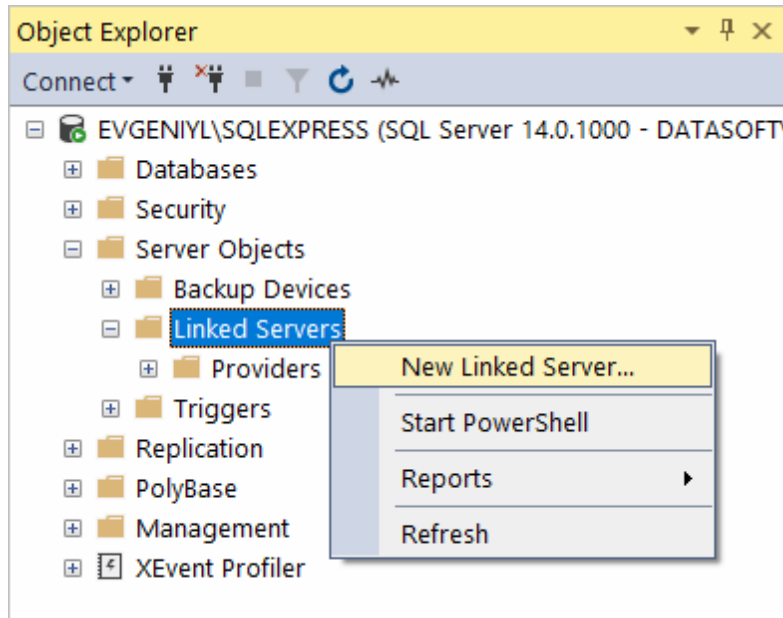
Ensure the **Allow inprocess option** of MSDASQL OLE DB Provider for ODBC Drivers is enabled. For this, find the **MSDASQL** provider in the list of Linked Servers and double-click on it



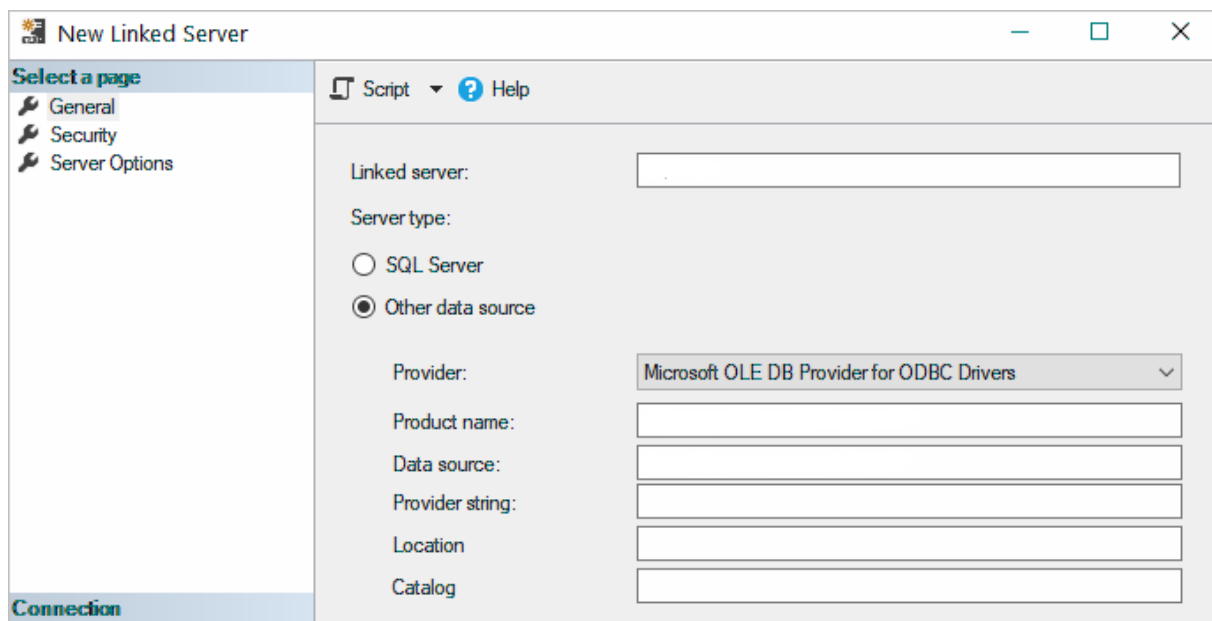
In the appeared **Provider Options** window, enable the **Allow inprocess** checkbox:



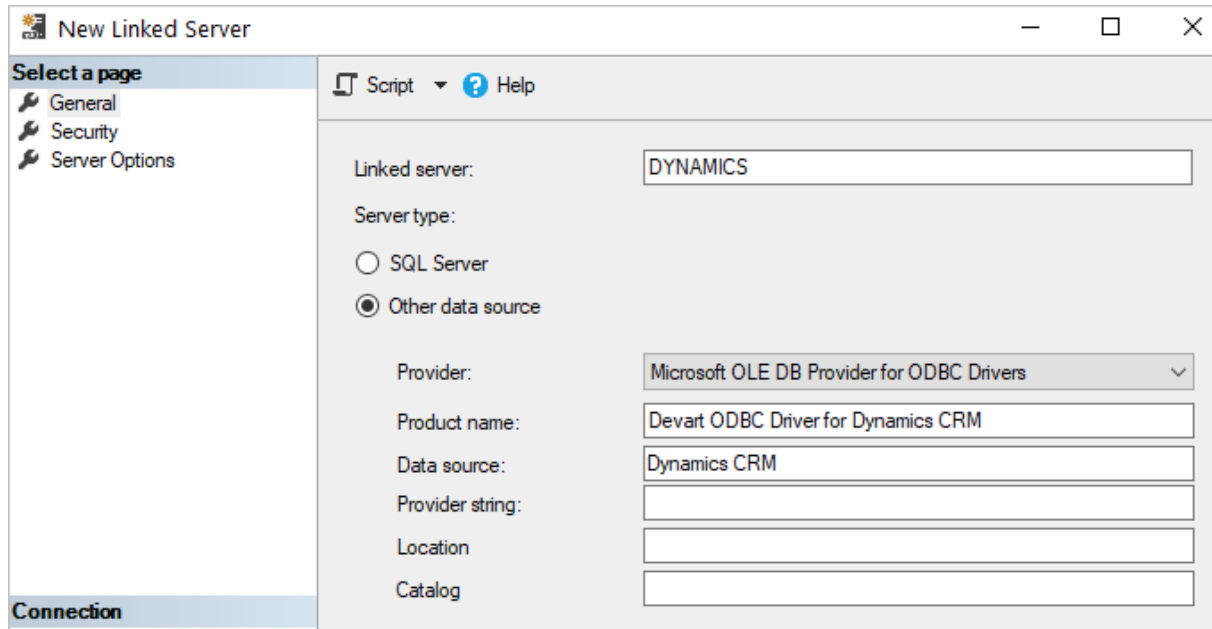
Create a new **Linked Server**



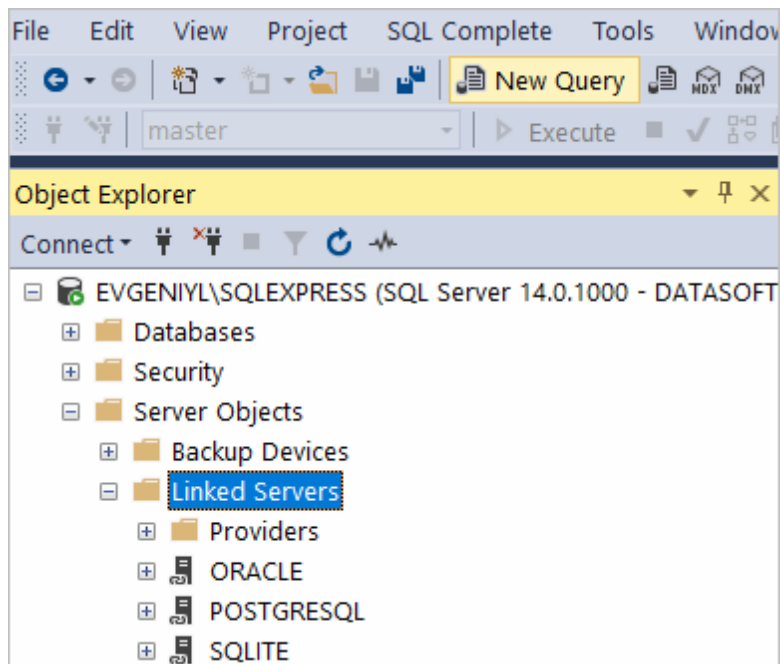
Make sure to select **Microsoft OLE DB Provider for ODBC Drivers**:



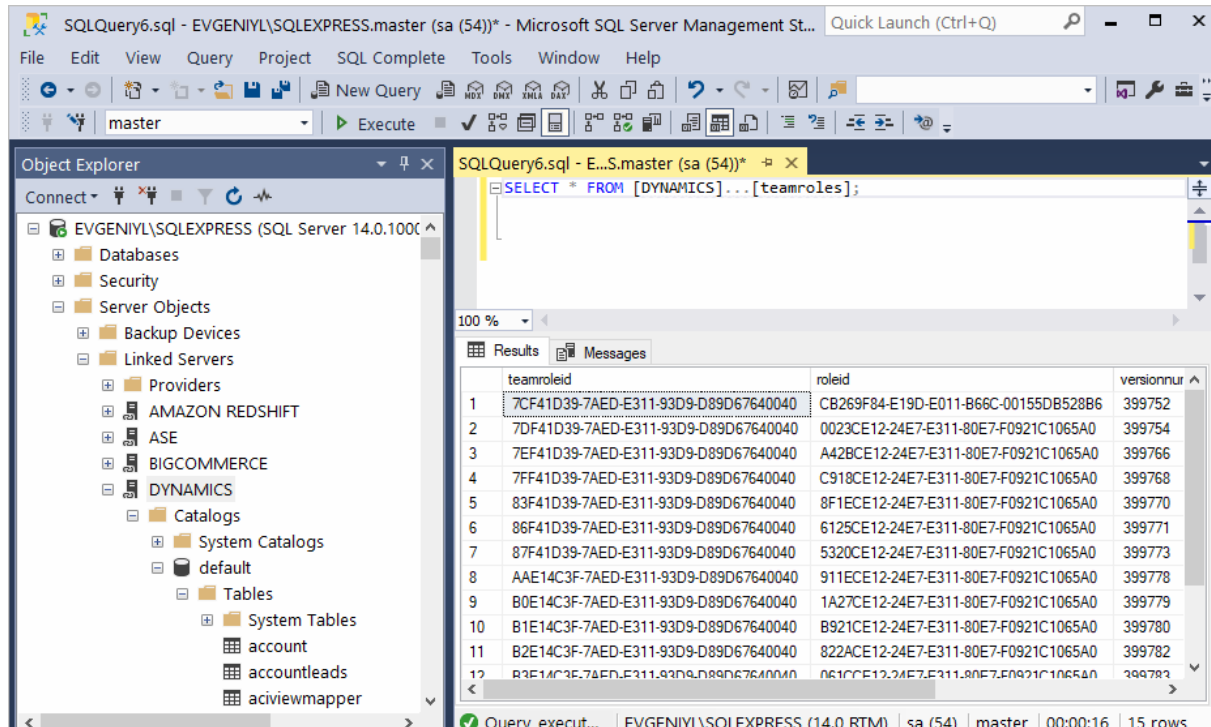
Now you need to input the Linked Server name, e.g. DYNAMICSBC. In the Product Name and Data Source fields you need to indicate the System DSN that you've previously created - more info on System DSN setup can be found [here](#).



The Dynamics 365 Business Central tables are already available to be fetched. To query the linked server, click **New Query** in the toolbar:



Enter your SQL query in the editor window and click **Execute** to run the query:



As a result, you can see the contents of the selected table retrieved directly from the Dynamics 365 Business Central account you are connected to.

See also

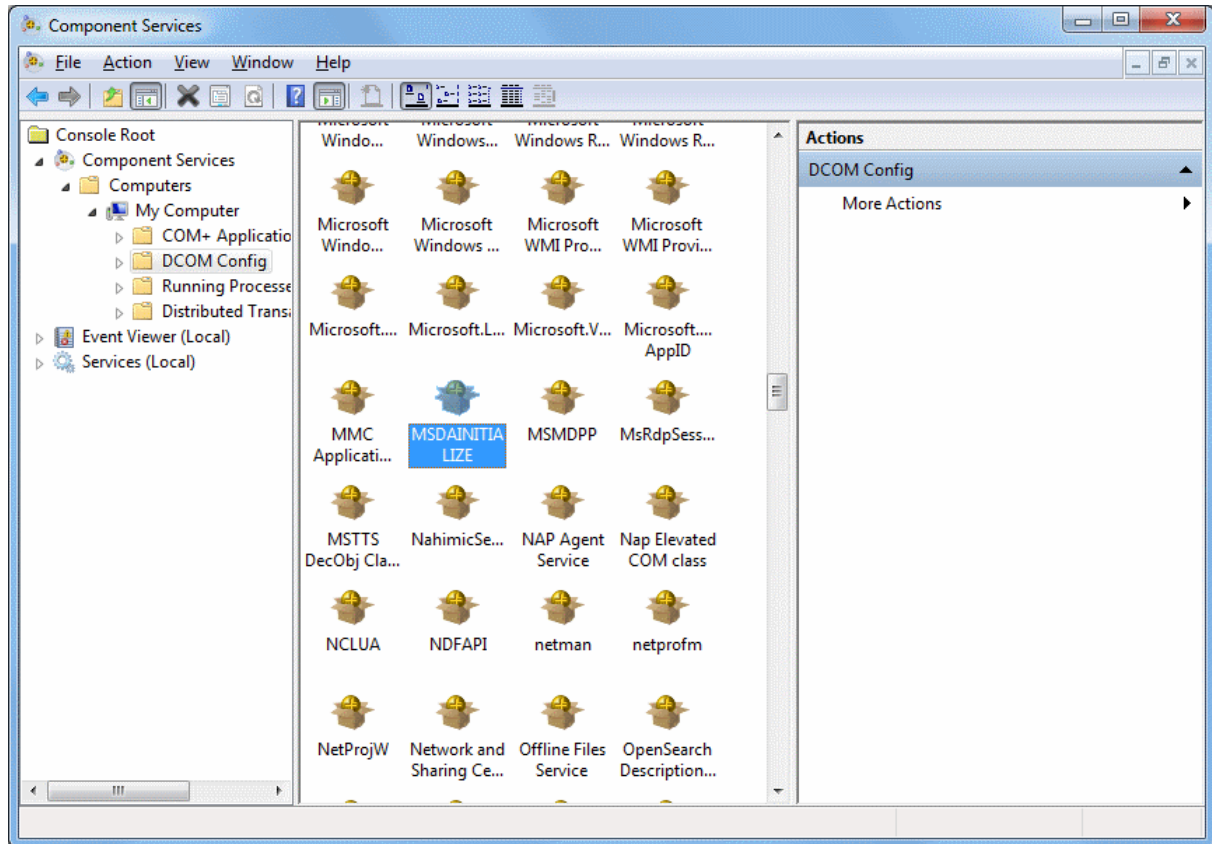
- [Troubleshooting SSMS](#)

4.7.2 Troubleshooting in SSMS

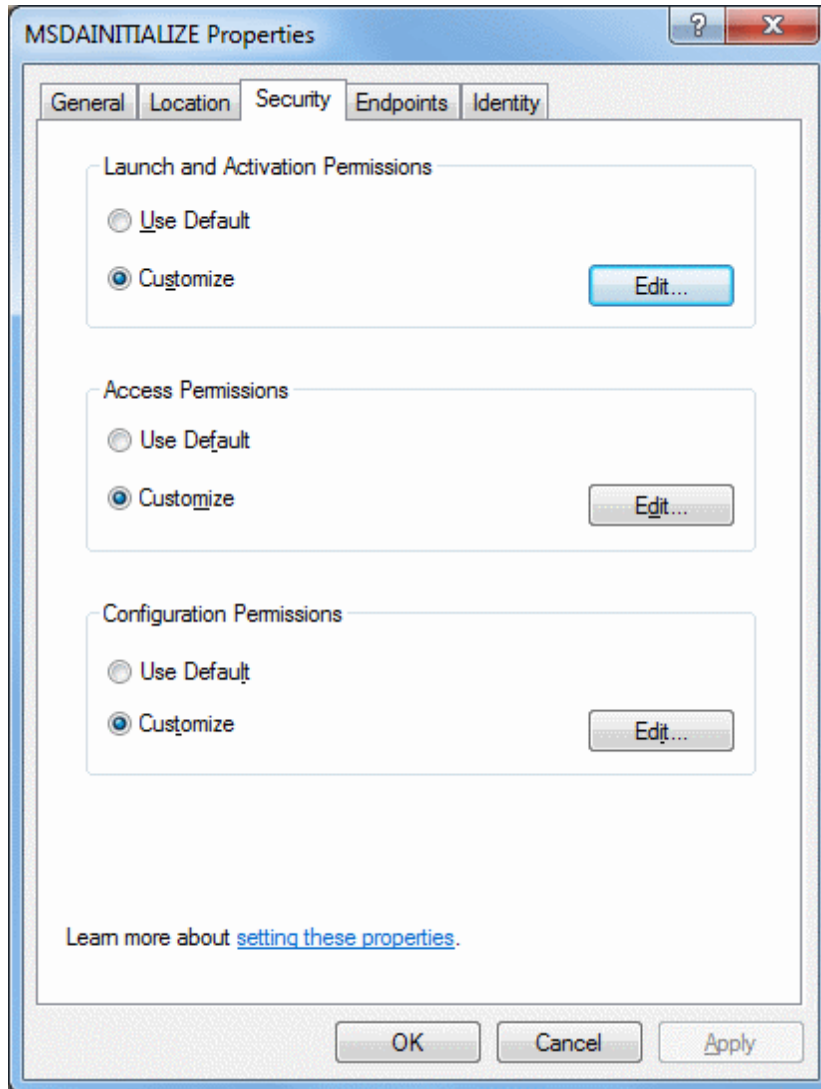
When creating a linked server in SSMS, most errors happen due to security issues with DCOM class MSDAINITIALIZE. We need to alter the DCOM Class MSDAINITIALIZE security settings to make it work.

Following are the steps:

1. Open Component Services (Start>Run>DCOMCNFG)
2. Expand Component Services>Computers>My Computer>DCOM Config
3. From the list of DCOM components on the right side, select **MSDAINITIALIZE** and go to its properties:



4. Go to the Security Tab, Choose 'Customize' and click on the 'Edit' Button:

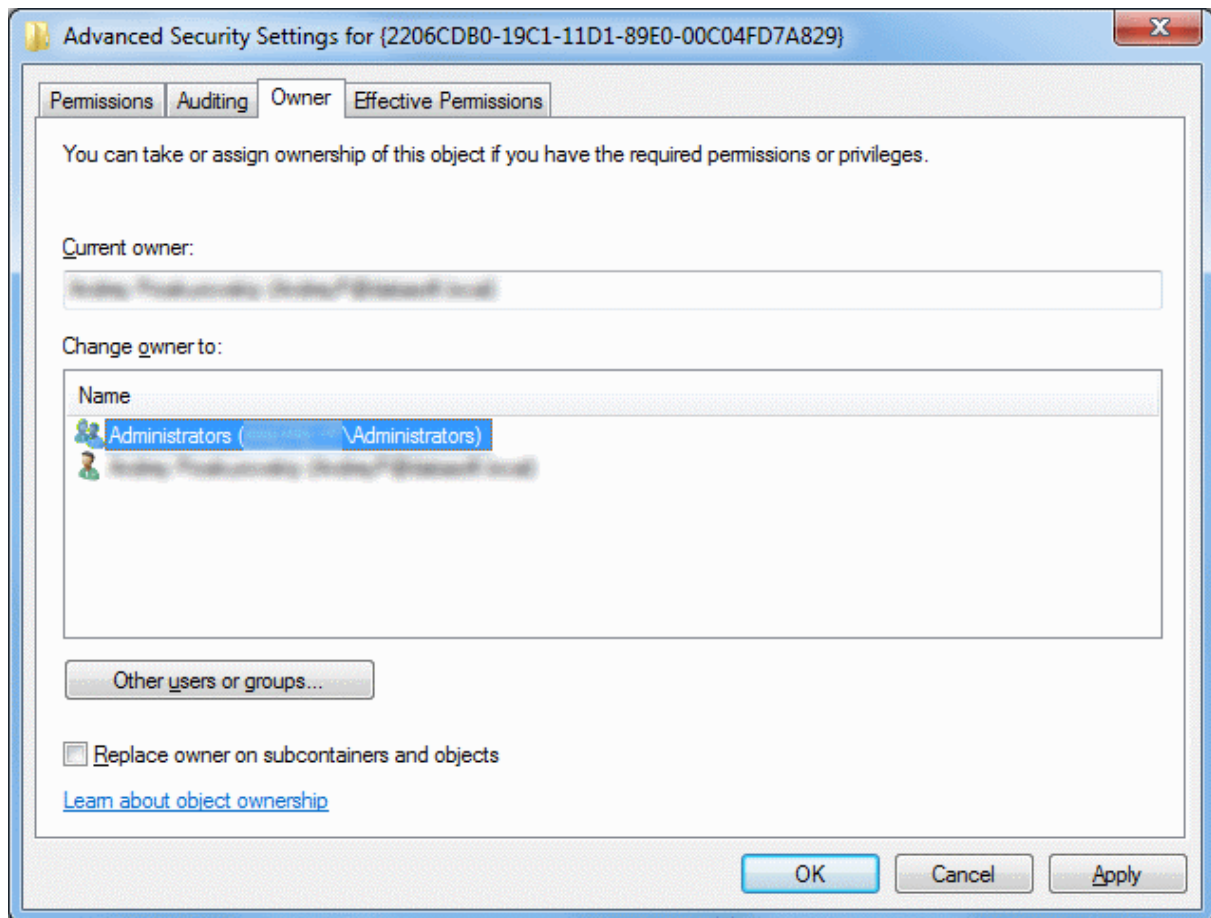


5. Add the Domain User who is accessing the linked server and 'Allow' all the permissions available (Local Launch, Remote Launch, Local Activation, Remote Activation). If you are connecting to SQL server using SQL account, you need to provide this permission to the account under which the SQL service is running.
6. Do this for all the 3 sections in the above screenshot.

To edit the Security settings, we followed the below steps:

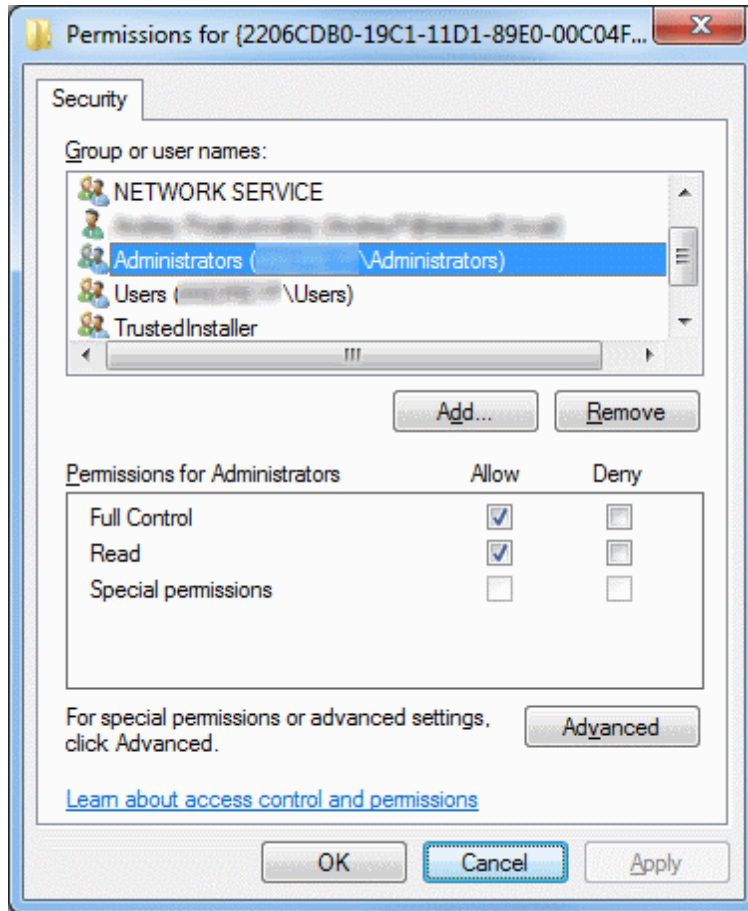
1. Start > Run > Regedit
2. Find the Key: HKEY_LOCAL_MACHINE\SOFTWARE\Classes\AppID\{2206CDB0-19C1-11D1-89E0-00C04FD7A829}

3. Right Click>Permissions>Advanced>Owner Tab:



4. Change the owner to Administrators.

5. Now, grant 'Full Control' to Administrators:



After this you should be able to edit MSDAINITIALIZE security settings .

See also

- [Error message when you try to create an instance of an OLE DB provider in SQL Server: "Cannot create an instance of OLE DB provider"](#)

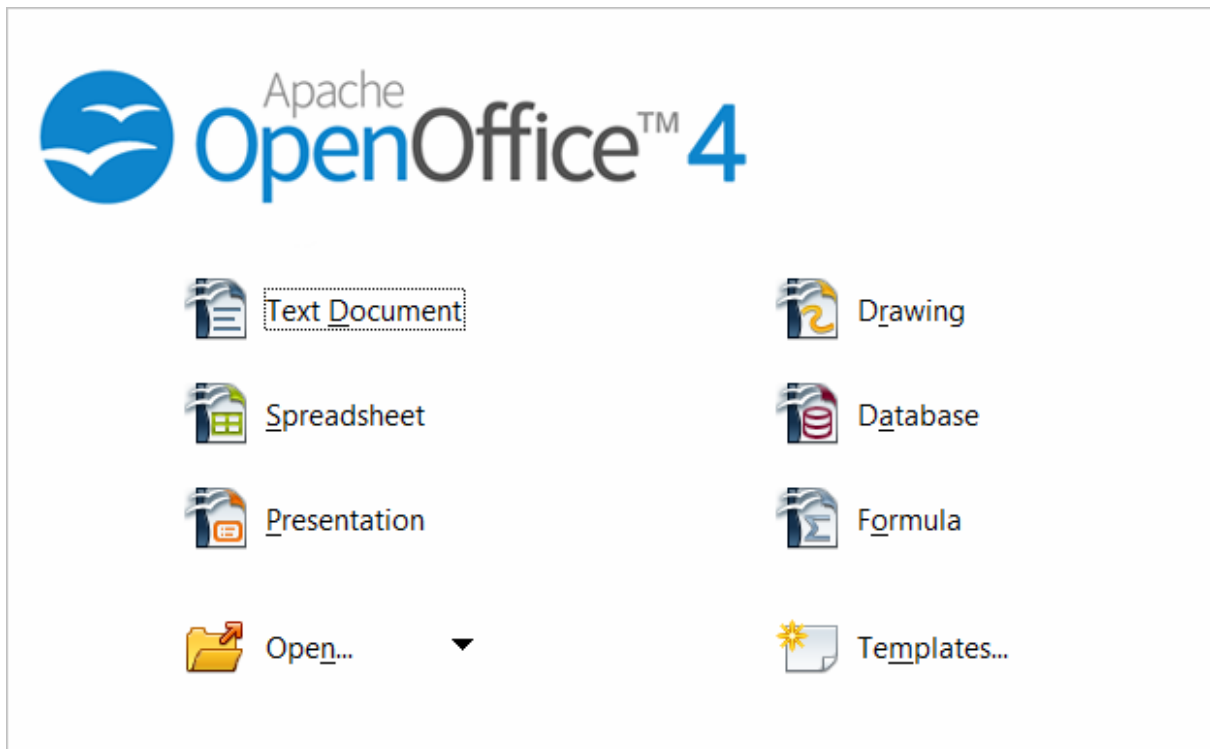
4.8 Using in OpenOffice and LibreOffice

Connecting to Dynamics 365 Business Central from OpenOffice and LibreOffice using ODBC Driver for Dynamics 365 Business Central

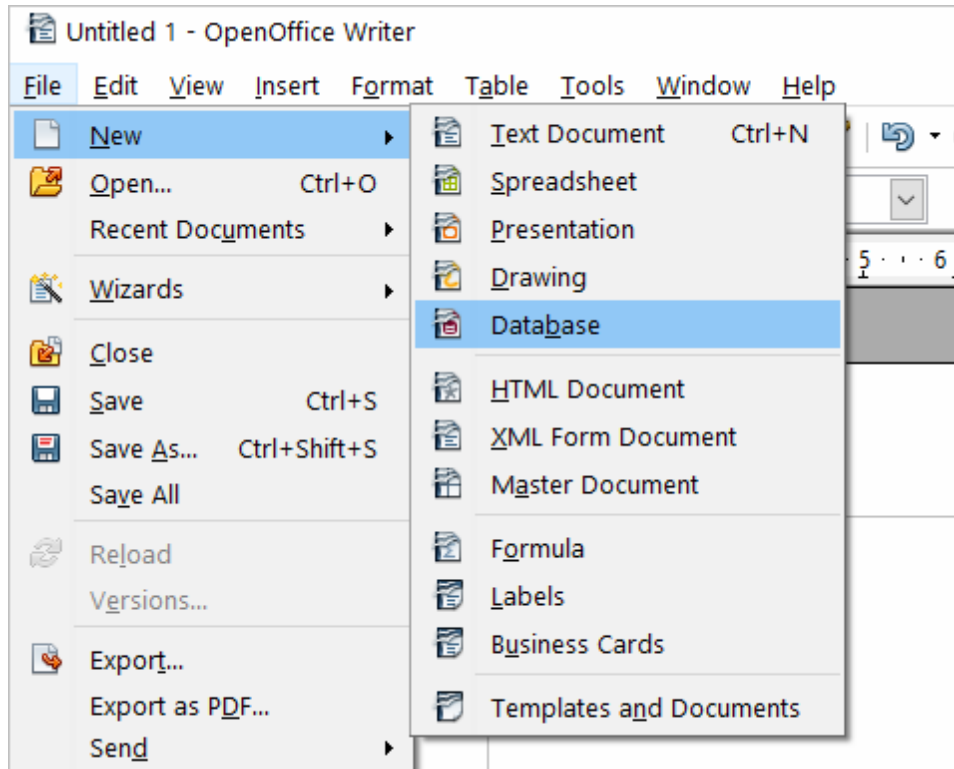
The article describes how to use Apache OpenOffice and LibreOffice to access ODBC data sources using the respective driver. You can access Dynamics 365 Business Central data from Open Office Base or LibreOffice Base — desktop database management systems. Note that the Windows version of OpenOffice is 32-bit, and you may get the error “The specified DSN contains an architecture mismatch between the Driver and Application” when trying to access a data source through a 64-bit ODBC Driver. To get rid of the error message, set up the 32-bit version of the driver.

To connect to an ODBC data source from OpenOffice or LibreOffice using our [driver for Dynamics 365 Business Central](#), perform the steps below:

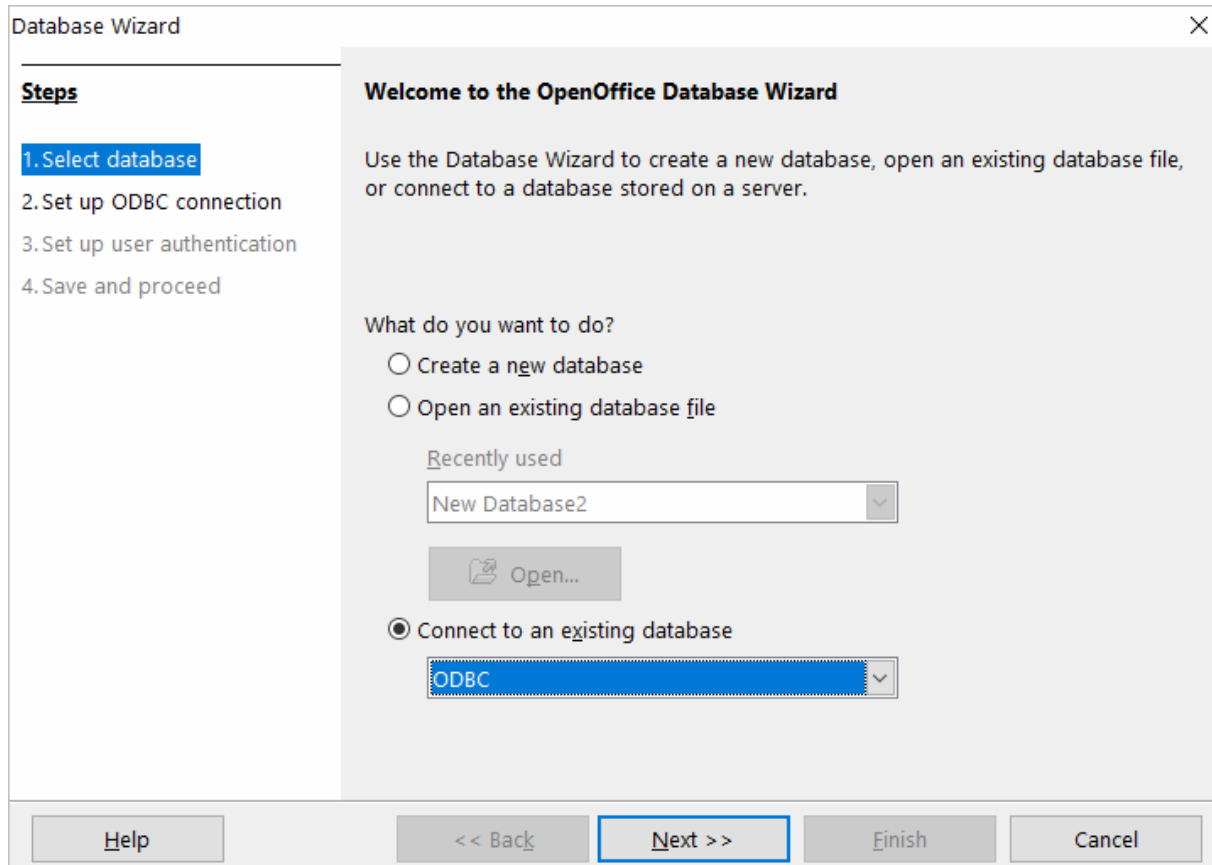
1. Start OpenOffice or LibreOffice, click **Database** to open the **Database Wizard**.



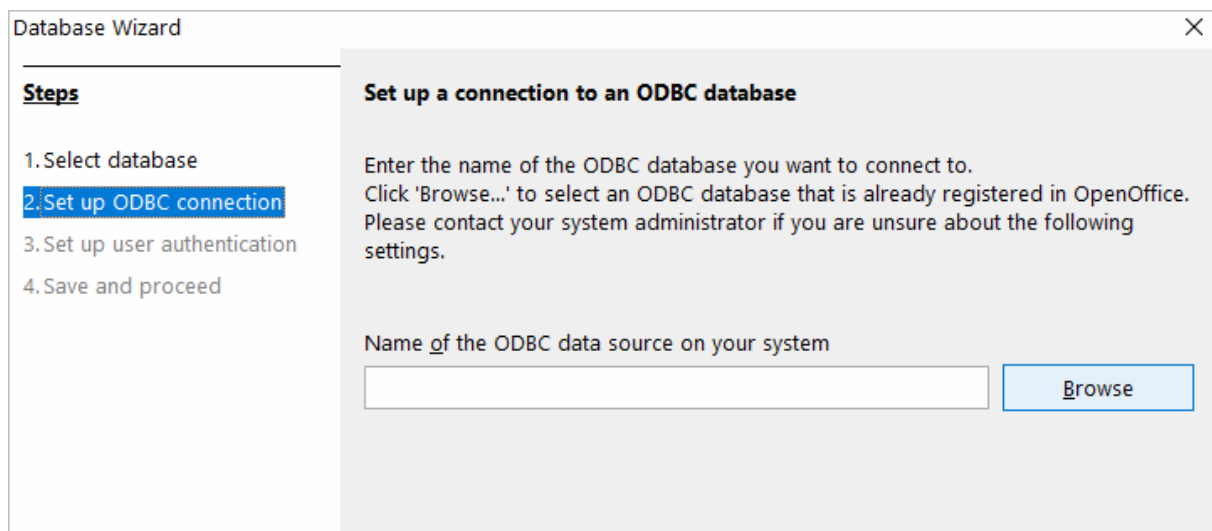
Alternatively, you can launch the **Database Wizard** from OpenOffice or LibreOffice Calc, Writer or any other tool by choosing **File > New > Database**.

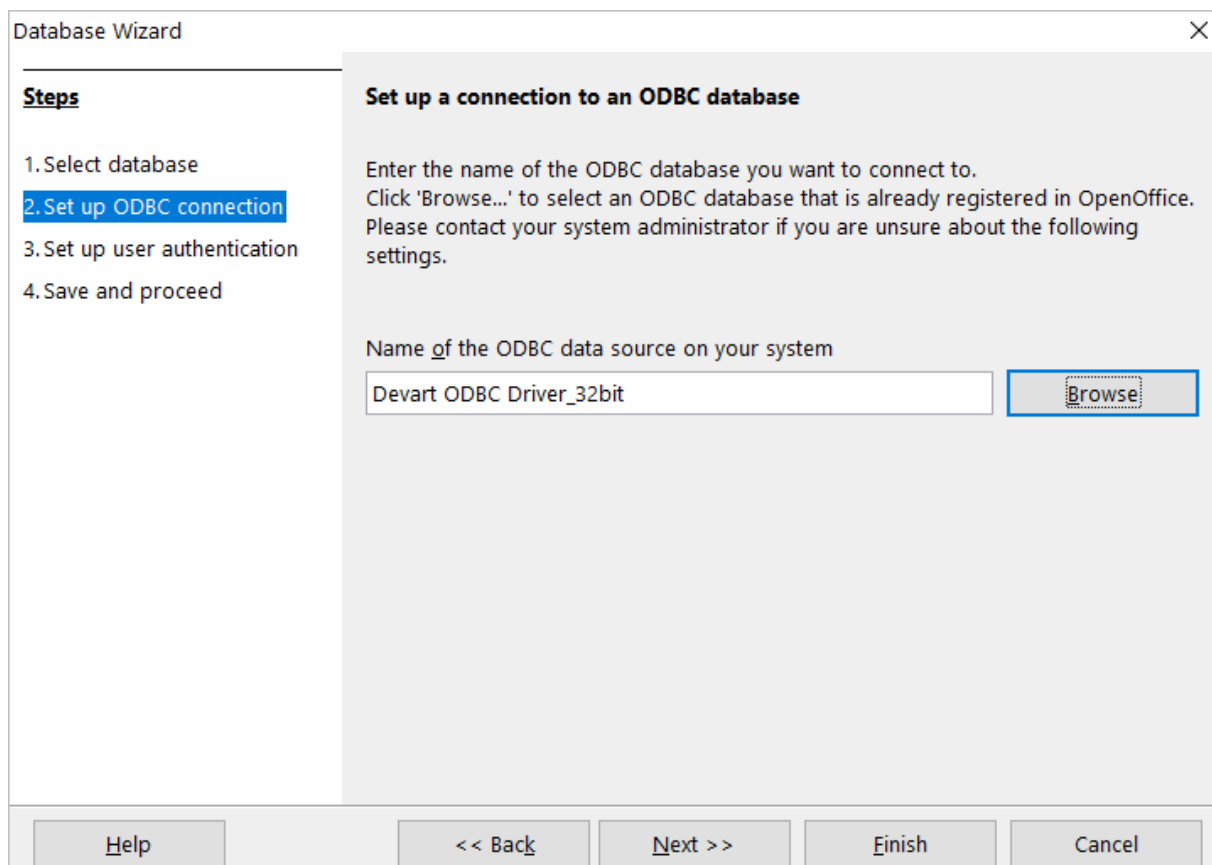
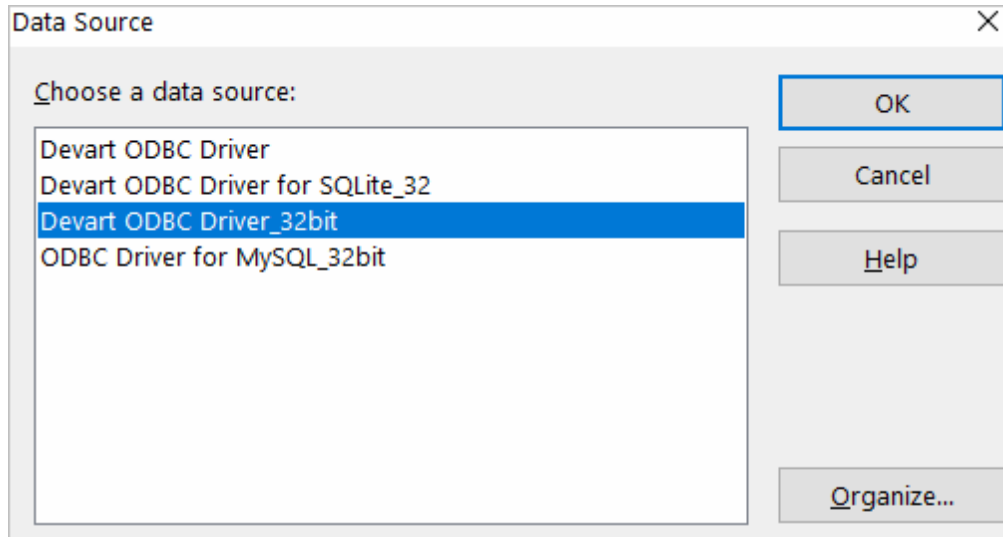


2. In the **Database Wizard dialog box**, click **Connect to an existing database**, select **ODBC** from the drop-down list, and click **Next**.



3. Specify the name of the data source you want to connect to. You can either type the name of your data source into the field, e.g. **ODBC Driver for Dynamics 365 Business Central**, or you can click **Browse**, double-click the data source you need, and then click **Next**.





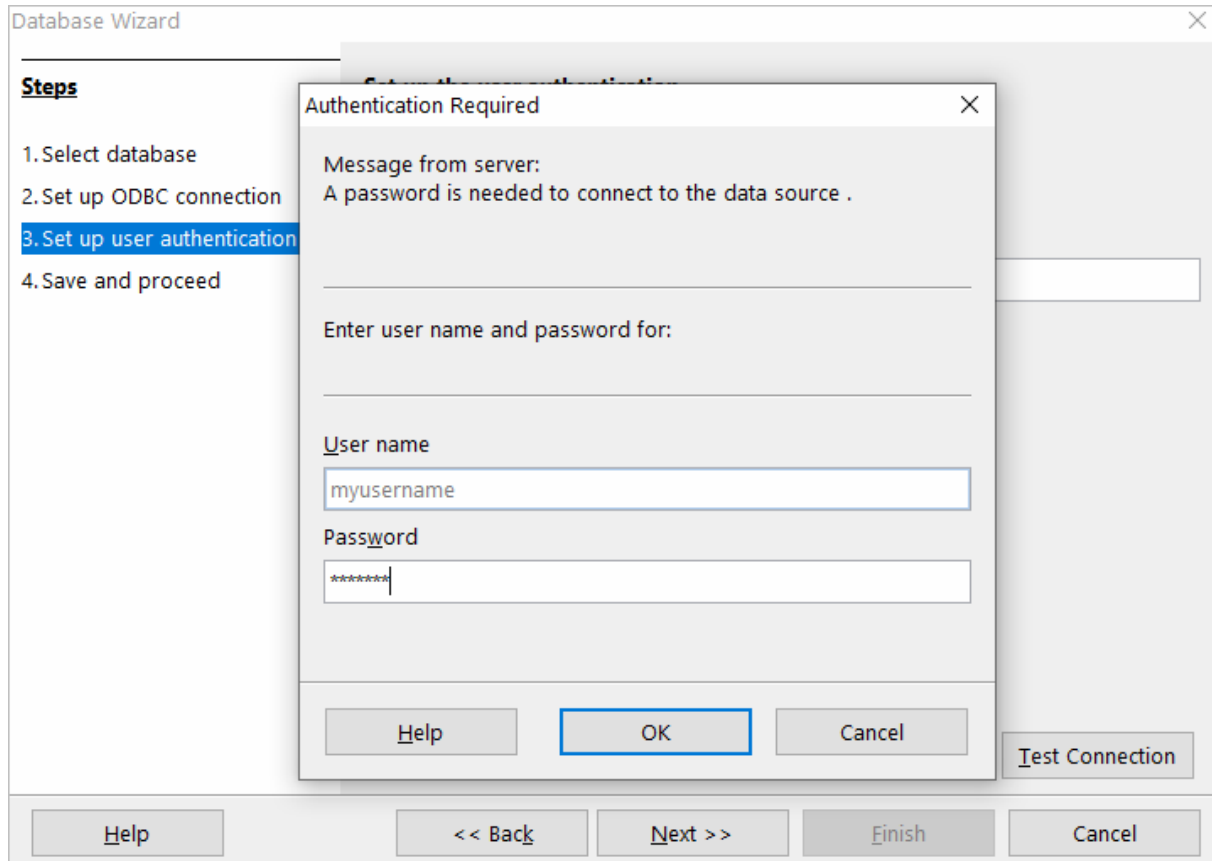
4. If your database requires a user name, type it into the **User name** field. If you are connecting to a password protected database, check the **Password required** field. Alternatively, you can specify these parameters in the data source settings of your ODBC

Driver for Dynamics 365 Business Central and leave these fields empty in **Database Wizard**.

The screenshot shows the 'Database Wizard' window with the 'Set up the user authentication' step selected in the 'Steps' list on the left. The main area contains the following text and controls:

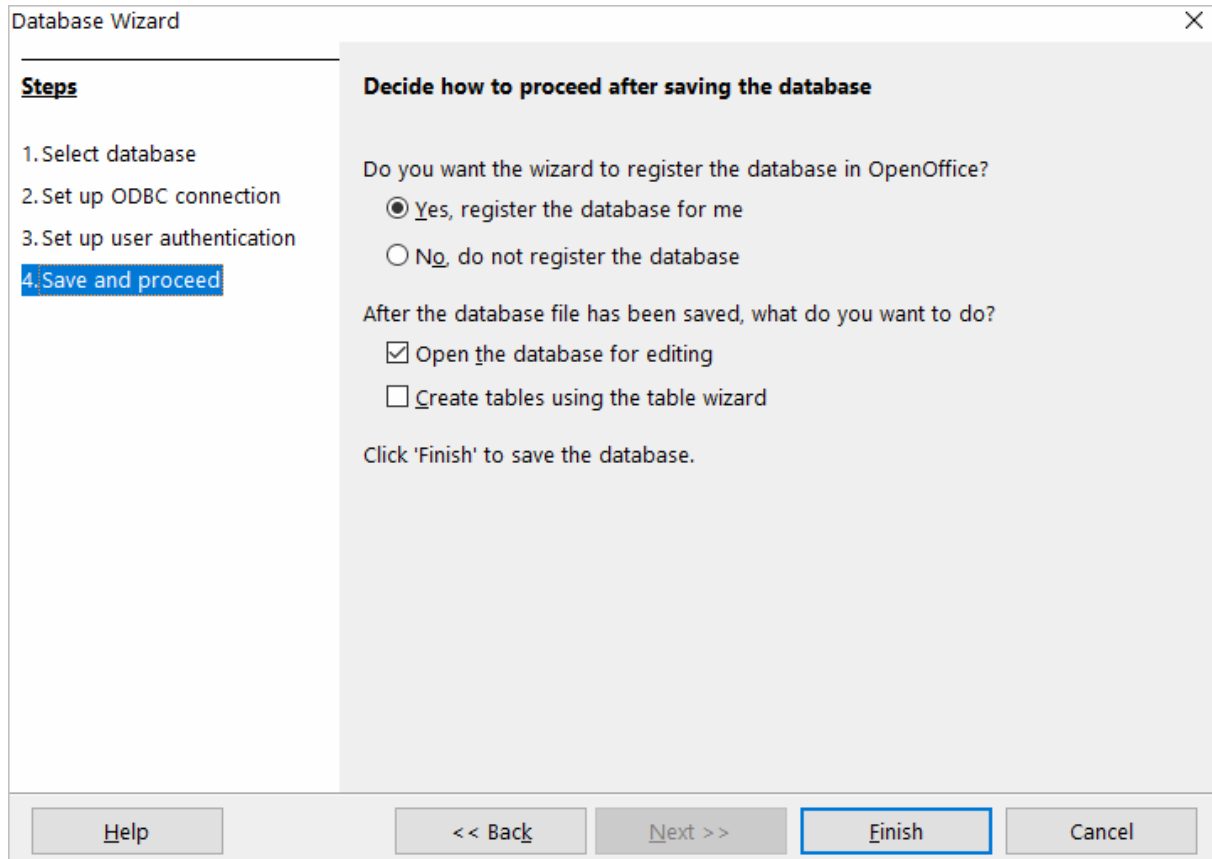
- Set up the user authentication**
- Some databases require you to enter a user name.
- User name**: A text input field containing 'myusername'.
- ☒ **Password required**
- Test Connection** button (bottom right of the main area).
- Navigation buttons at the bottom: **Help**, **<< Back**, **Next >>** (highlighted with a blue border), **Finish**, and **Cancel**.

To test the connection to your data source, click **Test Connection**, input your credentials and click **OK**.

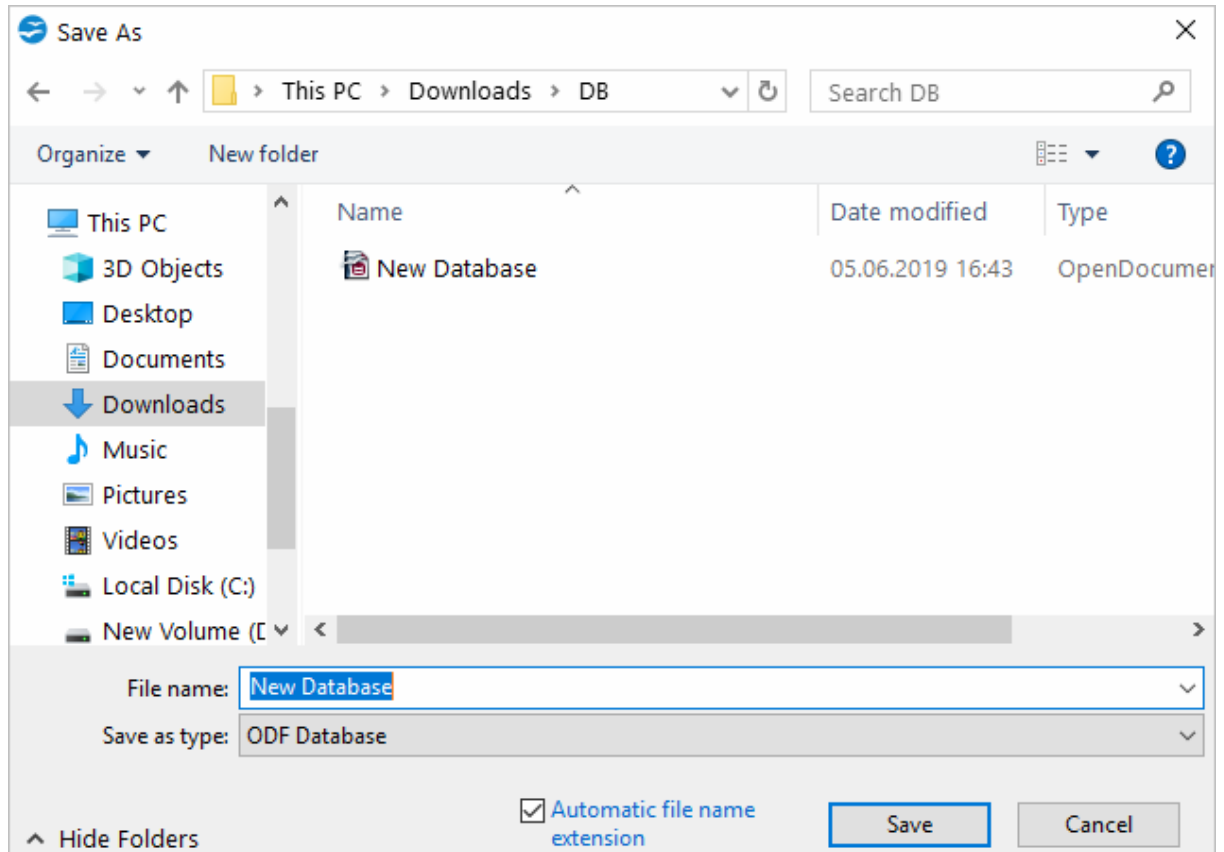


If you have entered valid credentials, you will see a success message. Click **Next** to proceed to the final step.

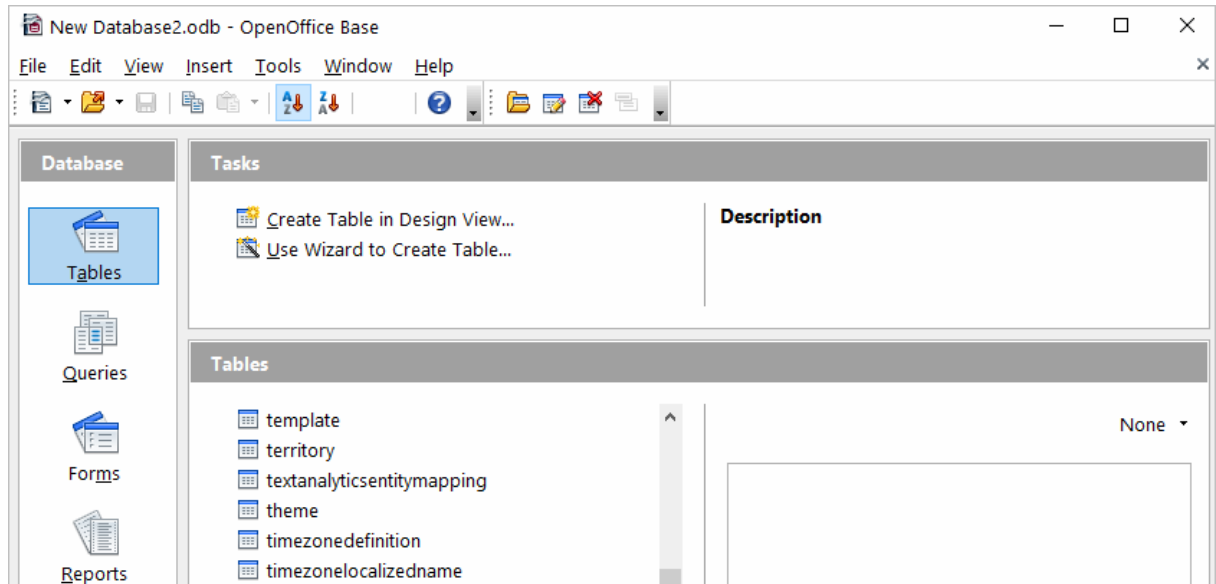
5. You can keep the default selection in this dialog box and click **Finish**.



You will be prompted to give a name to your new database and select the directory where you want to store it.



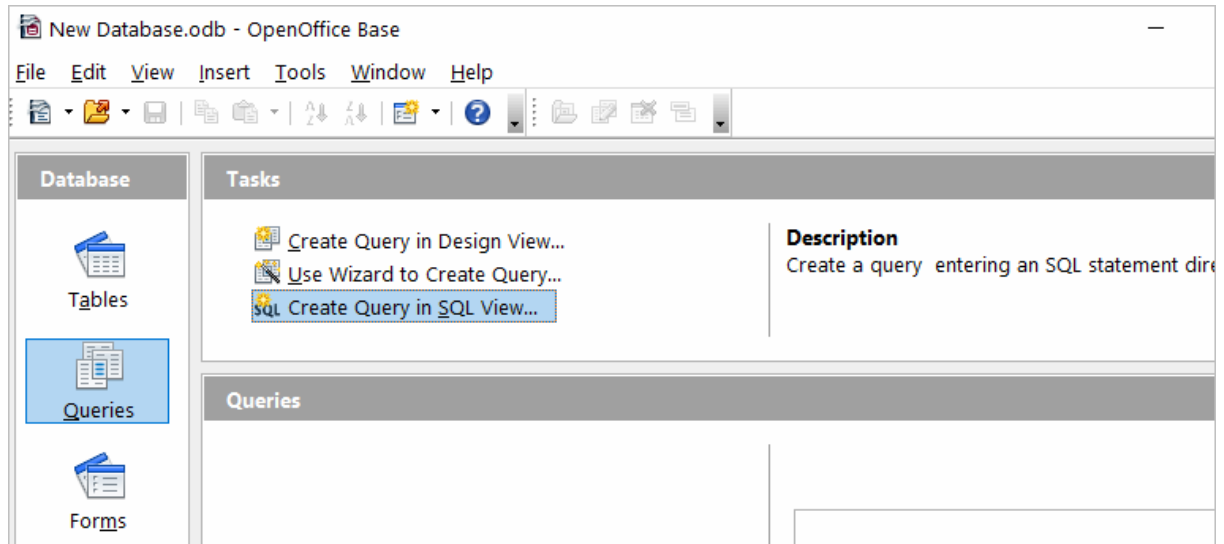
6. When the database opens, you will see the list of tables from your data source displayed in OpenOffice or LibreOffice Base workspace. To view the data from a specific table, double-click the table name.



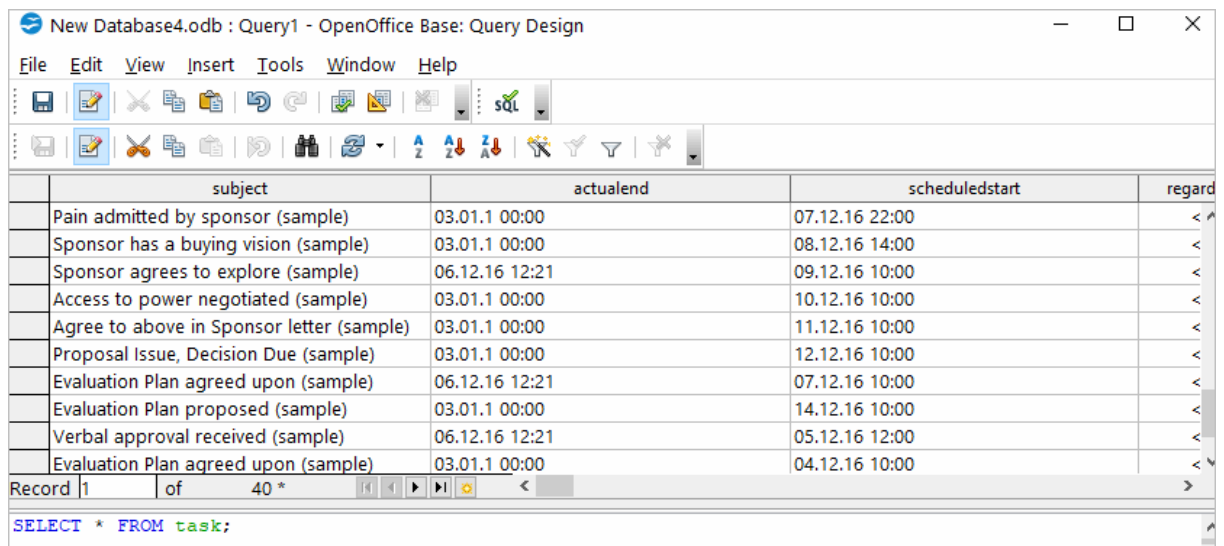
task - New Database42 - OpenOffice Base: Table Data View

subject	actualend	scheduledstart	reg
Pain admitted by sponsor (sample)	03.01.1 00:00	07.12.16 22:00	
Sponsor has a buying vision (sample)	03.01.1 00:00	08.12.16 14:00	
Sponsor agrees to explore (sample)	06.12.16 12:21	09.12.16 10:00	
Access to power negotiated (sample)	03.01.1 00:00	10.12.16 10:00	
Agree to above in Sponsor letter (sample)	03.01.1 00:00	11.12.16 10:00	
Proposal Issue, Decision Due (sample)	03.01.1 00:00	12.12.16 10:00	
Evaluation Plan agreed upon (sample)	06.12.16 12:21	07.12.16 10:00	
Evaluation Plan proposed (sample)	03.01.1 00:00	14.12.16 10:00	
Verbal approval received (sample)	06.12.16 12:21	05.12.16 12:00	
Evaluation Plan agreed upon (sample)	03.01.1 00:00	04.12.16 10:00	
Evaluation plan underway (sample)	03.01.1 00:00	08.12.16 10:00	
Pre-proposal review conducted (sample)	03.01.1 00:00	09.12.16 10:00	
Asked for business (sample)	03.01.1 00:00	10.12.16 10:00	

7. To create an SQL query, click **Queries** in the **Database** pane, then click **Create Query in SQL View...**



Enter your query in the query text box and click **Run Query (F5)**. The date will be fetched from the database and displayed in Open Office or LibreOffice, respectively.



4.9 Using in PHP

Connecting to Dynamics 365 Business Central from PHP using ODBC Driver for Dynamics 365 Business

Central

PHP is one of the most popular programming languages for website development. ODBC drivers are connectors that make PHP development database agnostic — your software written in PHP will function with any vendor's database management system. You can use functions like `odbc_exec()` to prepare and execute SQL statements against any databases like MySQL, SQLite, PostgreSQL, etc.

PHP-based projects usually require a data storage, whether a traditional database or a cloud-based database. You can establish a connection to them using ODBC interface. With our ODBC drivers, you can access various data sources and retrieve tables and fields from a database.

Below is a sample PHP script for accessing Dynamics 365 Business Central via ODBC. The script [connects to Dynamics 365 Business Central database](#) and fetches all records from a table:

Step 1: Connect to ODBC data source

The `odbc_connect()` function is used to connect to an ODBC data source. Note that the function takes three mandatory parameters: the data source name, username and password. If your database is not password-protected or doesn't require a username, leave these parameters empty. In the following example, a connection is established using the `odbc_connect()` function in PHP.

```
<?php
$user = "myusername";
$password = "mypassword";
$ODBCConnection = odbc_connect("DRIVER={Devart ODBC Driver for Dynamics
```

Step 2: Execute an SQL statement

If connection is successful, the `odbc_exec()` function is used to execute a SELECT statement against the `dept` table in the `autotest` database.

```
$SQLQuery = "SELECT * FROM autotest.dept";
$RecordSet = odbc_exec($ODBCConnection, $SQLQuery);
```

Step 3: Print the result set

The `odbc_fetch_row()` function is used to return records from the result set. While `odbc_fetch_row()` returns rows, the `odbc_result_set()` function prints a set of result in HTML table. After all rows from the result set have been printed, the `odbc_close()` function closes

the connection.

```
$result = odbc_result_all($RecordSet, "border=1");  
odbc_close($ODBCConnection);  
?>
```

You can modify this script by specifying general settings for each Devart ODBC driver to use any of them with your PHP projects.

4.10 Using in Power BI

Importing Dynamics 365 Business Central Data into Power BI Through an ODBC Connection

Power BI is a popular business intelligence solution that is comprised of services, apps, and connectors that allow you to pull raw data from various sources and create meaningful reports. To connect Power BI to a data source such as Dynamics 365 Business Central, you can use a corresponding ODBC driver.

This tutorial explores how to connect to Dynamics 365 Business Central and import data into Power BI Desktop using an ODBC driver. It is assumed that you have already installed and configured a DSN for ODBC driver for Dynamics 365 Business Central.

1. Run Power BI Desktop and click **Get Data**.
2. Select the **Other** category in the **Get Data** dialog box, then select **ODBC**. Click **Connect** to confirm the choice.
3. In the **From ODBC** dialog box, expand the **Data Source Name (DSN)** drop-down list and select the previously configured DSN for Dynamics 365 Business Central
4. If you would like to enter a SQL statement to narrow down the returned results, click the **Advanced options** arrow, which expands the dialog box, and type or paste your SQL statement.
5. Click **OK**. If your data source is password-protected, Power BI will prompt you for user credentials. Type your **Username** and **Password** in the respective fields and click.
6. Now you should see the data structures in your data source. You can preview the contents of the database objects by clicking on them.
7. To load the Dynamics 365 Business Central data into Power BI for analysis, select the

needed table and click **Load**.

4.11 Using in Python

Installing the ODBC Driver for Dynamics 365 Business Central

One of the most convenient methods to connect to an external database or access cloud data from Python is via ODBC. Devart has developed a range of ODBC Drivers for Python to work with databases and cloud services.

If you don't have Python installed on your machine, go to the Python official website, download the appropriate installer and run it. You will also need to install the **pyodbc** module — the easiest way to do that is by using the `pip install pyodbc` command in the Python interactive mode. Next, you need to [download the ODBC Driver](#) for Dynamics 365 Business Central. To use the ODBC driver as a translation layer between the application and the database, you need to configure it by following the installation [instructions](#).

Connecting to Dynamics 365 Business Central from Python using ODBC Driver for Dynamics 365 Business Central

Here's an example to show you how to [connect to Dynamics 365 Business Central](#) via Devart ODBC Driver in Python. First we import the pyodbc module, then create a connection to the database, insert a new row and read the contents of the EMP table while printing each row to the Python interactive console. To execute the script, you can type the code directly in the interactive console or add the code to a file with the .py extension and run the file from the command prompt.

Step 1: Connect

```
import pyodbc
cnxn = pyodbc.connect('DRIVER={Devart ODBC Driver for Dynamics 365 Business
```

Step 2: Insert a row

Here's a simple example of how to execute an *insert* statement to test the connection to the database. The script inserts a new record to the EMP table.

```
cursor = cnxn.cursor()
cursor.execute("INSERT INTO EMP (EMPNO, ENAME, JOB, MGR) VALUES (535, 'Scott
```

Step 3: Execute query

The `cursor.execute()` function retrieves rows from the *select* query on a dataset. The `cursor.fetchone()` function iterates over the result set returned by `cursor.execute()` while the `print()` function prints out all records from the table to the console.

```
cursor = cnxn.cursor()
cursor.execute("SELECT * FROM EMP")
row = cursor.fetchone()
while row:
    print (row)
    row = cursor.fetchone()
cursor.close()
cnxn.close()
```

4.12 Using in QlikView

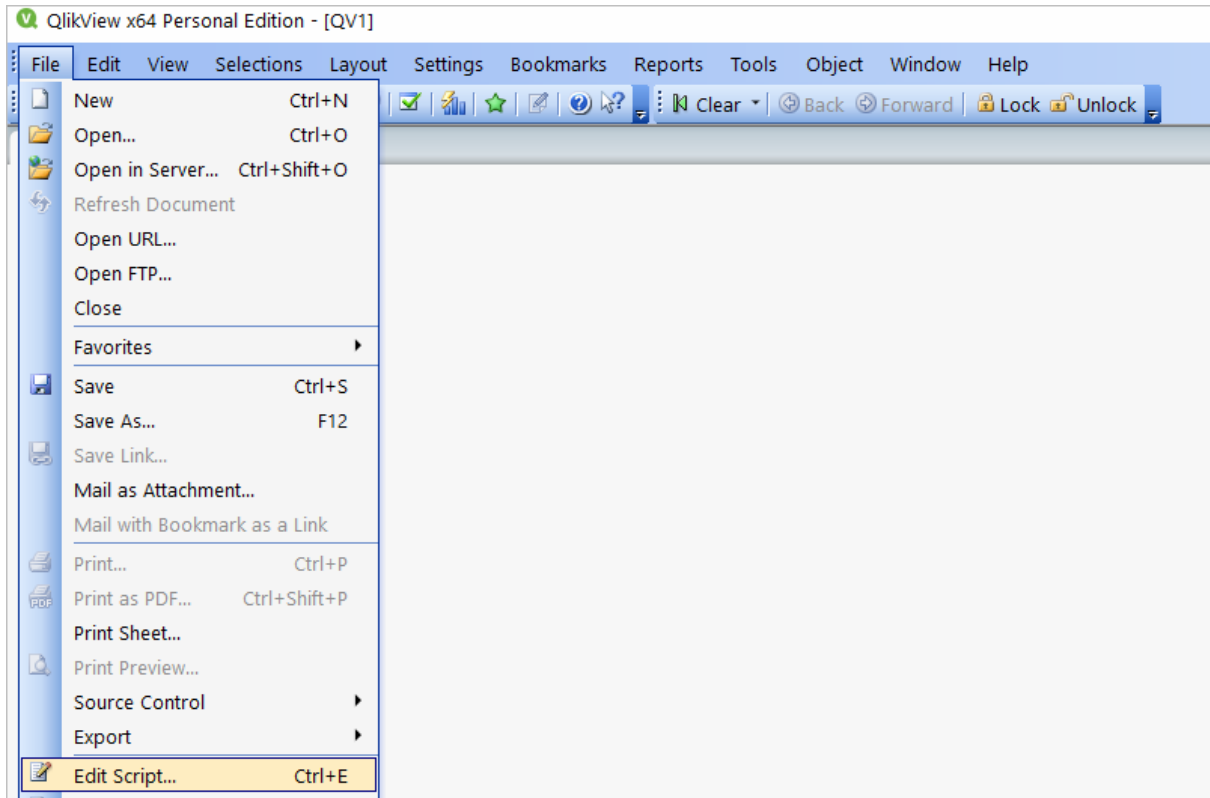
Connecting to Dynamics 365 Business Central from QlikView using ODBC Driver for Dynamics 365 Business Central

This tutorial describes how to connect and configure QlikView to retrieve data from Dynamics 365 Business Central for further analysis. QlikView is a data visualization tool that connects and pulls data from different popular databases like MySQL, MongoDB, Oracle, SQL Server, Postgres, etc. to present it in a single view. The business intelligence platform identifies relationships in your data and discovers patterns and opportunities to support your decision making.

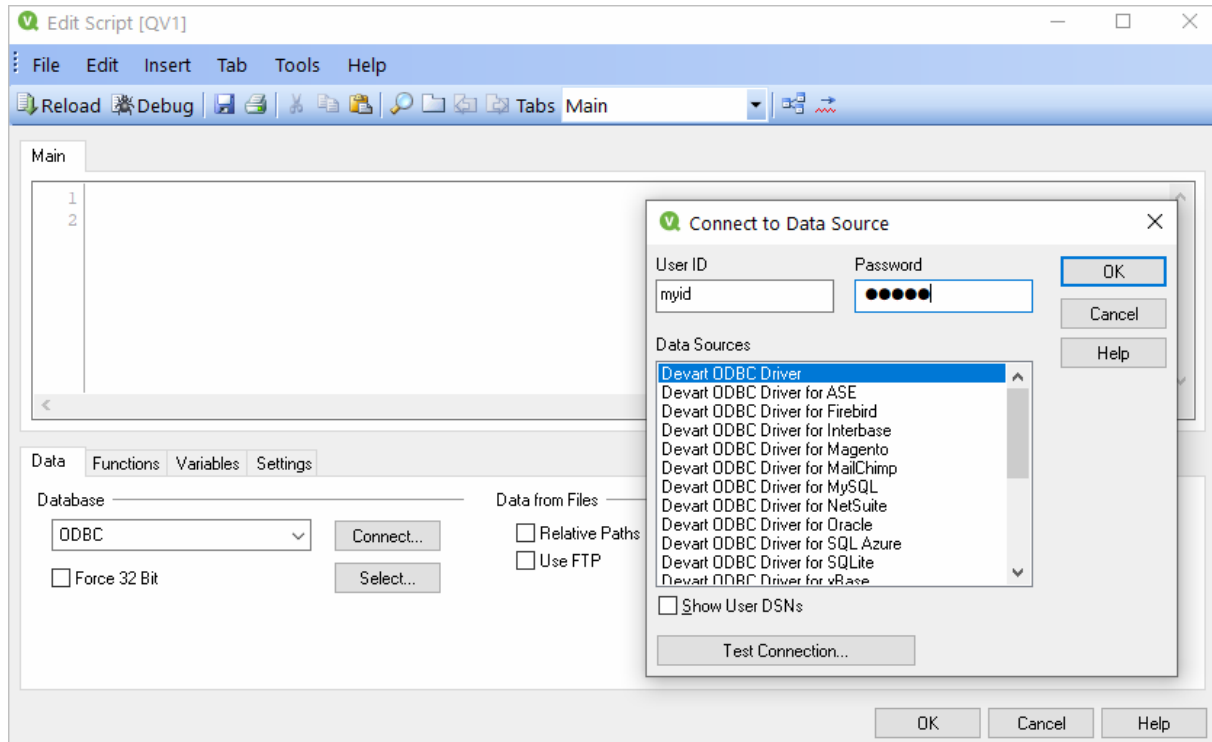
QlikView supports the ODBC connectivity interface for communication with external data sources. An ODBC data source must be configured for the database you want to access. You can create an ODBC connection using a DSN during the ODBC driver installation or later.

To connect to an ODBC data source from QlikView using our driver for Dynamics 365 Business Central, perform the steps below:

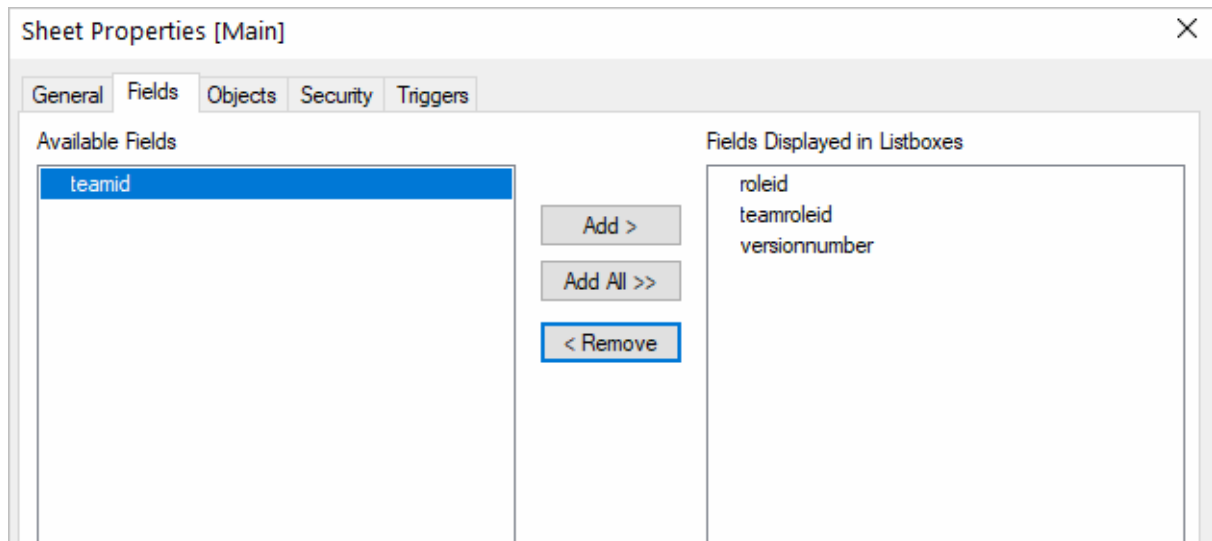
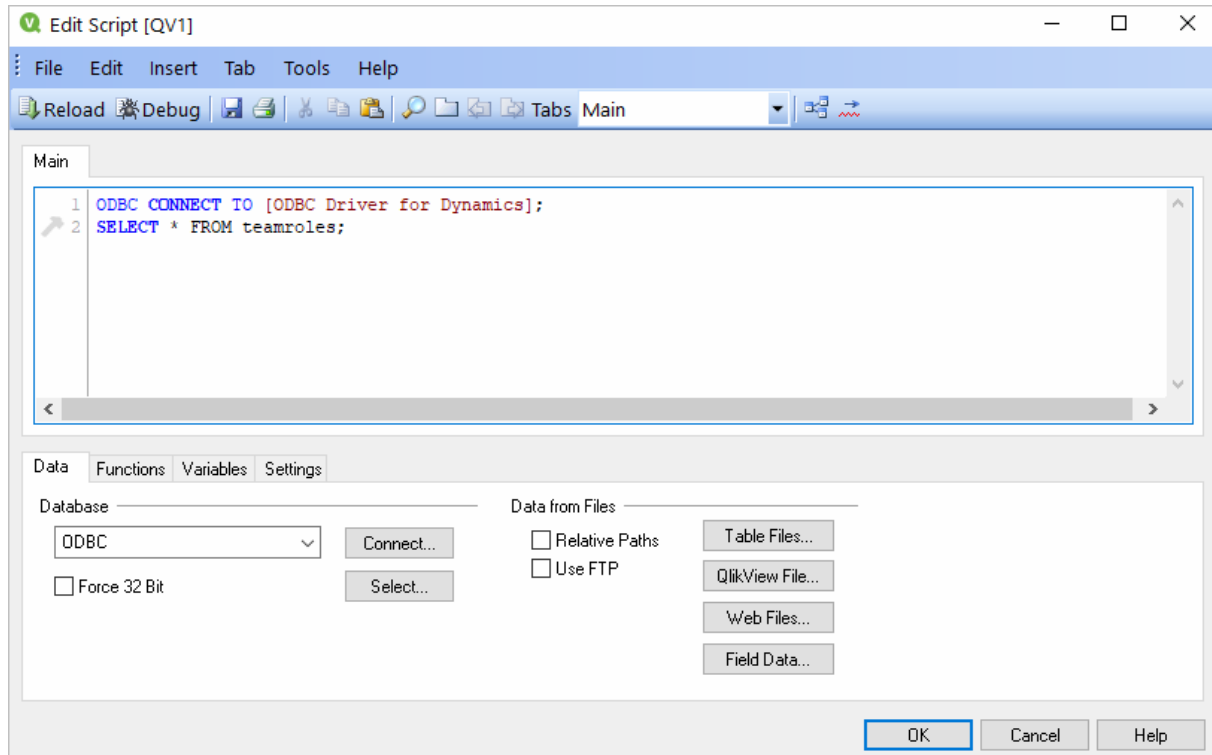
1. Open the QlikView client application and click **File > New**. Close the **Getting Started** wizard and open **File > Edit Script (CTRL+E)**.



2. In the **Data** tab, choose **ODBC** from the **Database** drop-down and click **Connect**. Select the **Data Source** you created earlier, type in the **User ID** and **Password** if your database is password-protected. You can test the connection by choosing **Test Connection**. The **Connection Test succeeded** message should appear. Click **OK** to connect to your data source.

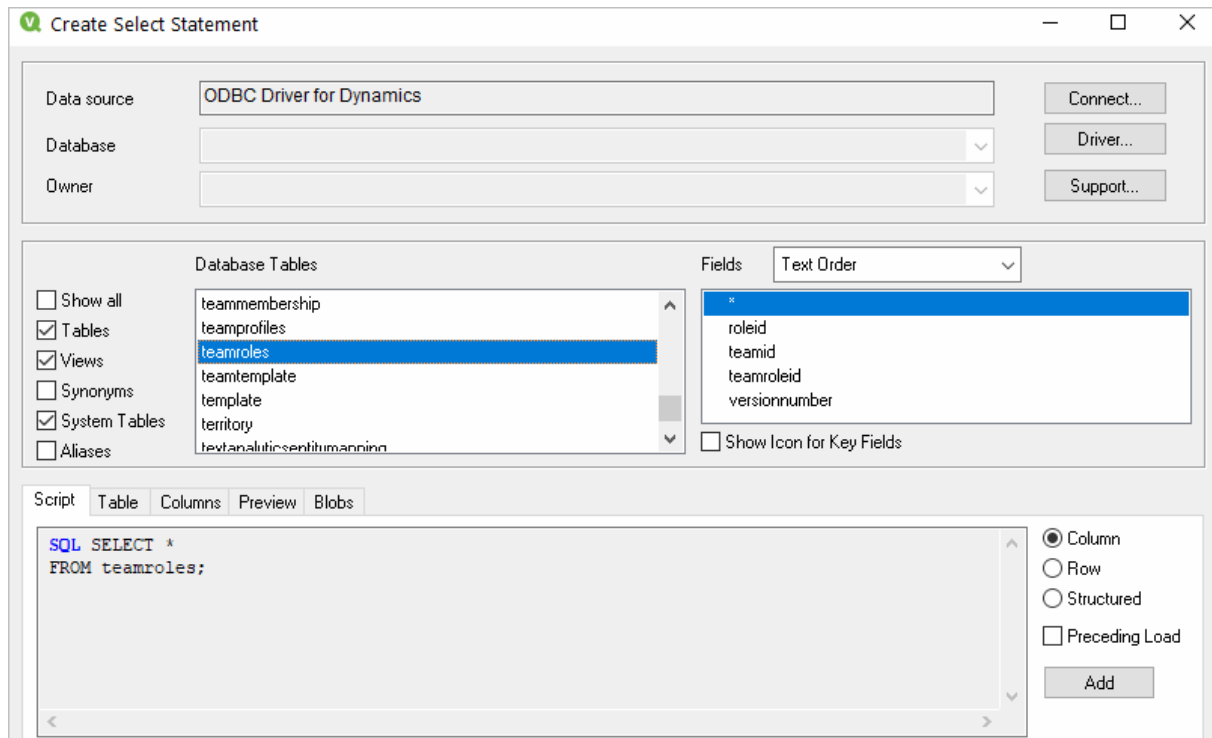


3. To retrieve the data from your data source, you can enter an SQL query and press **F5**. You will be suggested to choose fields to be displayed.

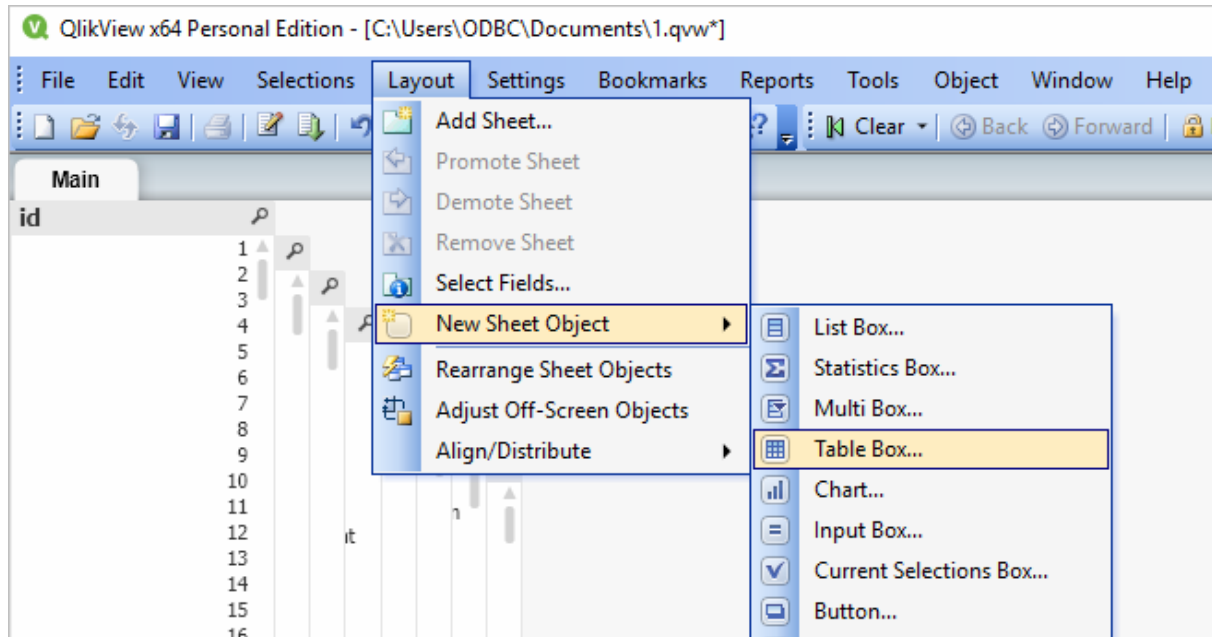


- Alternatively, you can click **Select**, and QlikView will show you the database structure window where you can compose a SELECT statement for the data to be fetched. You can choose a different database from the database drop-down list. Select the necessary tables and fields. You can retrieve data from multiple tables and fields by selecting them and

clicking **Add**. When you are ready with your SELECT statement, click **OK**. You will get back to the main script editor with your SQL statement. Press **F5** to execute the script and select the fields to be displayed in QlikView.



5. Once the data has been fetched, you can choose a table layout to present the data in a table. Choose **Layout > New Sheet Object > Table Box**. Select the fields to be added to the tablebox and click **OK**.



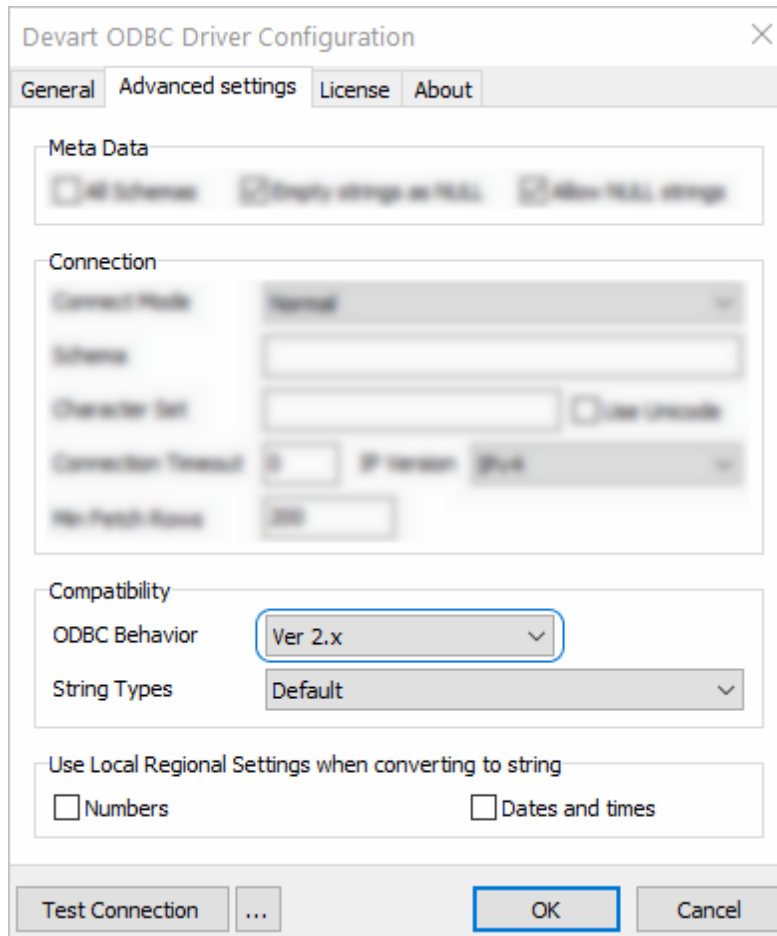
The screenshot shows the QlikView x64 Personal Edition interface with the 'Selections' menu open. The background displays a data table with the following columns: roleid, teamid, teamroleid, and versionnumber.

roleid	teamid	teamroleid	versionnumber
1a27ce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	b0e14c3f-7aed-e311-93d9-d89d67640040	399779
7e28ce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	cae14c3f-7aed-e311-93d9-d89d67640040	399784
8f1ece12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	83f41d39-7aed-e311-93d9-d89d67640040	399770
0023ce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	7df41d39-7aed-e311-93d9-d89d67640040	399754
061cce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	b3e14c3f-7aed-e311-93d9-d89d67640040	399783
341ace12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	cbe14c3f-7aed-e311-93d9-d89d67640040	399817
582dce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	cce14c3f-7aed-e311-93d9-d89d67640040	399818
822ace12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	b2e14c3f-7aed-e311-93d9-d89d67640040	399782
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5320ce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	87f41d39-7aed-e311-93d9-d89d67640040	399773
6125ce12-24e7-e311-80e7-f0921c1065a0	c618ce12-24e7-e311-80e7-f0921c1065a0	86f41d39-7aed-e311-93d9-d89d67640040	399771
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cb269f84-e19d-e011-b66c-00155db528b6	c618ce12-24e7-e311-80e7-f0921c1065a0	7cf41d39-7aed-e311-93d9-d89d67640040	399752

4.13 Using in SSIS

SQL Server Integration Services (SSIS) is a component of SQL Server that is designed to perform various data migration tasks. When using Devart ODBC Driver for Dynamics 365 Business Central as a translation layer between the data source and SSIS, the driver and SSIS communicate via Microsoft ODBC version 3.x.

Note that when you extract data from an ODBC data source using the `SQLExecDirect` function, an issue may occur: SSIS expects the ODBC 2.x behavior, while the ODBC driver continues to fetch data from a data source via ODBC version 3.x. To prevent any issues when using `SQLExecDirect`, you should force the ODBC 2.x behavior in the DSN settings: open the **Advanced Settings** tab and select **Ver 2.x** from the **ODBC Behavior** dropdown.



4.14 Using in Tableau

Importing Dynamics 365 Business Central Data Into Tableau Through an ODBC Connection

This article explains to establish and ODBC connection to Dynamics 365 Business Central from Tableau Desktop. Tableau is a data visualization tool that allows you to pull in raw data, perform analysis on it, and create meaningful reports to get actionable insights. With Tableau

Desktop and our suite of [ODBC drivers](#), you can connect to various relational and non-relational databases, both cloud and on-premise.

1. Run Tableau Desktop.
2. On the start page, select **More...** in the **Connect** pane.
3. Choose **Other Databases (ODBC)**.
4. Expand the **DSN** drop-down list and select the DSN that you have created and configured for Dynamics 365 Business Central. Alternatively, if you have not created a DSN, you can choose the **Driver** option and select Devart ODBC Driver for Dynamics 365 Business Central from the drop-down.
5. Click **Connect**.
6. After a successful connection, click **Sign in**.
7. Select the needed database and schema in Dynamics 365 Business Central.
8. You should see the list of all tables you have access to in the connected data source.
9. Drag-and-drop the table name to the area where it says **Drag tables here** to retrieve the data, or click **New Custom SQL** to write a query that will select only specific data from the table.
10. Hit **Update Now** to retrieve and display the data.