

A 3D CAD model of a blue helmet is shown against a blue background with a grid pattern. Two red tooling fixtures with yellow inserts are positioned to machine the top of the helmet. A third red tooling fixture is shown separately in the foreground. The helmet has a complex shape with various openings and features.

*hyper*MILL®

OPEN MIND macro database in an
SQL server environment



Table of Contents

1. Macro database in multi-user mode	3
2. Creating an OPEN MIND macro database as a client application	4
3. Connecting the client database to SQL Server	6
4. Exporting macros from the previous <i>hyperMILL</i> version	12
5. Opening the SQL database with <i>hyperMILL</i> and importing macros	13
6. Update an existing SQL macro database	14

1. Macro database in multi-user mode



NOTE

General information about using a macro database with multiple users at the same time

- **Create macro (s)** and **Edit macro (s)**: Macros can **cannot be edited** by multiple users **at the same time** . This applies to both standard databases and databases in a SQL server environment.
- **Apply macro (s)**: the simultaneous application of macros is possible for both standard databases and databases in a SQL server environment (**Macros** → **Apply macros** function in the context menu of a job or **Apply macros** function in the context menu of a feature).

2. Creating an OPEN MIND macro database as a client application

1. Install the **Microsoft SQL Server Management Studio** software on the computer that you use to manage your tool databases and start the software as **Administrator**. Under **File** → **Connect Object Explorer**.
2. In the **Connect to Server** dialogue, select **Database Engine** under **Server type**, the name of your SQL Server under **Server name** and **SQL Server Authentication** under Authentication. Then enter your login details (**Login** and **Password**) and click **Connect**.

3. Create a new database. To do this, click the **Databases** entry in the file browser and choose **New Tool Database** on the shortcut menu. Enter the required database name under **Database name**. Click **OK** to close the dialogue. The database appears as an entry in the file browser.
4. Open the MacroDB_sqlserver.sql script file for your new database's data definition by double-clicking (the script is automatically loaded into Microsoft SQL Server Management Studio) or via the menu item **File** → **Open** → **File**.
By default, the script file is located in the following directory:

```
C:\Program Files\OPEN MIND\hyperMILL\[version]\macrotech.
```



NOTE

Alternatively, you can also open and copy the content of the script file in a text editor. Select **Script for database as** → **Create** → **New query editor window** from the database's shortcut menu. Delete the content in the editor window and paste the content of the database script from the clipboard.

5. Enter the name of the previously created database in the **USE** instruction at the beginning of the script (example: omMacroDBSQL).



```
USE [omMacroDBSQL]
GO
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
```

6. Execute the script. To do this, click **Execute** on the menu bar.
You have now completed the administrator tasks.



NOTE

Please note that it may be necessary to adapt the permissions for the new database (login details) to the database administrator.

3. Connecting the client database to SQL Server

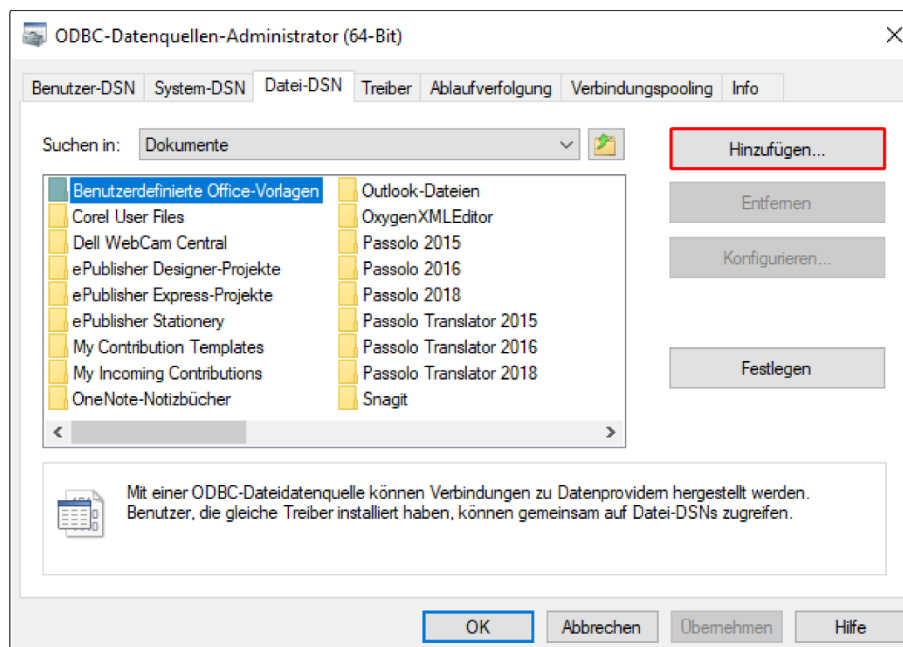
To ensure that the macro database can establish a connection to the SQL Server, you must create a DSN file with the connection information for the driver that the SQL Server client needs.



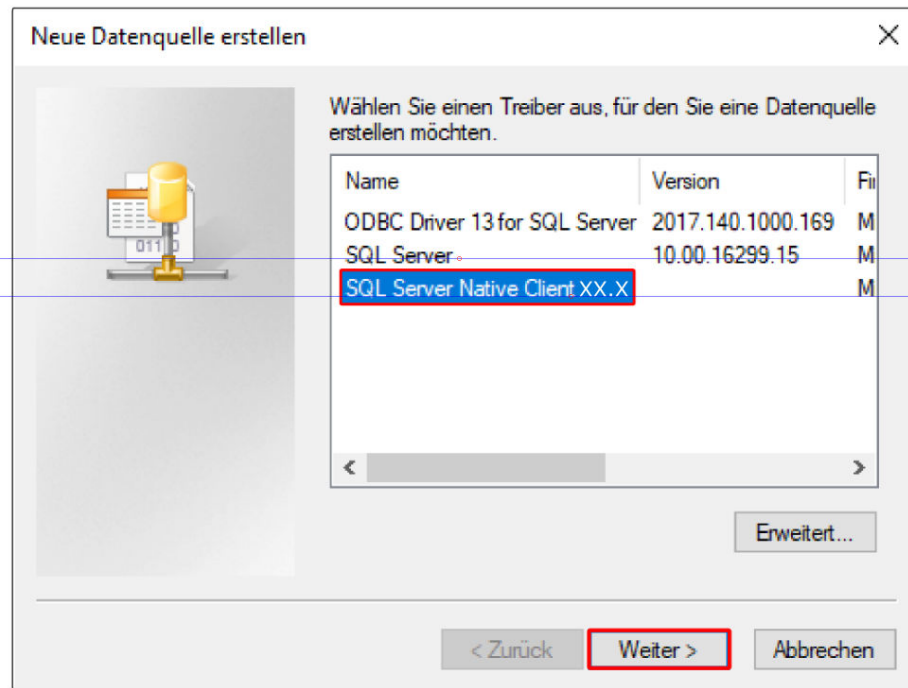
NOTE

If the permissions were adapted for the database administrator when you created the macro database as a client application, the following tasks must be performed on the database administrator's system.

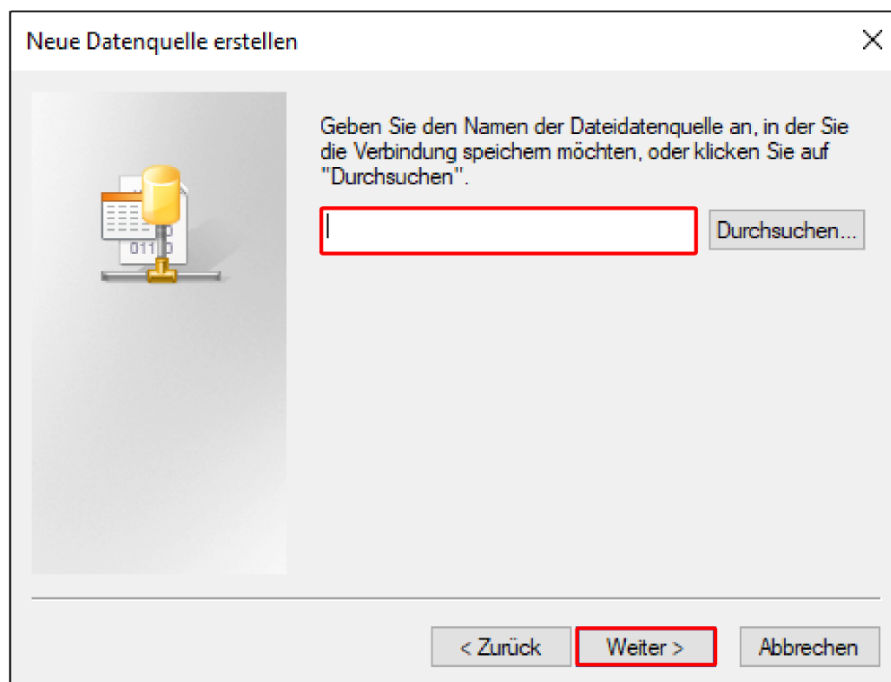
1. Click the magnifying glass icon on the Windows taskbar, enter **ODBC** and select **Set up ODBC data sources (64-Bit)**.
2. Start the software, switch to the **File DSN** tab and click **Add**.



3. In the next dialogue, always select the highest available version of the SQL Server Native Client from the list of available drivers and click **Next**.

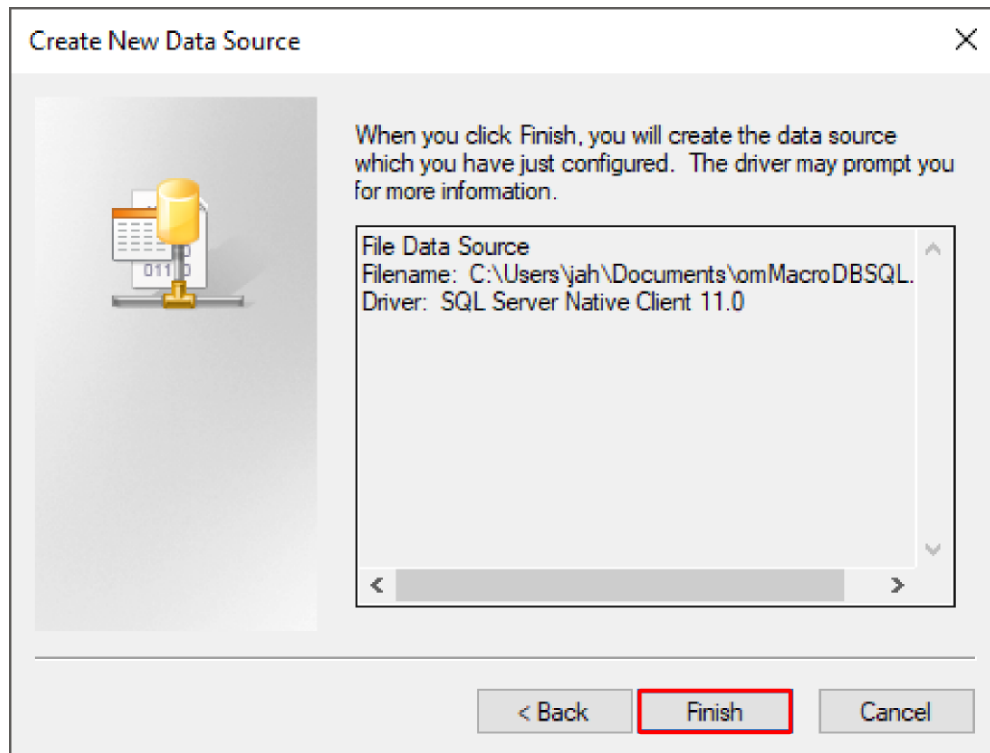


- Specify a name and the storage location for the *.dsn file and click **Next**.

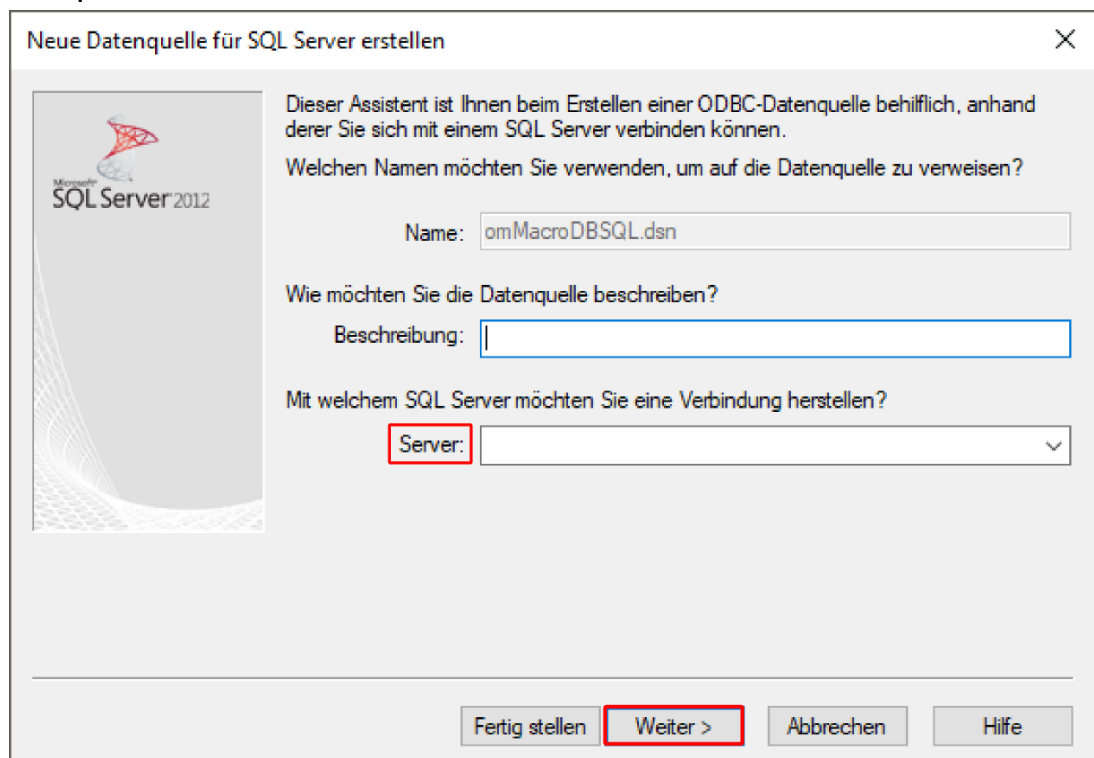


- Then click **Finish**.
By default, the *.dsn file is saved in the following directory:

C:\Users\[Benutzername]\Documents\



6. The **Create a New Data Source to SQL Server** dialogue opens and the name of the previously created *.dsn file is displayed. If you choose, you can provide a description of your data source under **Description**. Select the name of the SQL Server under **Server** and click **Next**.



7. Then select **With SQL Server authentication using a login ID and password entered by the user**, enter the login details and click **Next**.

Microsoft SQL Server DSN Konfiguration

Wie soll SQL Server die Authentizität der Anmelde-ID bestätigen?

☐ Mit integrierter Windows NT-Authentifizierung.
SPN (optional):

☐ Mit integrierter Active Directory-Authentifizierung.

☒ Mit SQL Server-Authentifizierung anhand der vom Benutzer eingegebenen Anmelde-ID und des Kennworts.

☐ Mit Active Directory-Kennwortauthentifizierung über eine vom Benutzer eingegebene Anmelde-ID und ein Kennwort.

☐ Mit interaktiver Active Directory-Authentifizierung anhand einer vom Benutzer eingegebenen Anmelde-ID.

☐ Authentifizierung mit einer verwalteten Azure-Dienstidentität

☐ Mit Authentifizierung über Azure-Dienstprinzipal.

Anmelde-ID:

Kennwort:

< Zurück Weiter > Abbrechen Hilfe

8. On the following dialogue page, select the **Change the default database to:** checkbox and enter the name of the database previously created in step A. Then click **Next**.

Microsoft SQL Server DSN Konfiguration

☒ Die Standarddatenbank ändern auf:
master

Spiegelserver:

SPN für Spiegelserver (optional):

☐ Datenbank-Dateinamen anfügen:

☒ ANSI-Anführungszeichen verwenden.

☒ ANSI-Nullen, -Auffüllungen und -Warnungen verwenden.

Anwendungszweck:
READWRITE

☐ Multisubnetz-Failover

☒ Transparente Netzwerk-IP-Adressauflösung.

☐ Spaltenverschlüsselung.

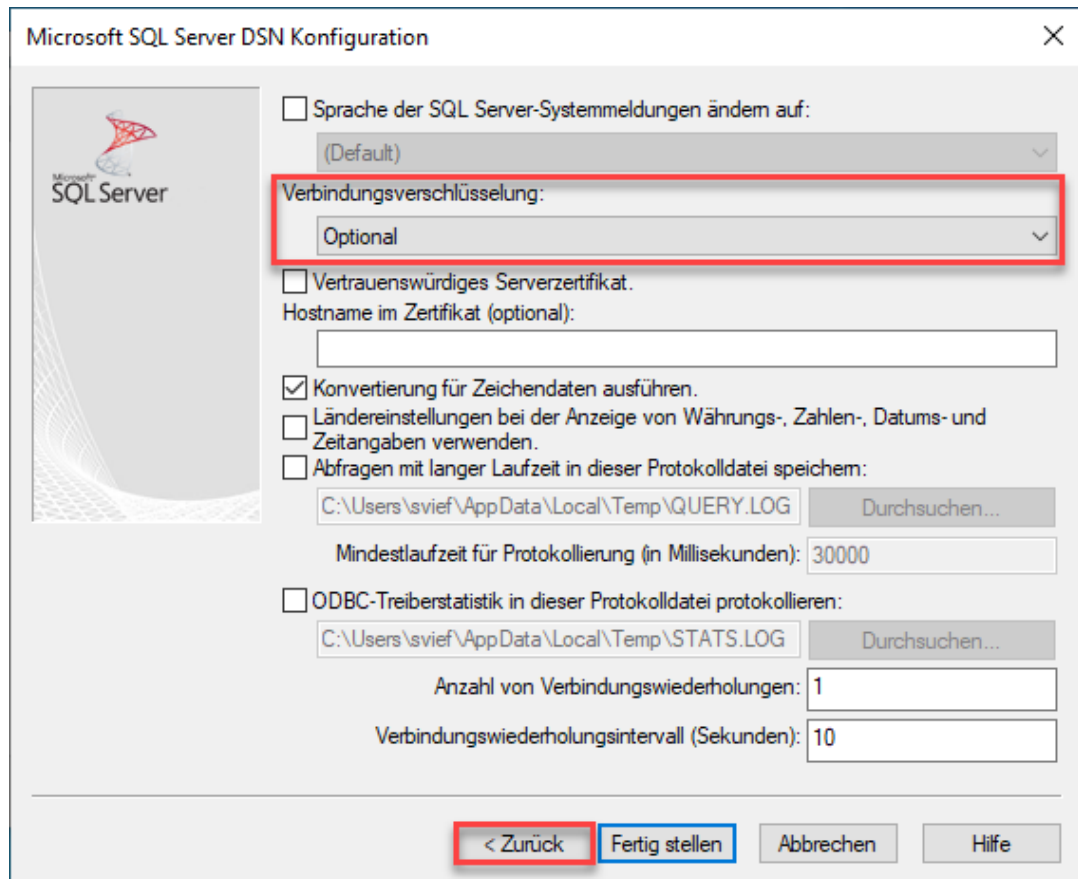
Informationen zu Enclave-Nachweis:

Keystore-Konfiguration...

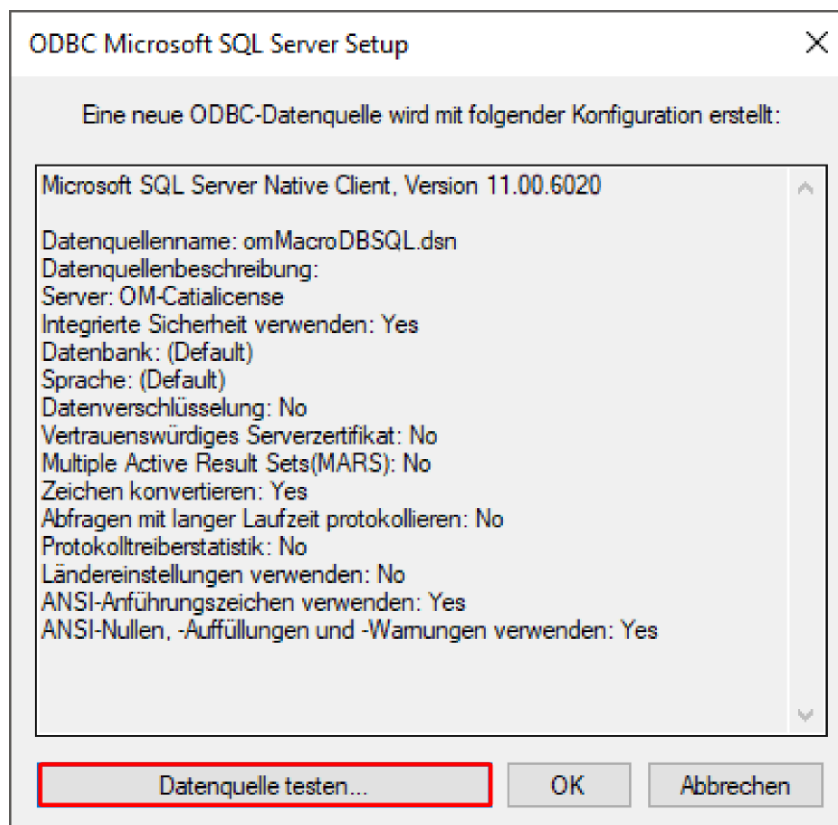
☐ Verwenden Sie die FMTONLY-Metadatenmittlung.

< Zurück Weiter > Abbrechen Hilfe

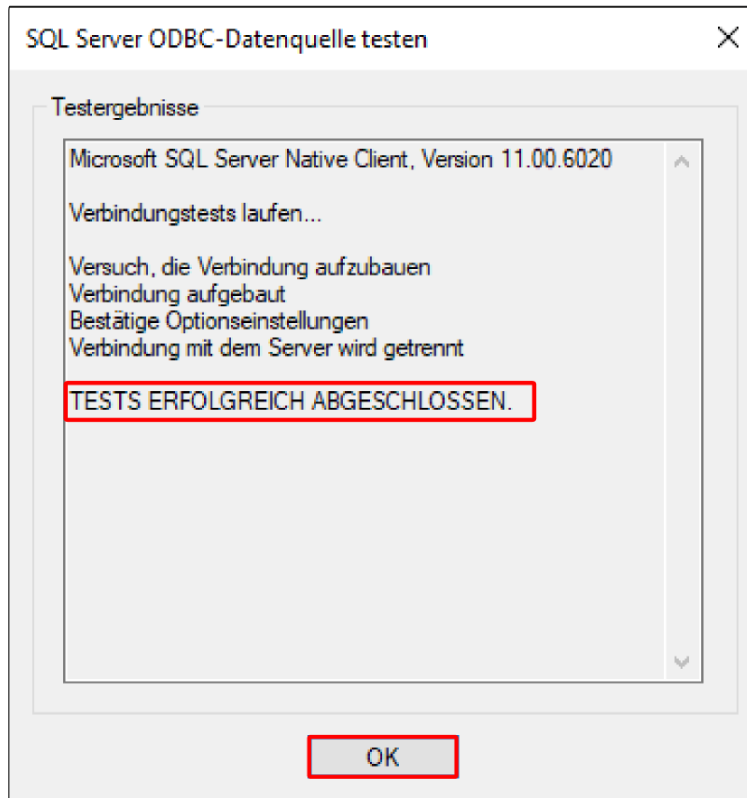
9. Click **Finish** on the following dialogue page.



10. A summary of all the information is displayed on the last dialogue page. Click **Test Data Source** to test the connection between the macro database and SQL Server.



11. If the **TESTS COMPLETED SUCCESSFULLY!** message appears, the connection is functioning correctly. Click **OK** to close the dialogue.



The *.dsn file should now contain the following information:

```
DRIVER=SQL Server Native Client 11.0 UID=[your login name]  
PWD=[your password]  
DATABASE=[your database name]  
WSID=[your client computer name]  
APP=Microsoft® Windows® Operating System  
SERVER=[your server computer name]  
Description=[optional - your database description]
```



NOTE

If the password entry is not present, add the password (PWD) manually to the file. To do this, select the file and then select **Open with**. Choose a standard text editor for editing and save the *.dsn file.



4. Exporting macros from the previous *hyperMILL* version

Before you can import macros from a previous version of the database, you must export this version of the database in the *.omx format.

1. To do this, start the previous version of *hyperMILL* and open the macro database. Use the **View macro database** function on the shortcut menu of the *hyperMILL* macro browser.
2. Click **Export all** and specify the storage location for the *.omx file.



5. Opening the SQL database with *hyperMILL* and importing macros

1. Start the current version of *hyperMILL* and open the *hyperMILL* settings (**hyperMILL** → **Setup** → **Settings**). Click **Database** → **Database Settings Wizard / manage database projects**. The *hyperMILL* SettingsWizard opens.
2. Select **Change** under Macro database and choose **SQL-Server database (*.dsn)** as the format in the selection dialogue. Under **File name**, select the name of the previously created database (*.dsn). Close the *hyperMILL* Settings Wizard by clicking **OK**.
You have now linked the newly created database and can import your macros from an older version of the database into it.
3. Open the new database that is still 'empty' using the **View macro database** shortcut function of the *hyperMILL* macro browser. Click **Import** to import your macros. Select **Macro Exchange File (*.omx)** as the format (**Type**) and select the storage location of the previously exported *.omx file under **Path**.
4. Click **OK** to close the dialogue.
You have now successfully imported your macros from your previous database into the new version of the database.



6. Update an existing SQL macro database

Before you can import macros from a previous version of the database, you must export this version of the database in the * .omx format.

1. Start the previous version of *hyperMILL* and open the macro database. Use the View macro database function on the shortcut menu of the *hyperMILL* macro browser.
2. Click **Export all** and specify the storage location for the * .omx file.
3. Create a new SQL database as described in section 1.
4. Import your macros into the new created SQL database as described in the previous section 4.