

# Microsoft SQL Server 2016

## Installation Guide

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# Microsoft SQL Server 2016

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# 1 Introduction

The HELiOS - PDM - Module (document management, component management, Workflow, etc.) are based on a relational database. Before start of HELiOS, the Microsoft SQL database control system must be installed on the server, a database imported and the clients ODBC connection has to be established.

The following installation instructions refer to the installation of the English Version of SQL Server 2016 Standard Edition. Other editions may require minor variations in the installation process.

For detailed information about Microsoft SQL Server 2016, please refer to the Microsoft documentation, or the Help on the Microsoft website:

<https://msdn.microsoft.com/en-gb/library/ms143531.aspx>

Please note that the Microsoft SQL Server 2016 can only be used with HELiOS 2016 (SP1) or higher.

## Please note:

- If you are working with HELiOS and ordered the SQL Server software via ISD, please only use the DVD or ISO file supplied by ISD for the installation of the SQL Server.
- If you want to install a German SQL Server on an operating system with a different language, please switch Language and Region to DE/DE; otherwise, the setup routine will not start. You can switch back again after installation. (The same applies to the combinations German/Switzerland and German/Austria)
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## 2 Installation of the Database Server

### 2.1 Installation of the Database Module

Shortly after starting the setup, the installation screen will appear as shown below:

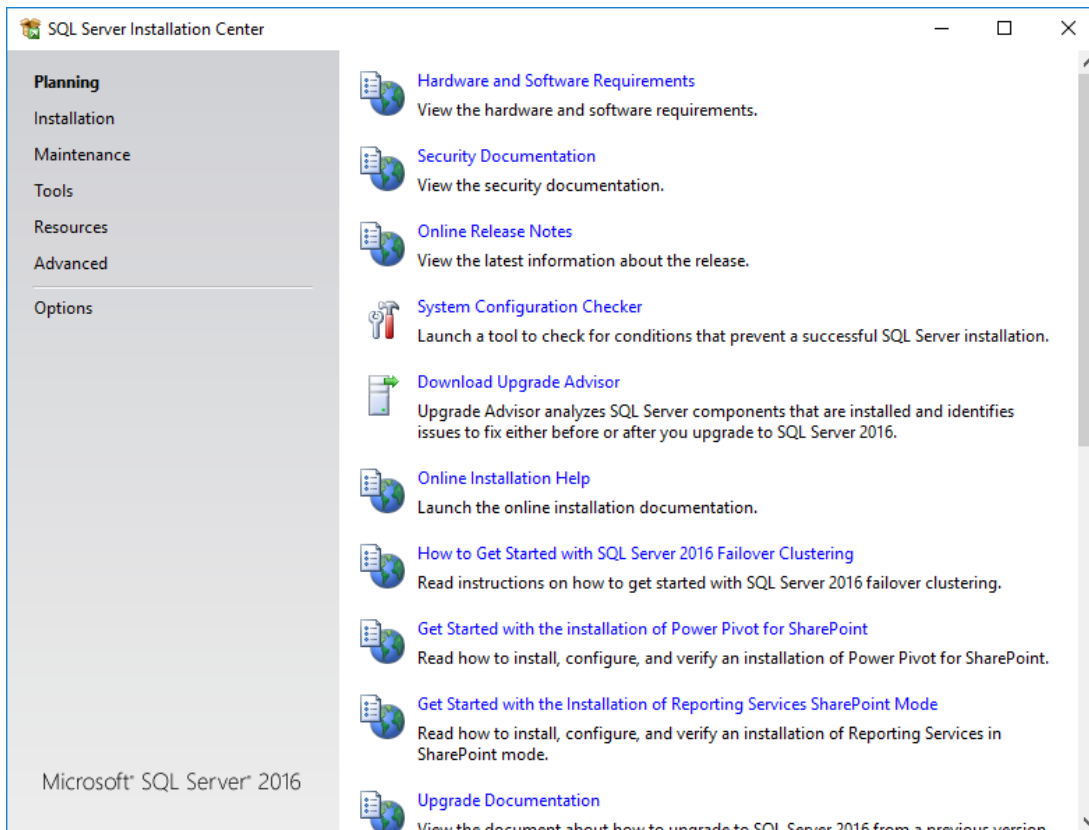


Image1: Start page of SQL Server Installation Centre

On the left hand side of the window, select the **Installation** menu item.

Then, on the right side of the screen, click **New SQL Server stand-alone installation** or **add features to an existing installation**.

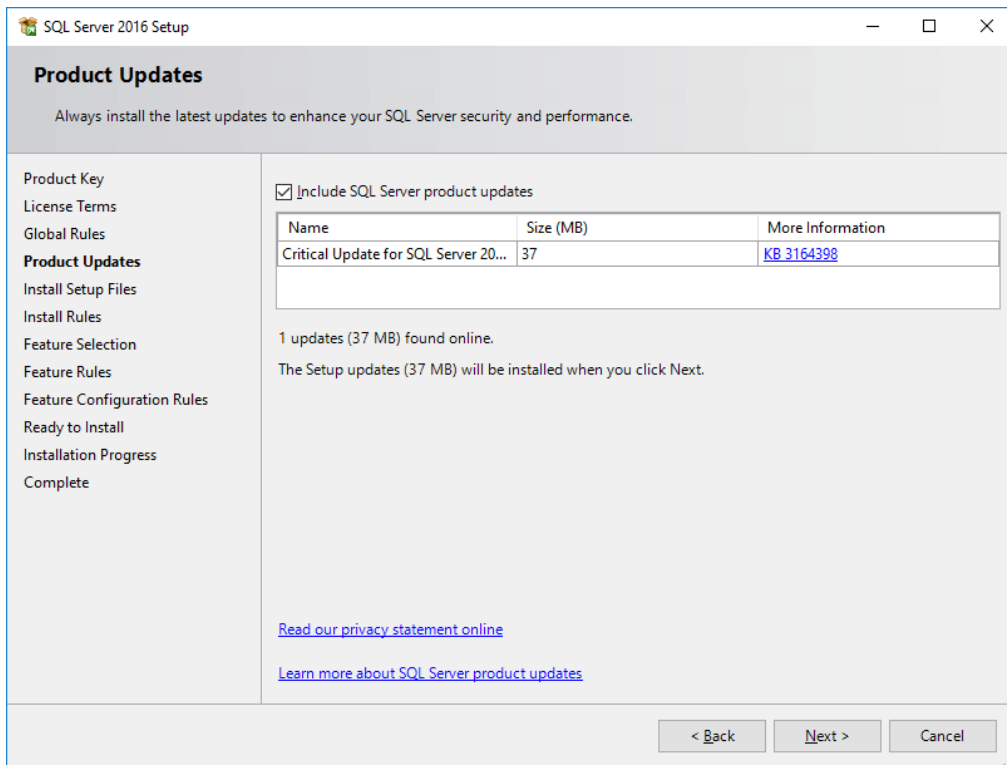


Image 2: Settings for product updates

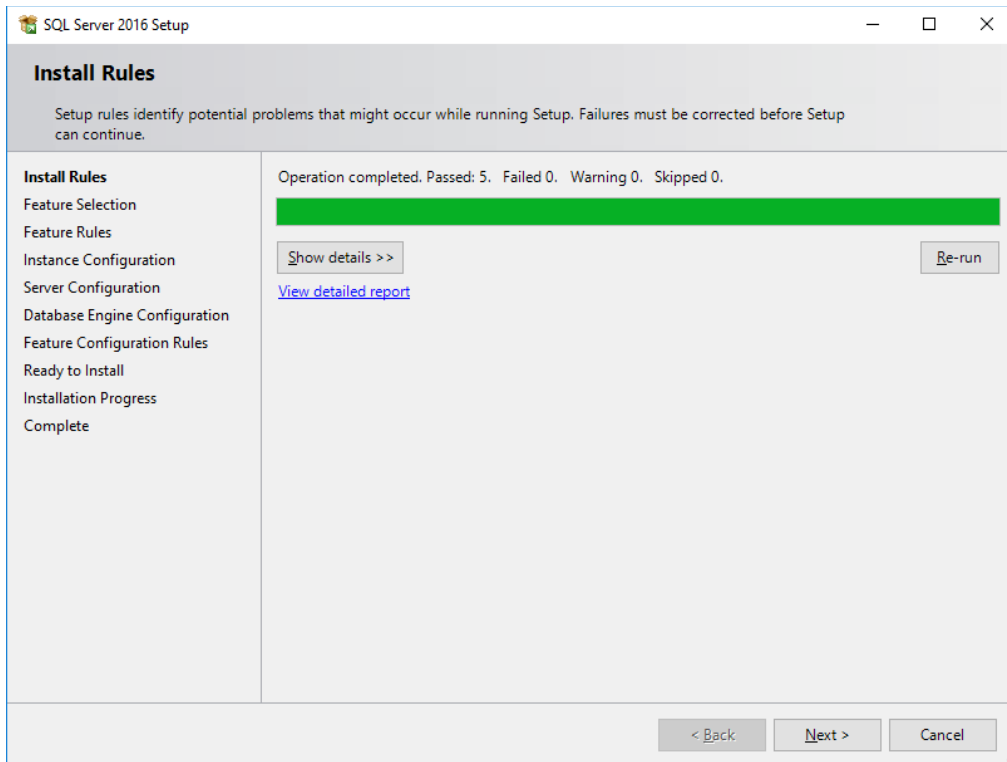


Image 3: Install rules

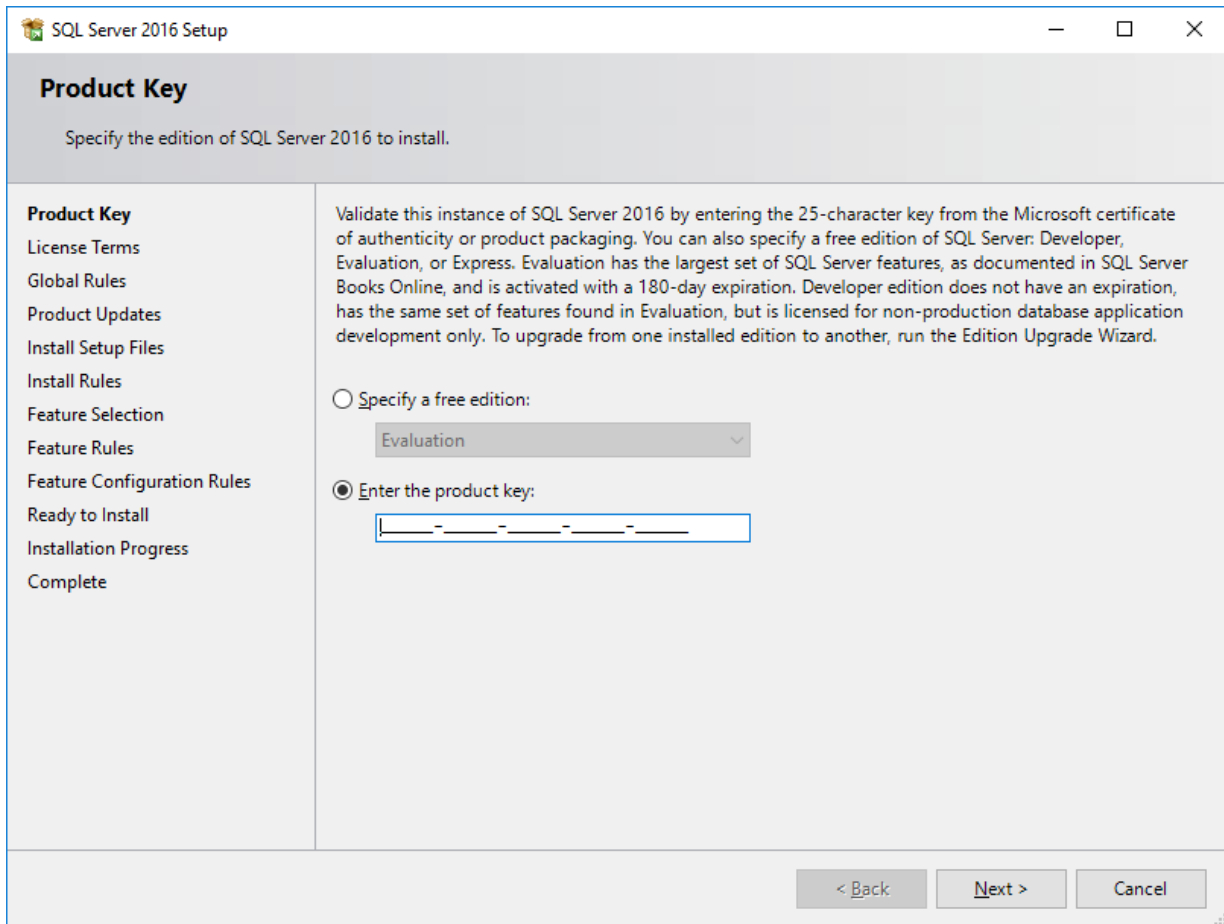


Image 4: Enter Product Key

Accept the license terms and click **Next**.

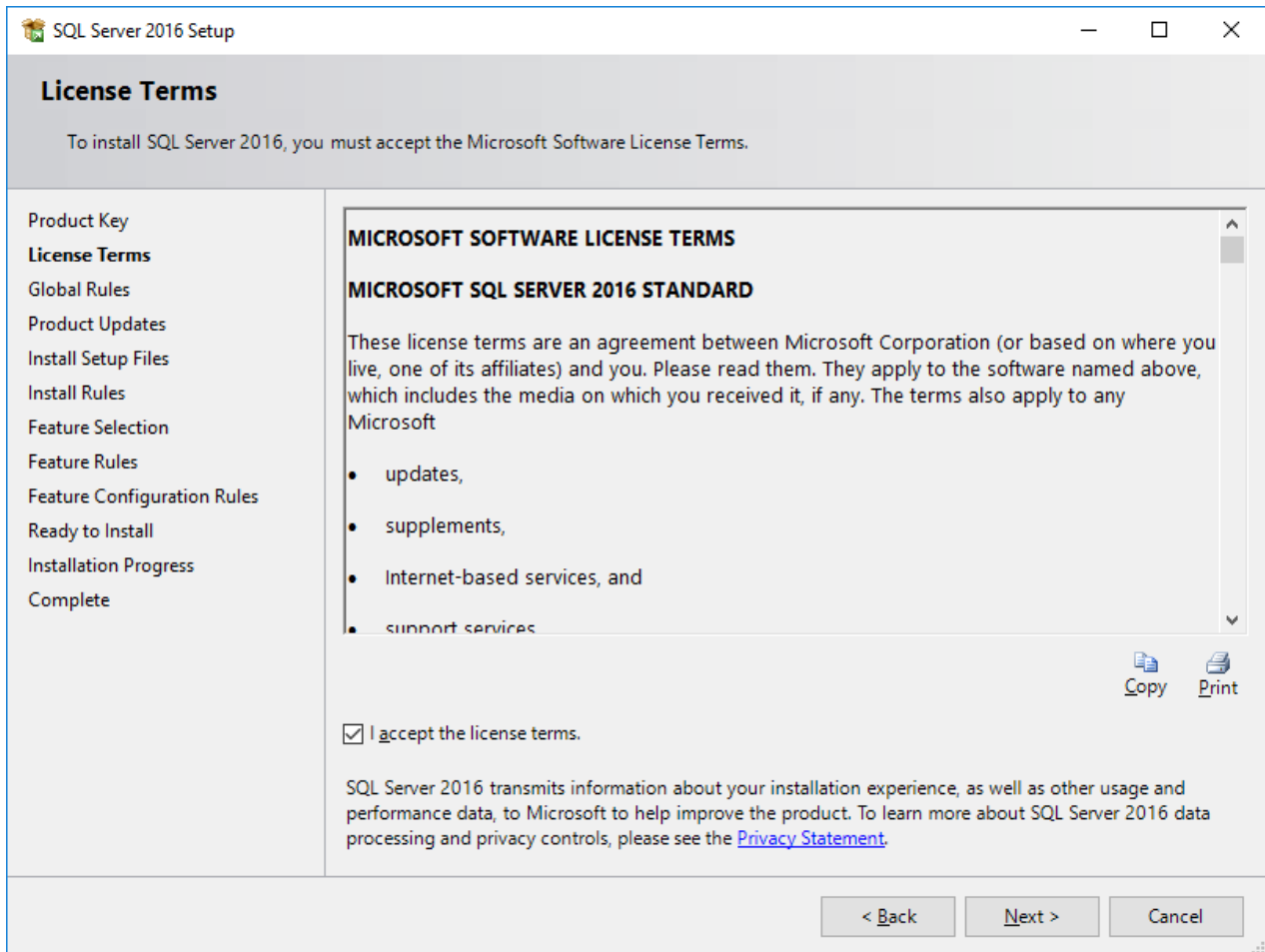


Image 5: Accept Licence Terms

Select the highlighted features:

- Database Engine Services
- Documentation Components

Confirm the selection and click **Next**.

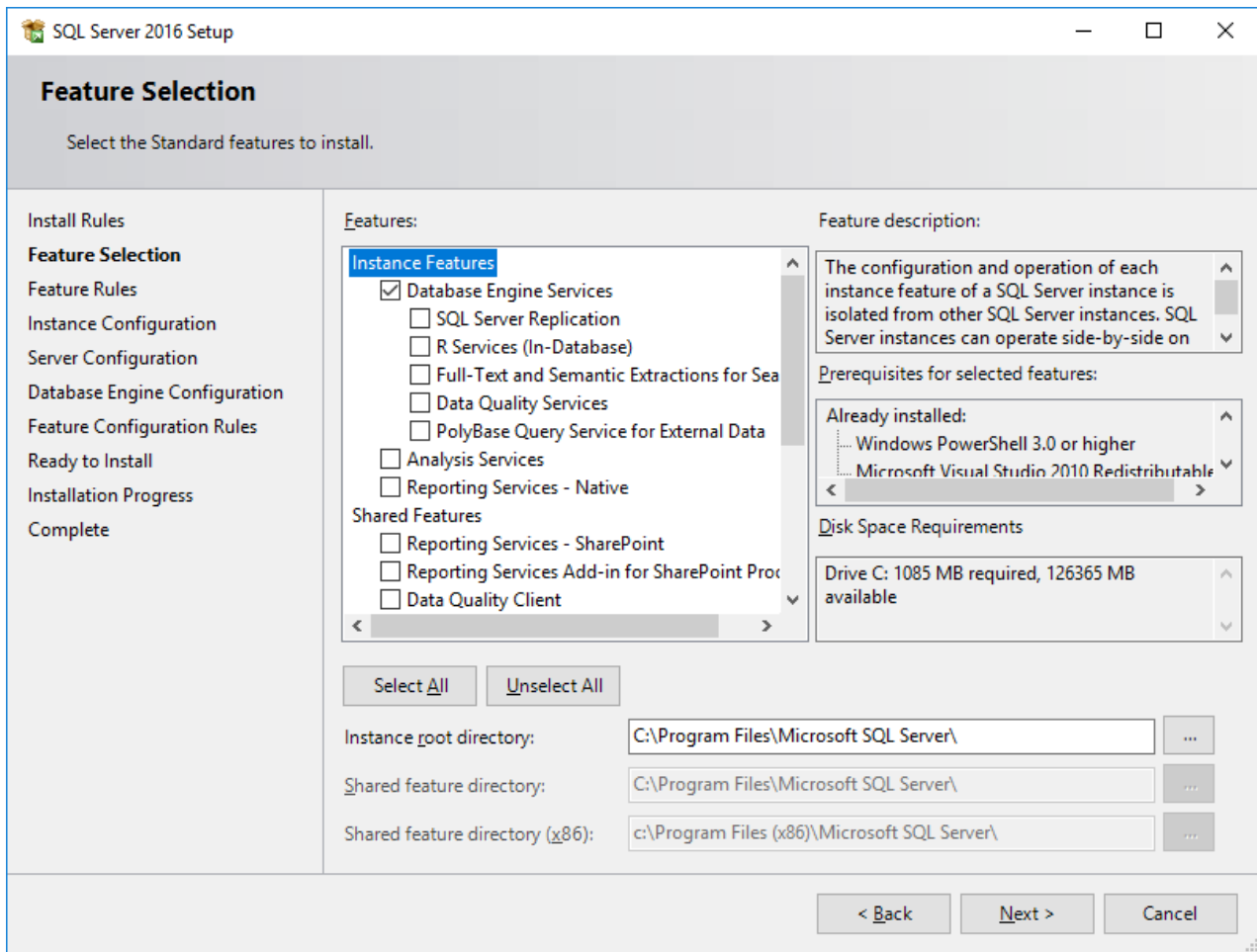


Image 6: Feature selection



In the dialogue shown below, specify the name of the SQL Server instance. In this manual, the **Default instance** is used.

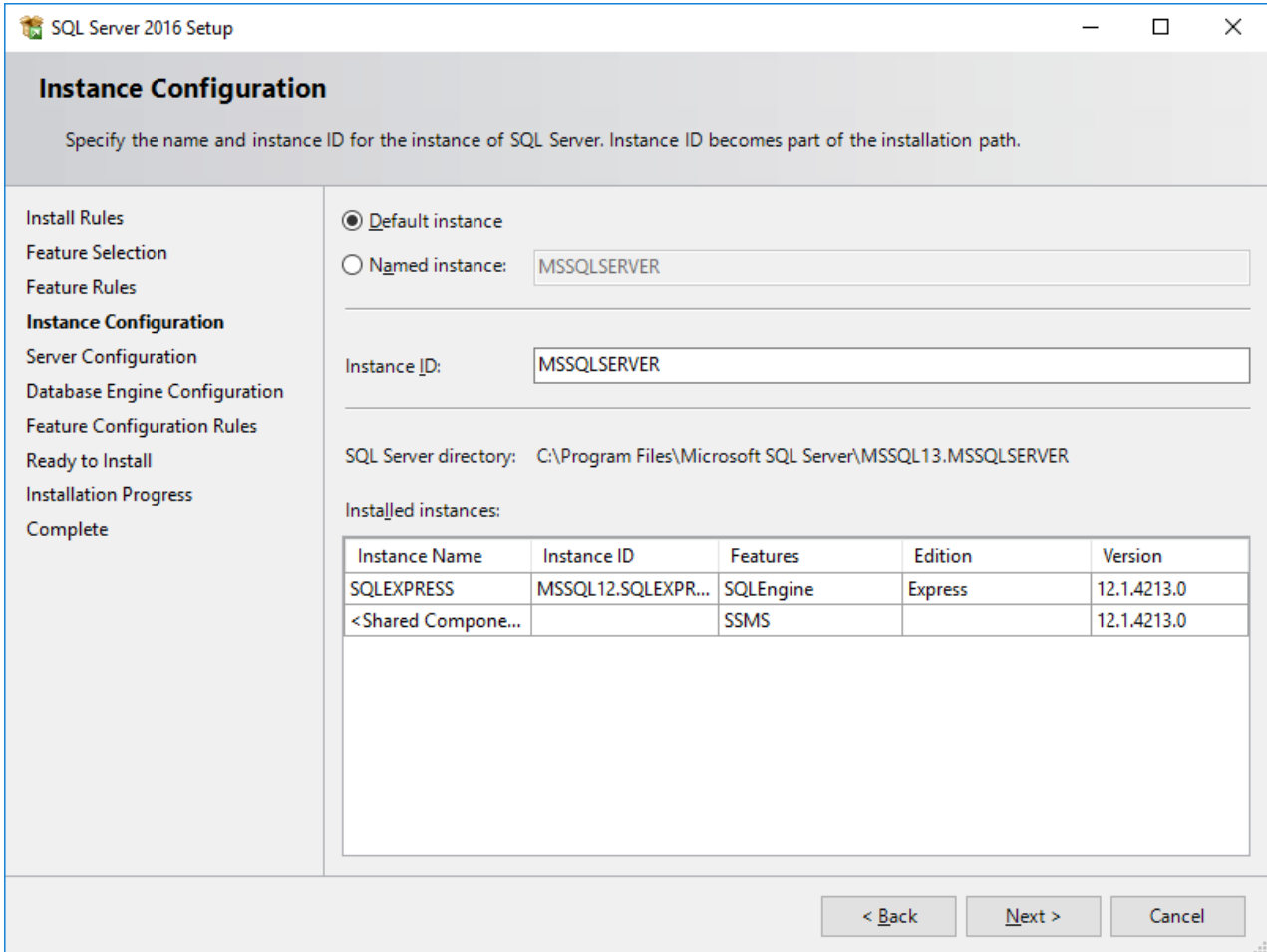


Image 7: Instance Configuration

Then, define under which service accounts the services are to be launched.

Apply the settings shown below and click **Next**.

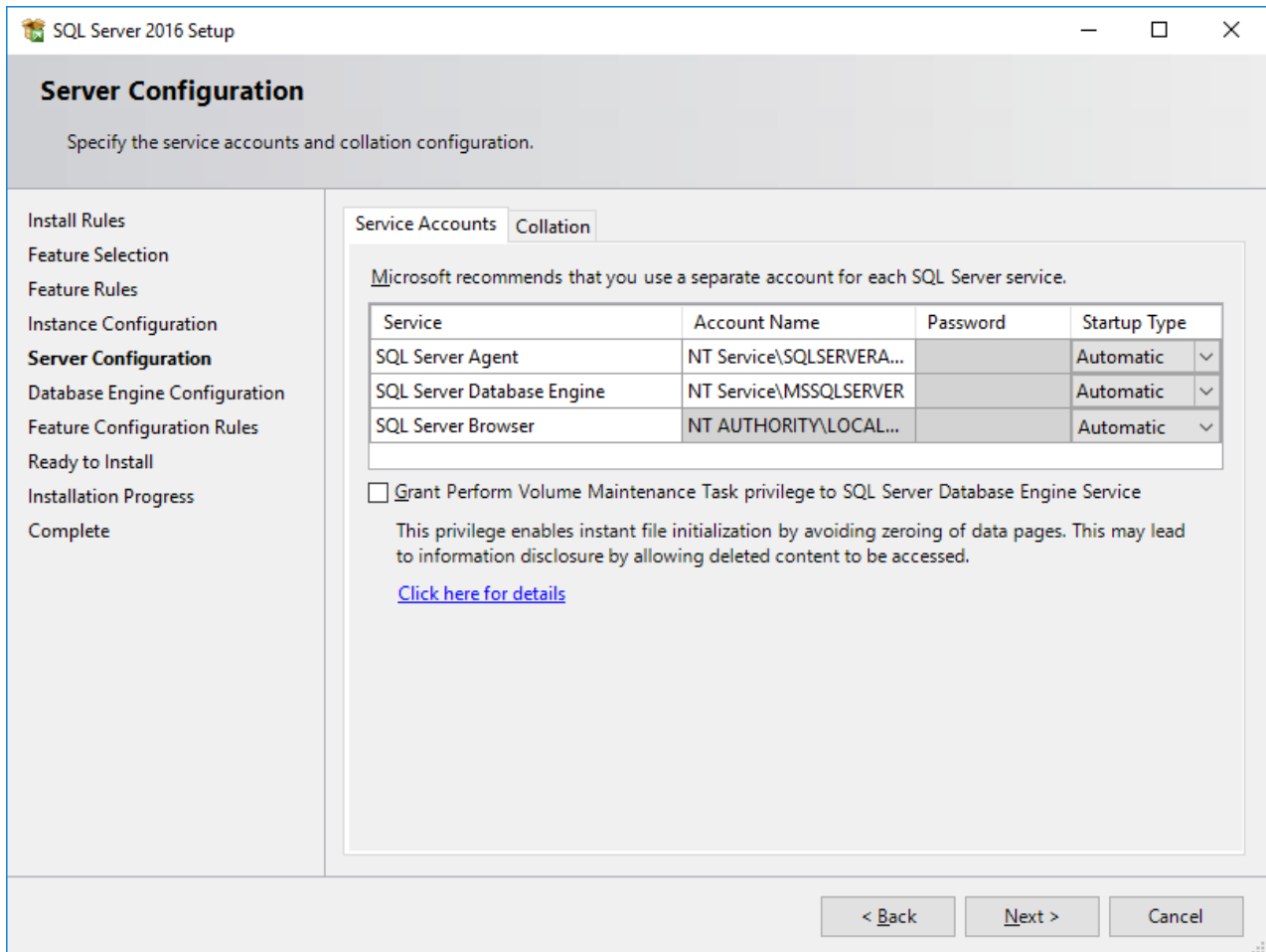


Image 8: Service accounts: Startup Type is set to “Automatic”

After clicking **Next** the authentication mode shall be specified. Select the **Mixed mode**. Enter the password for the internal database administrator (**SA**). In the **Specify SQL Server administrators** field, enter the current user and the group of Windows – Administrators (will be added automatically as the case may be).

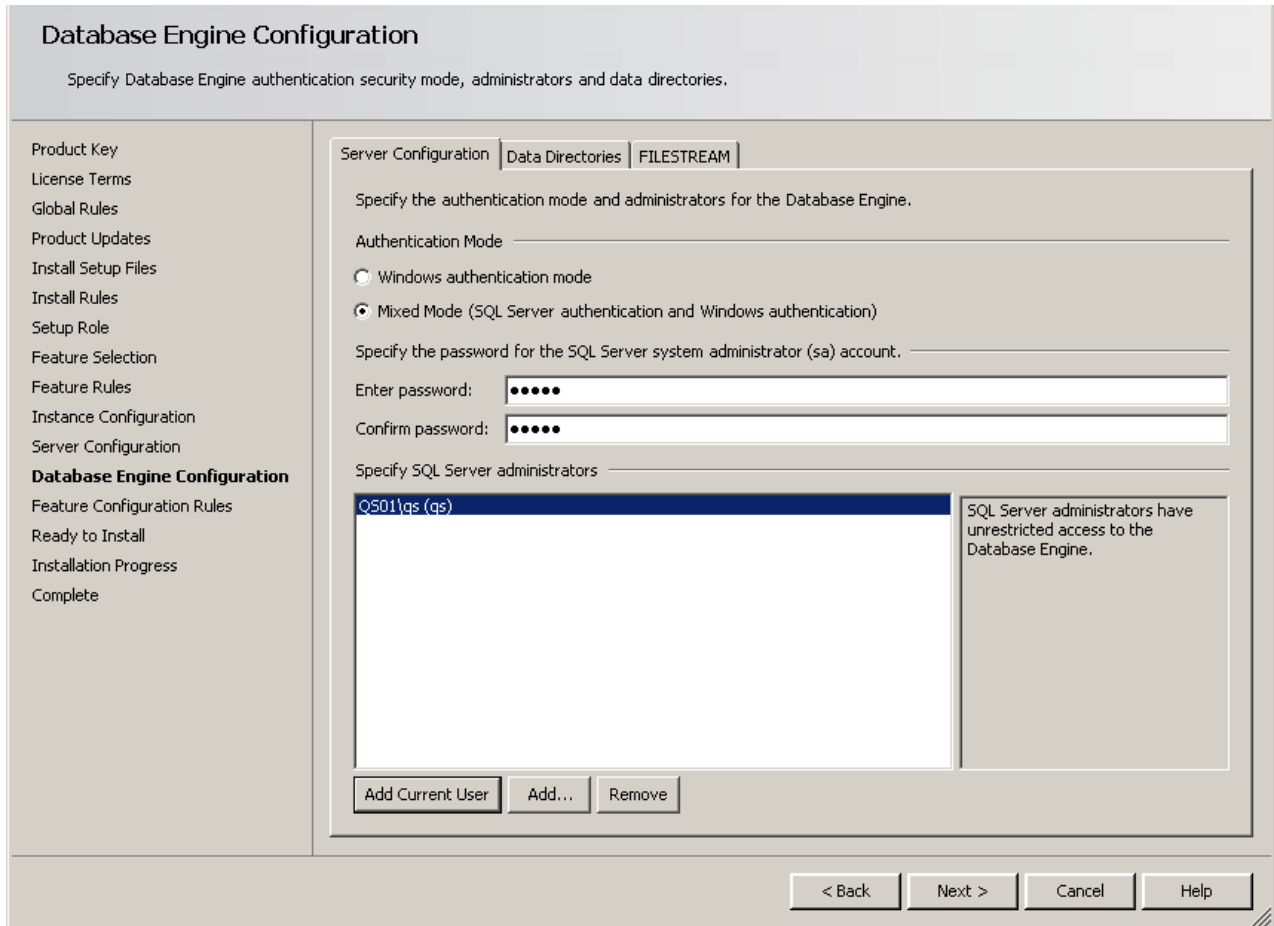


Image 9: Authentication mode

Now an overview of all settings which made by the user is shown. Click **Install** to start the installation of the SQL Server 2016.

After successful installation, additional information and the status of functions will be shown.

Click **Close** to finalize the installation.

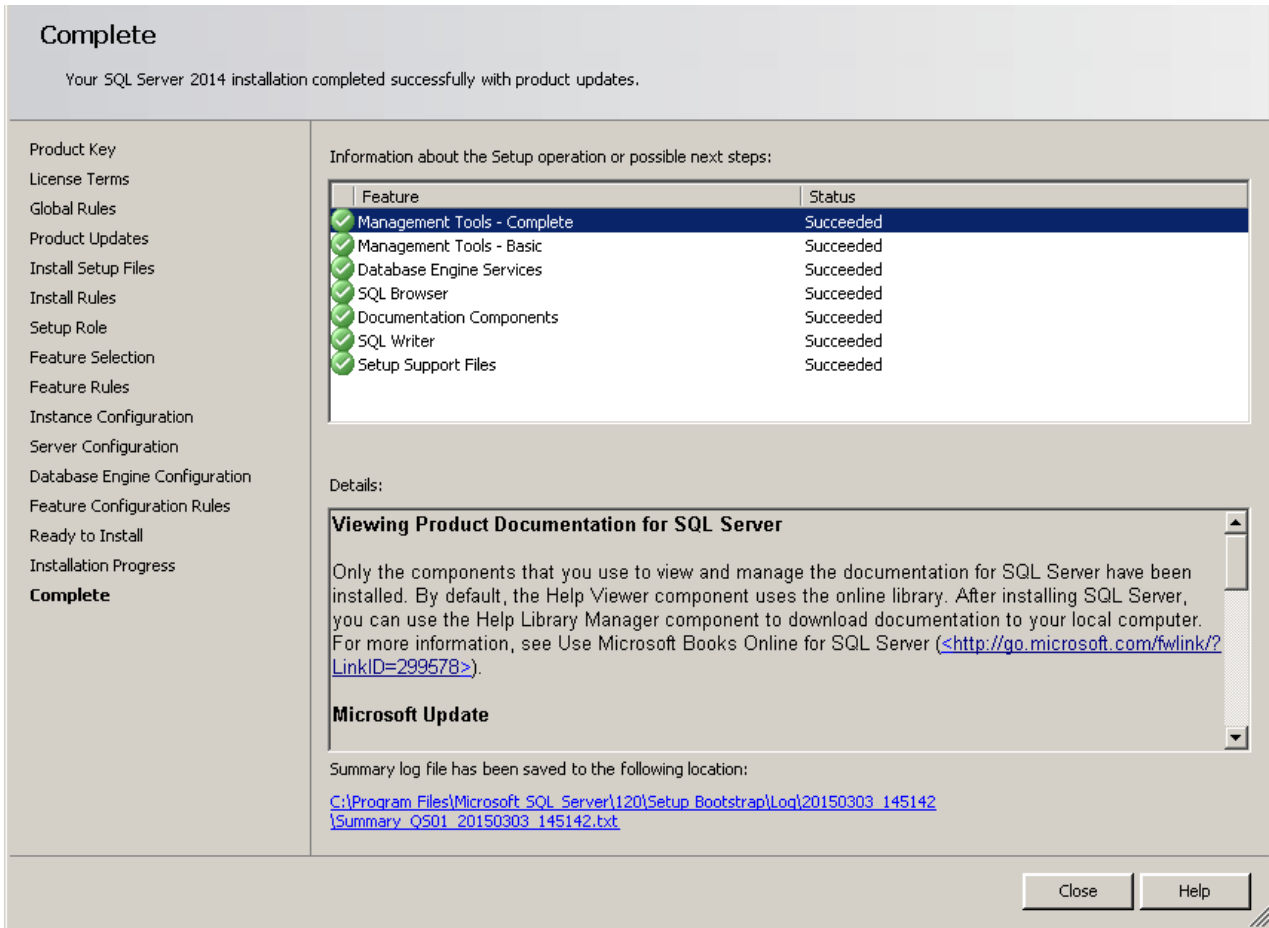


Image 10: Finalise installation

To configure the SQL Server 2016 you need the **SQL Server Management Studio** tool.

You can download the tool directly from the Microsoft website:

<https://msdn.microsoft.com/en-us/library/mt238290.aspx>

## 3 Setting Up the SQL Server 2014

### 3.1 Setting Up the Conditions for Database Import

To configure the SQL database, click the **Start** icon on the Windows task bar and select **All Programs > Microsoft SQL Server 2016 > SQL Server Management Studio** (it might have to be installed separately).

In the login window, specify the **Server name** in the same-named field. Enter **SQL Server Authentication** in the **Authentication** field, **sa** in the **Login** field and the password you specified during installation in the **Password** field. Click **Connect**.

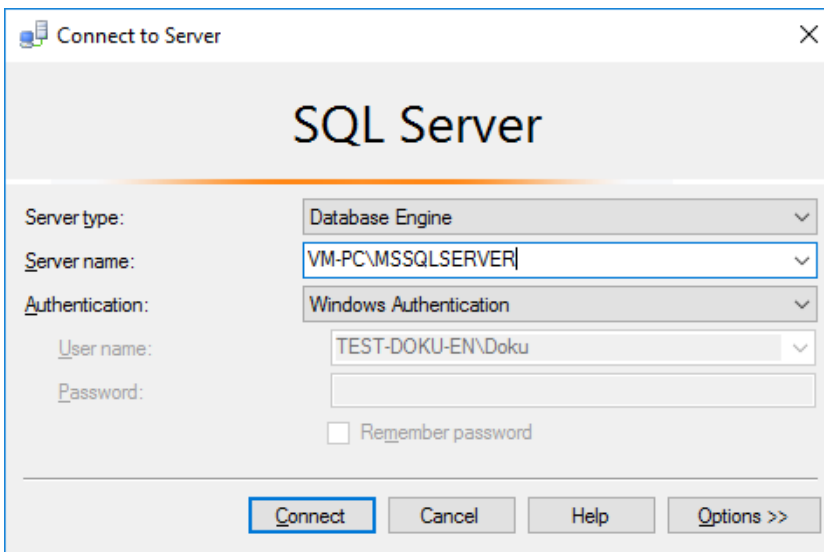


Image 9: Connect in the Management Studio

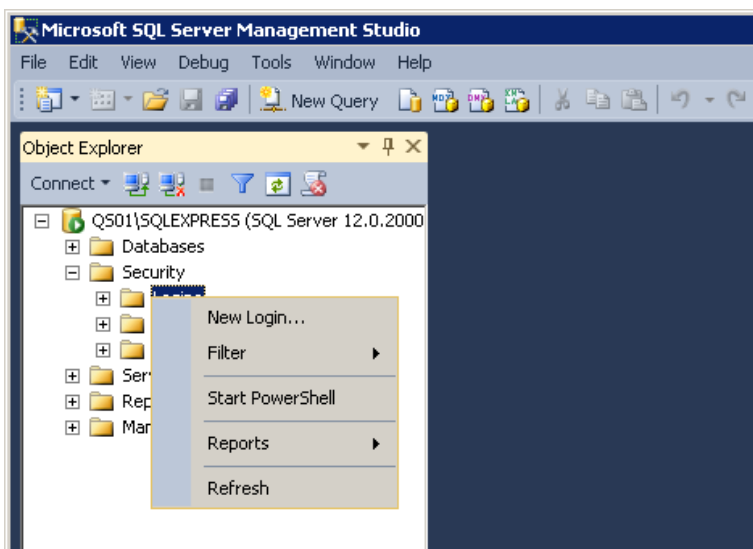


Image 10: Microsoft SQL Server Management Studio

In the left area of the window, expand the folder **Security**, right-click the **Logins** sub-folder and select **New Login** in the context menu.

The following window will be displayed:

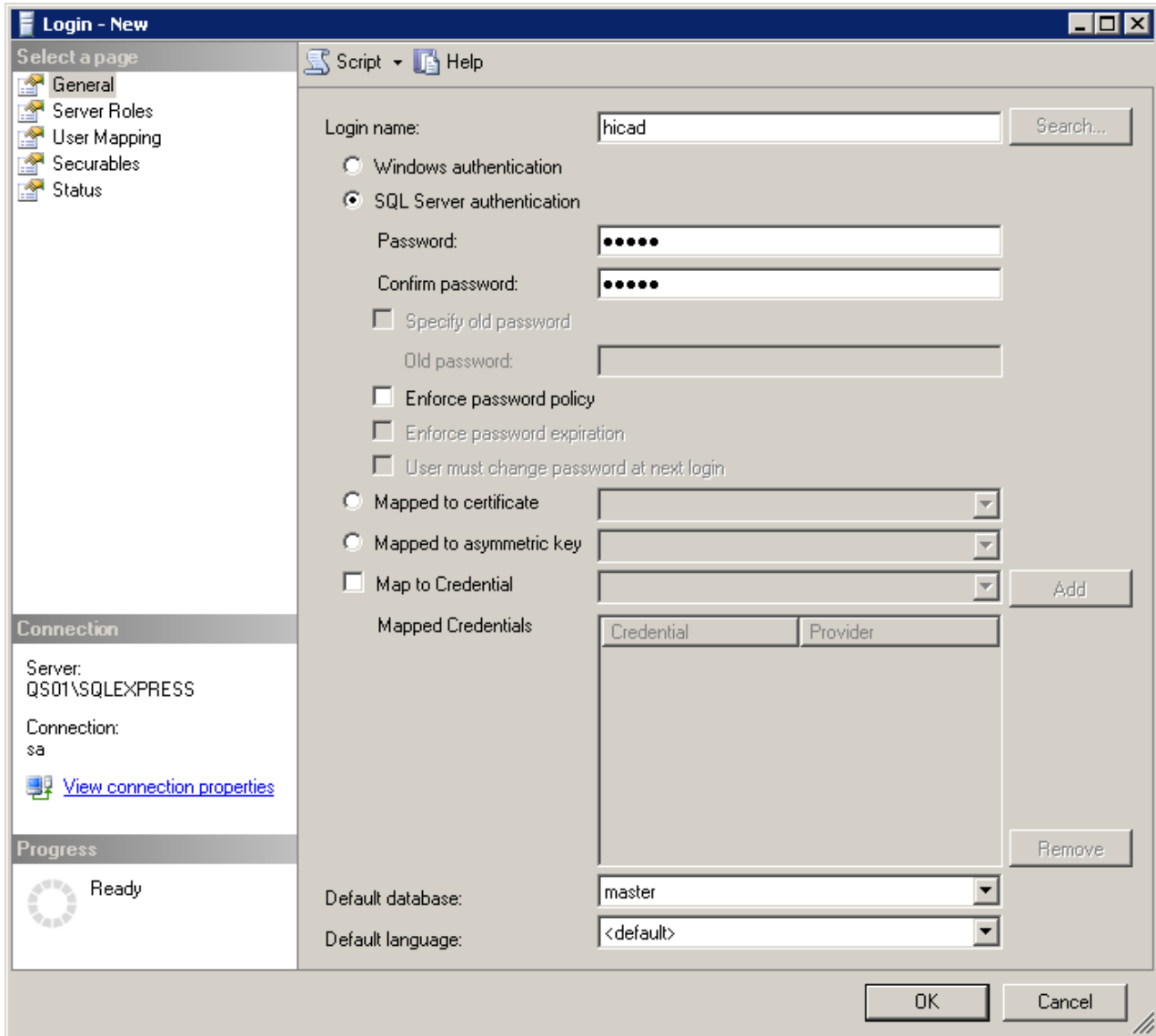


Image 11: Creating the User **hicad**

Enter **hicaid** in the **Login name** field, activate the **SQL Server authentication** option and enter a password. Then, deactivate the **Enforce password policy** option and open the **User Mapping** menu. Activate, as shown in the image below, the model database and enter **hicaid** in the **Default Schema** column. Confirm with **OK**.

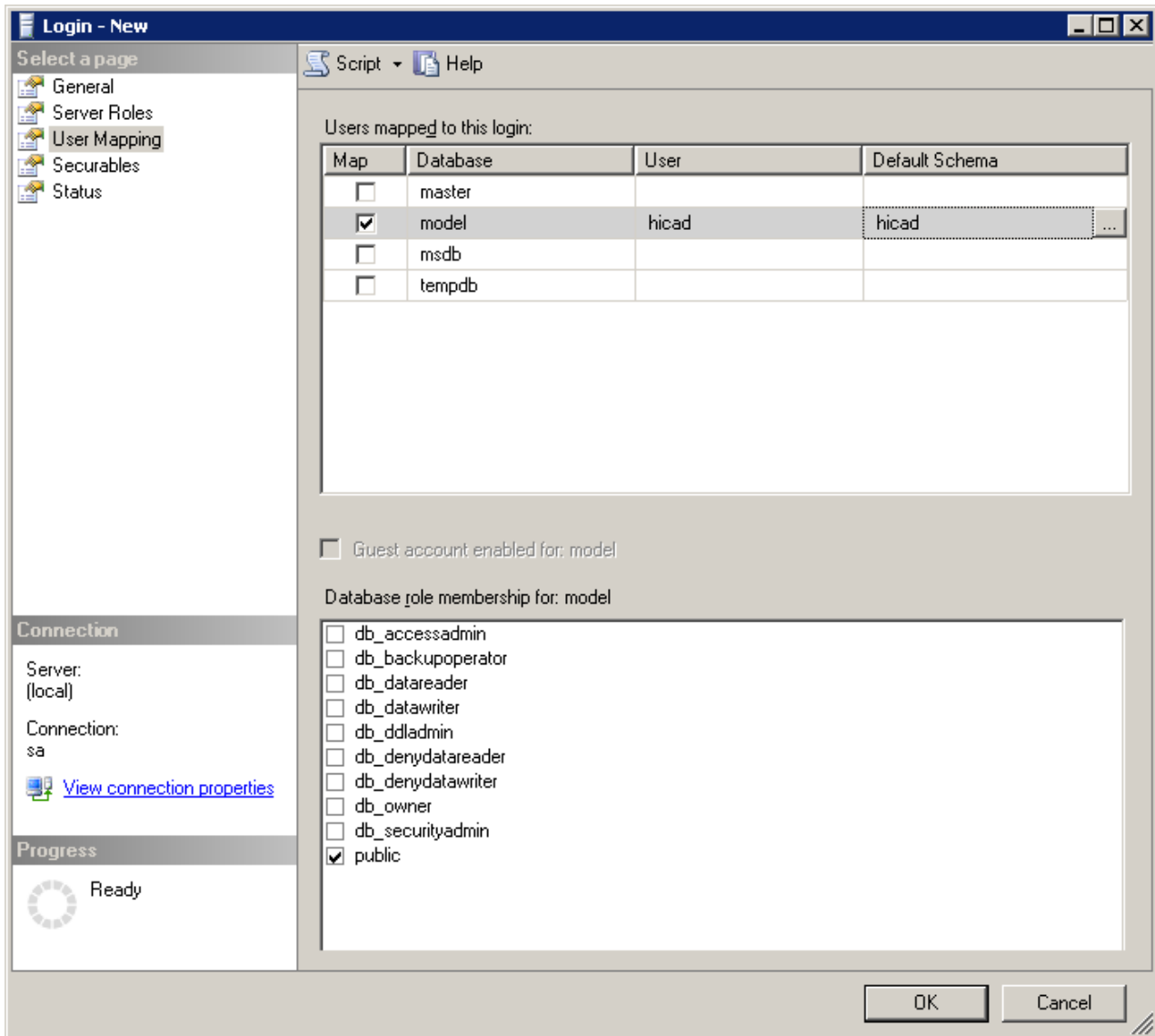


Image 12: User Mapping

## 4 Importing the HELiOS Database

### 4.1 Installing the HELiOS Database Creator

To install the **HELiOS Database Creator** click the same-named button in the HELiOS installation mask:

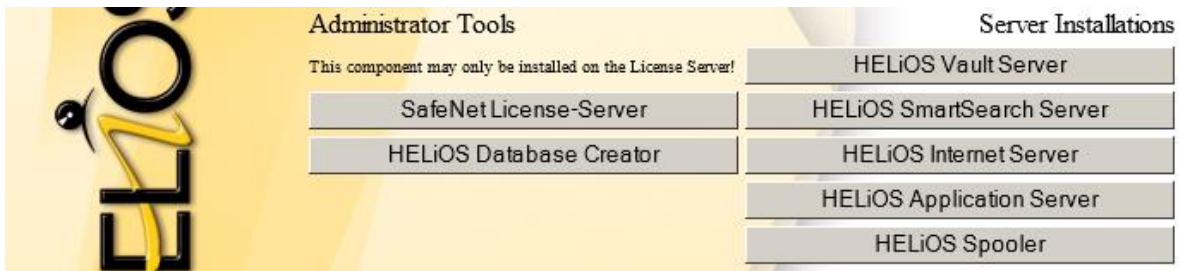


Image 13: Installation DVD with HELiOS Database Creators

The start mask of the setup wizard of the **HELiOS Database Creator** will then be displayed.

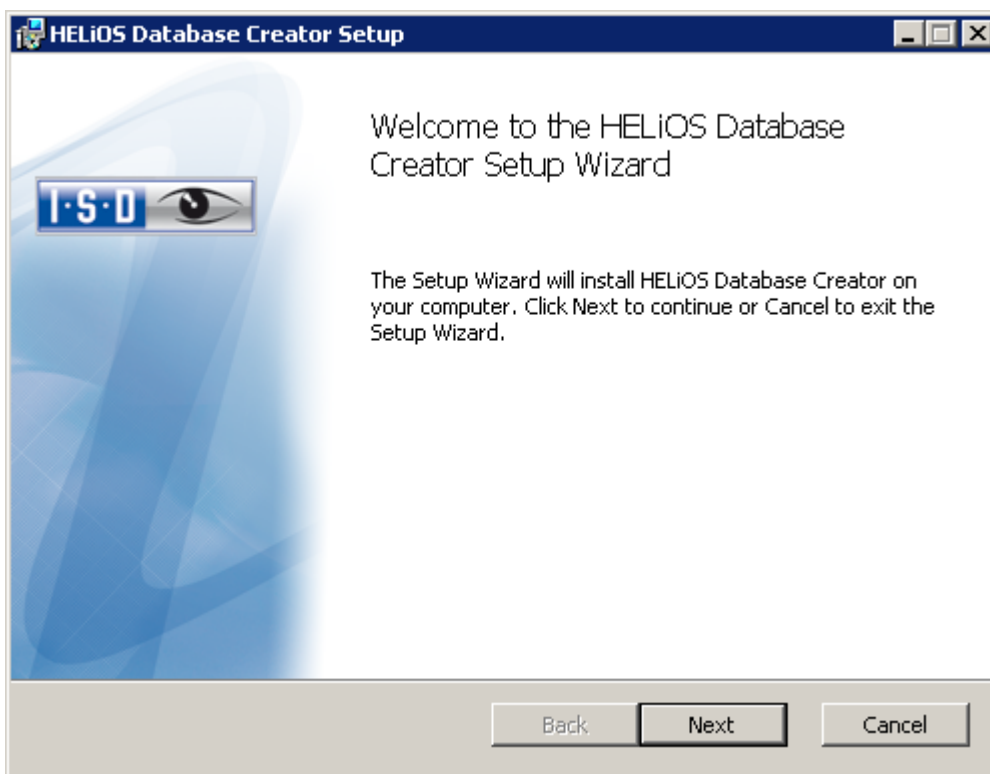


Image 14: Database Creator - Setup wizard

Click **Next**.



Specify an installation directory for the HELIOS Database Creator, and click **Next**.

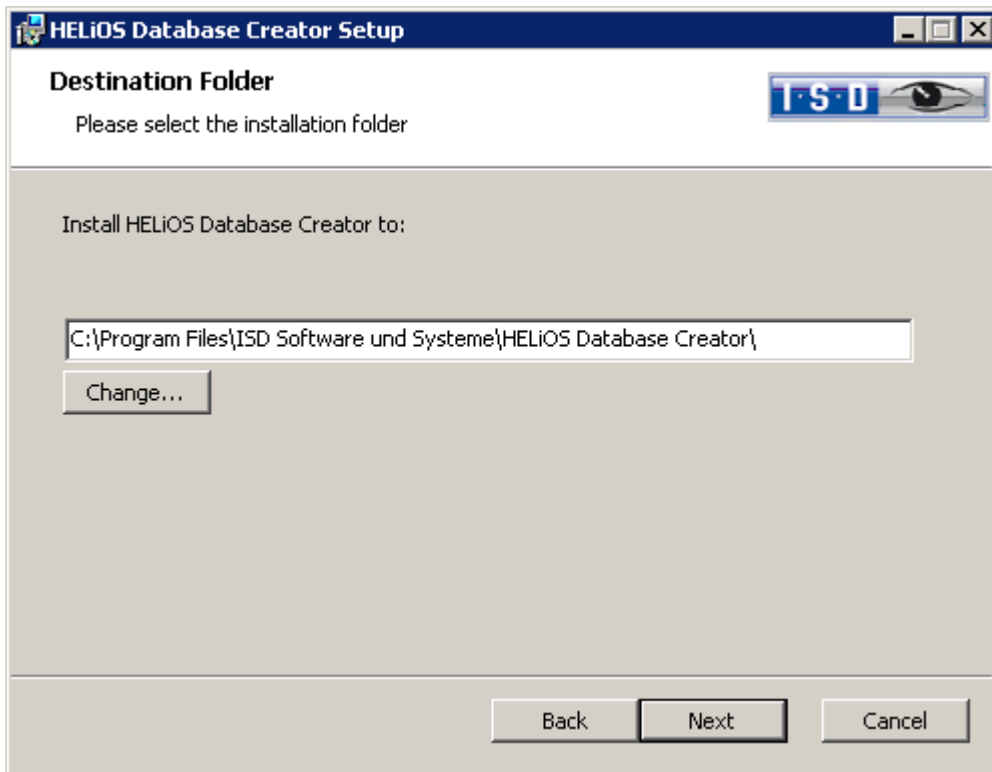


Image 15: Specify target folder

Click **Next**, then click **Install** to start the installation.

Click **Finish** to finalize the installation of the **HELIOS Database Creator**.

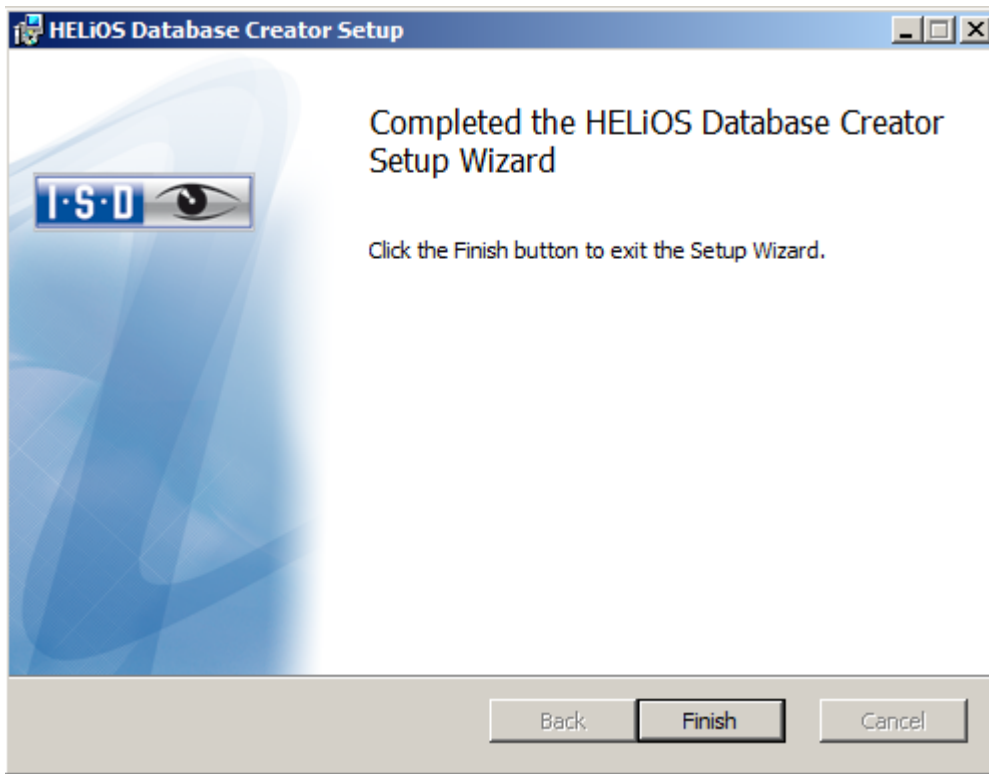


Image 16: Finalise HELIOS Database Creator installation

## 4.2 Importing the Database with the HELiOS Database Creator

Click the **Start** icon on the Windows task bar and select **All Programs > ISD Software und Systeme > HELIOS Administration > HELIOS Database Creator**.

After entering the user data – User: **sa**, the Password and the SQL Server to be connected – you will be logged in.

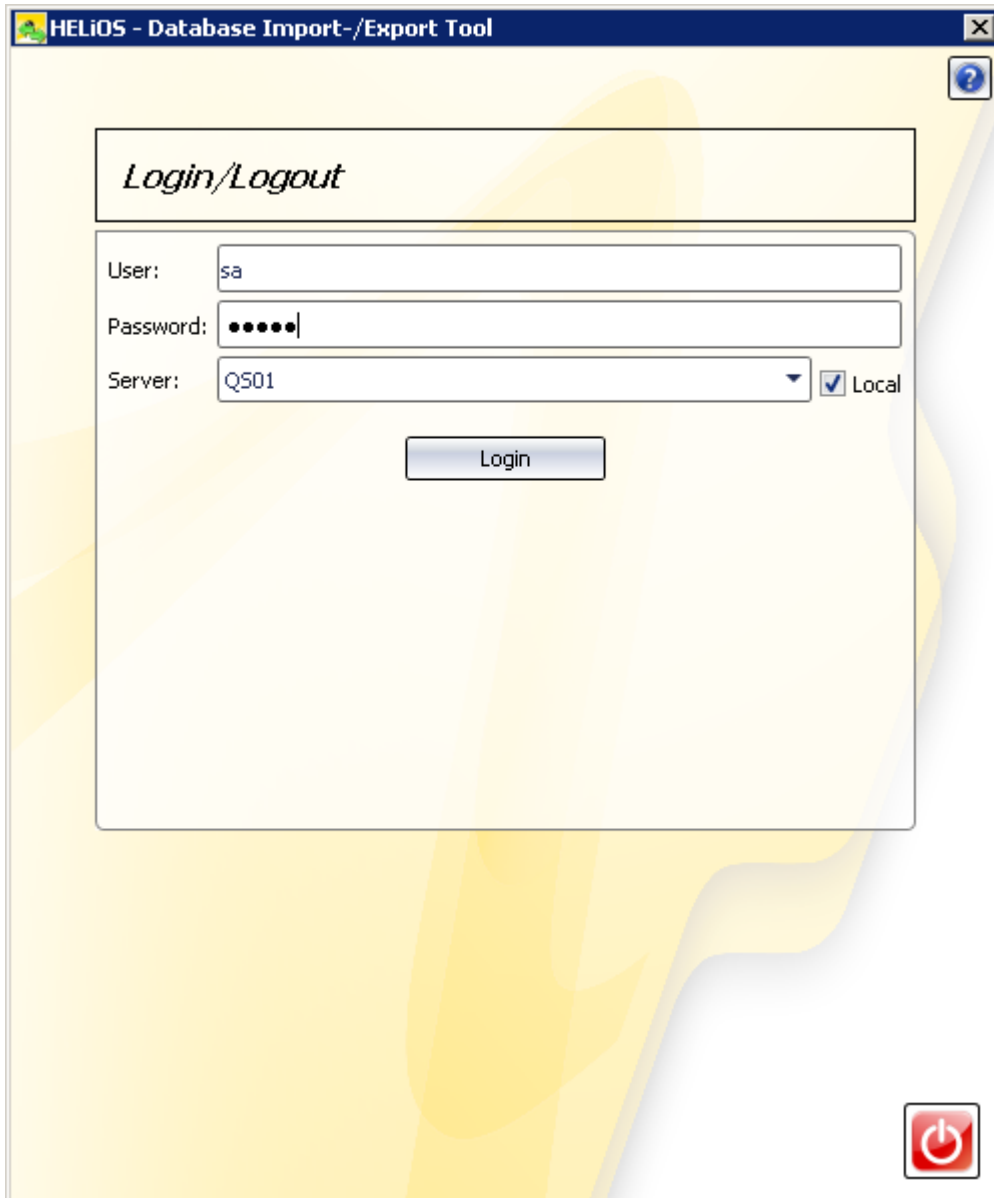


Image 17: HELIOS Database Import/Export tool

For older versions, it was necessary to copy the empty HELiOS database from the installation DVD (\Helios\Datenbanken\MsSql80\bauteil\_sic ) to a temporary directory of the server. As of HELiOS 2014 SP1 (Version 1901.1) it is also possible to directly import the database from the DVD to an empty directory, without this intermediate step.

For HELiOS versions older than HELiOS 2023 Service Pack 1 (V 2801) you will find the database in the subdirectory \Datenbanken\bauteil\_sic\, from Version 2801 it is located in the directory \Databases\en\.

The log file for the process will be saved to %Appdata%\Roaming\ISD Software und Systeme\HELiOS\bauteil\_akt\_Helios\_Export.log and the configuration will be saved to %Appdata%\Roaming\ISD Software und Systeme\Helios.DB\ImportExport\DB\ImportExportConfig.xml

In this guide the database name **bauteil** (German for “part”) is used. Enter the export path and the database name and start the **Import** by clicking the same-named button.

Exports to directories which already contain files are no longer possible. In this case an appropriate error message will be displayed.

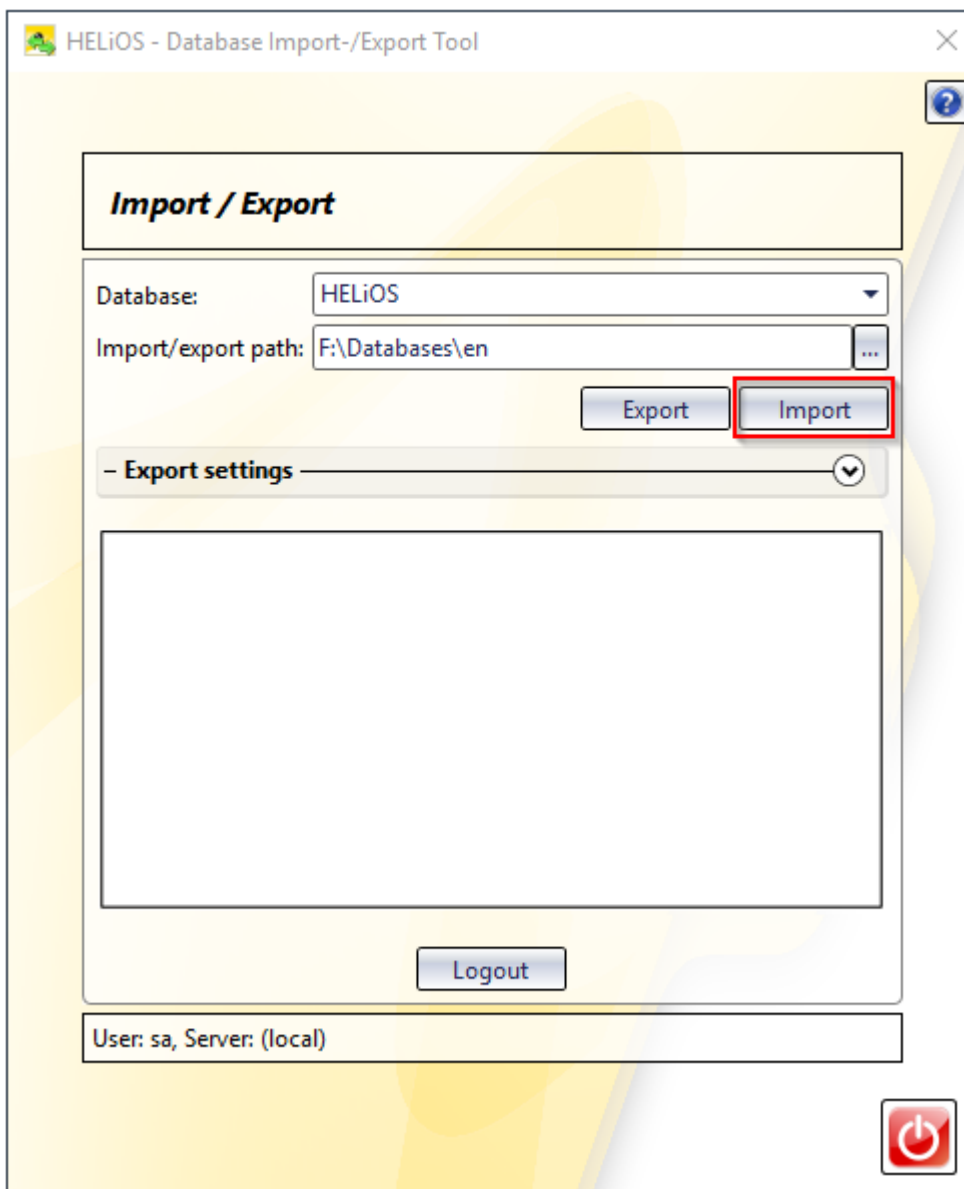


Image 18: Start import

The import procedure will be recorded in an import log:

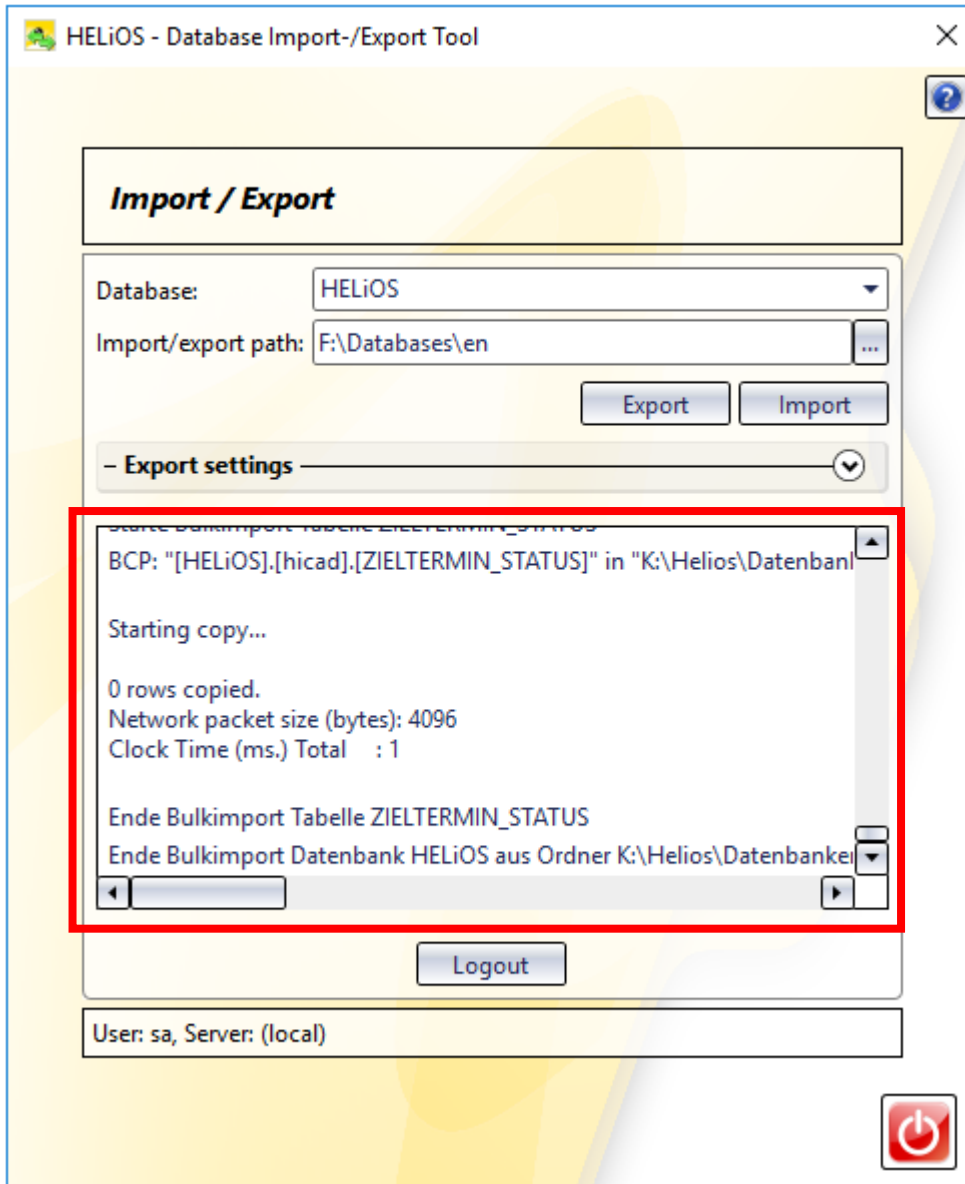


Image 19: Import log

If the import was successful, this will be indicated by a corresponding message. Confirm with **OK**.

### Information

Operation successfully completed.

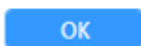


Image 20 : Import successful

## 5 Defining the Permissions for the User **hicad**

Switch to the SQL Server Management Studio to define the permissions of the user **hicad**.

Expand the **Databases** folder, right-click **bauteil** and select the **Properties** function in the context menu.

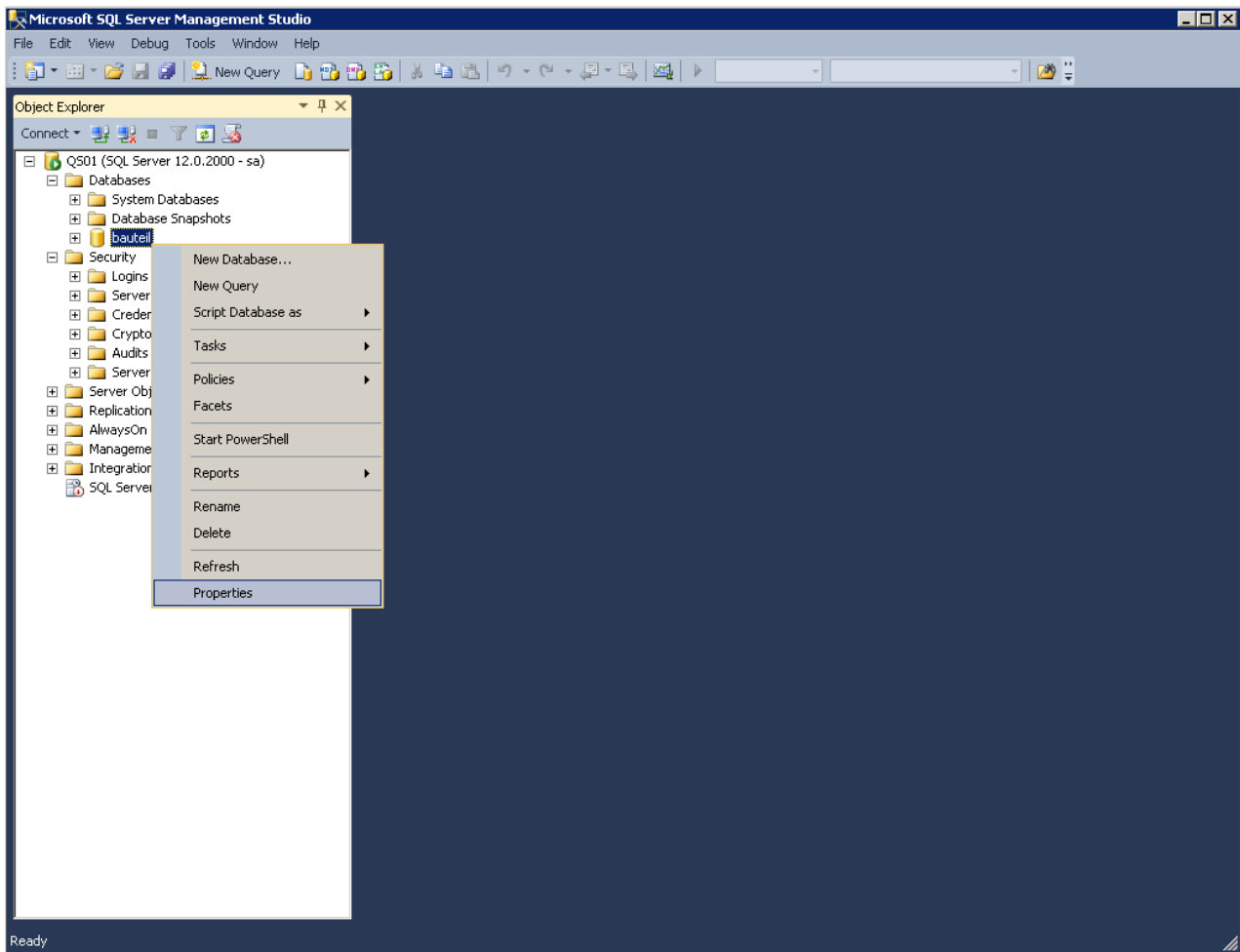


Image 21: Calling the Properties of “bauteil”

On the left side of the window, select **Permissions**. Define the permissions for the user **hica**.

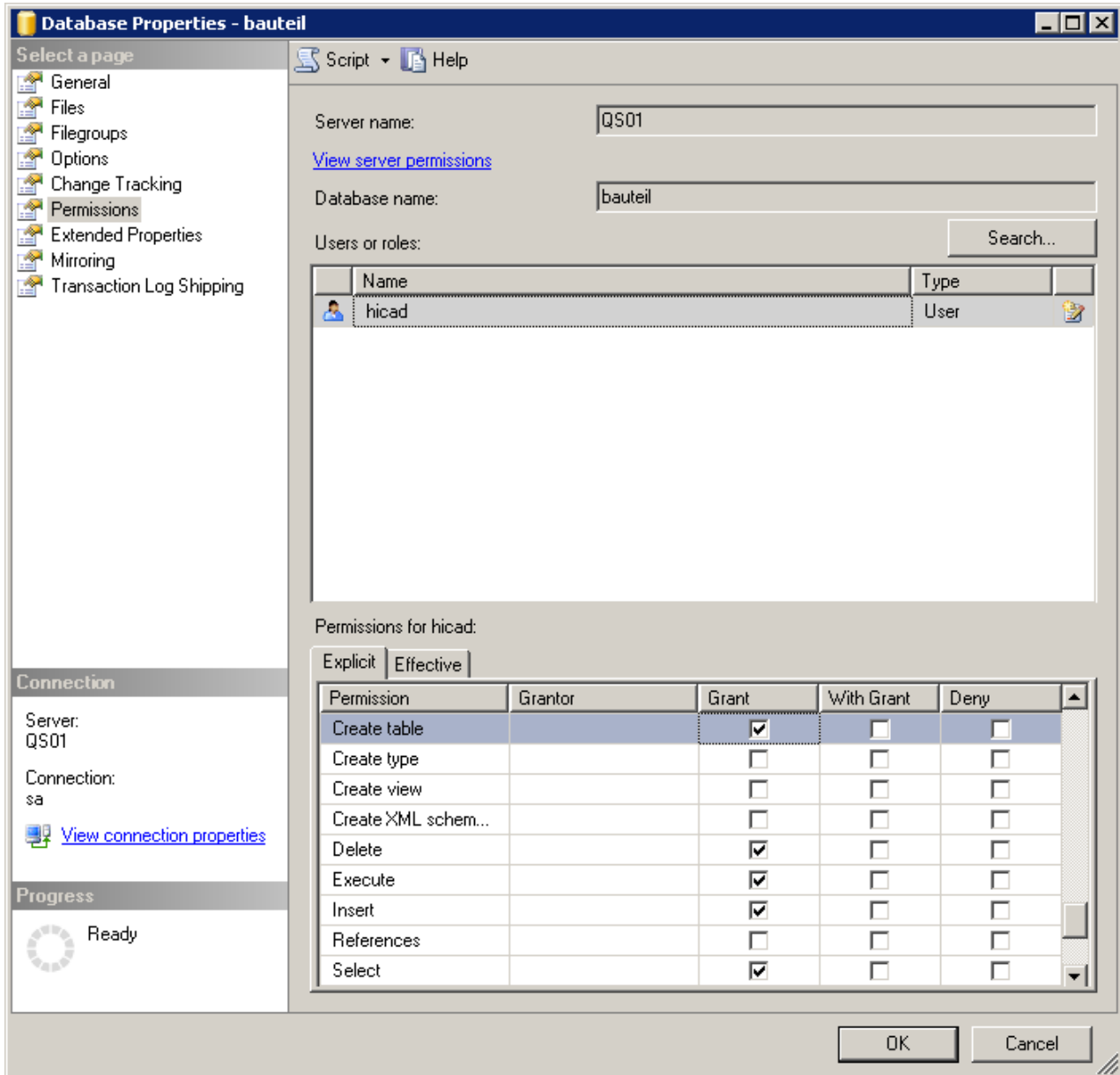


Image 22: Permissions for hica

Assign the following permissions to the user **hica**:

- » Update
- » Select
- » Insert
- » Modify
- » Delete
- » Create table





## 6 Setting up the ODBC Connection

To set up the ODBC connection for the clients, click the **Start** icon on the Windows task bar and select **Control Panel > Administrative Tools > Data Sources (ODBC)**.

The ODBC data source can be set up either as a **System DSN** (by an administrator) which will be available to all users of the computer, or as a User DSN which will only be available for the user who has created it. The procedure for both options is identical.

In the ODBC Data Source Administrator, click the **Add** button.

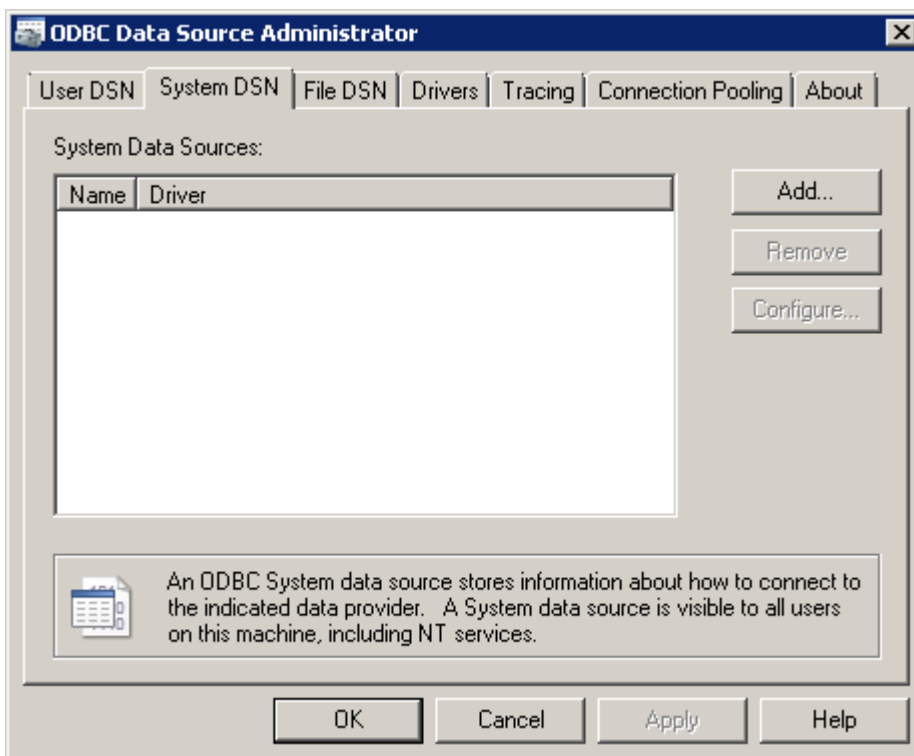


Image 23:ODBC Data Source Administrator

In the **Create Data Source** dialogue window, select the **SQL Server Native Client 11.0** and click **Finish**.

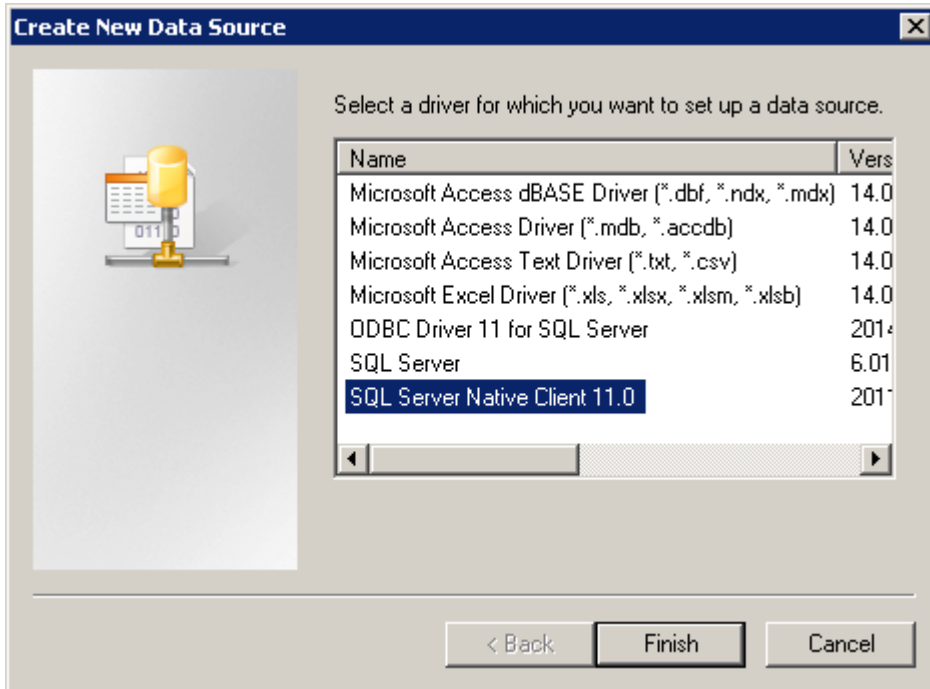


Image 24: Select ODBC driver

Now enter the name of the data source (in the following **HeliosBauteil**), and enter the name of the database server or select it from the list. Confirm your entries with **Next**:

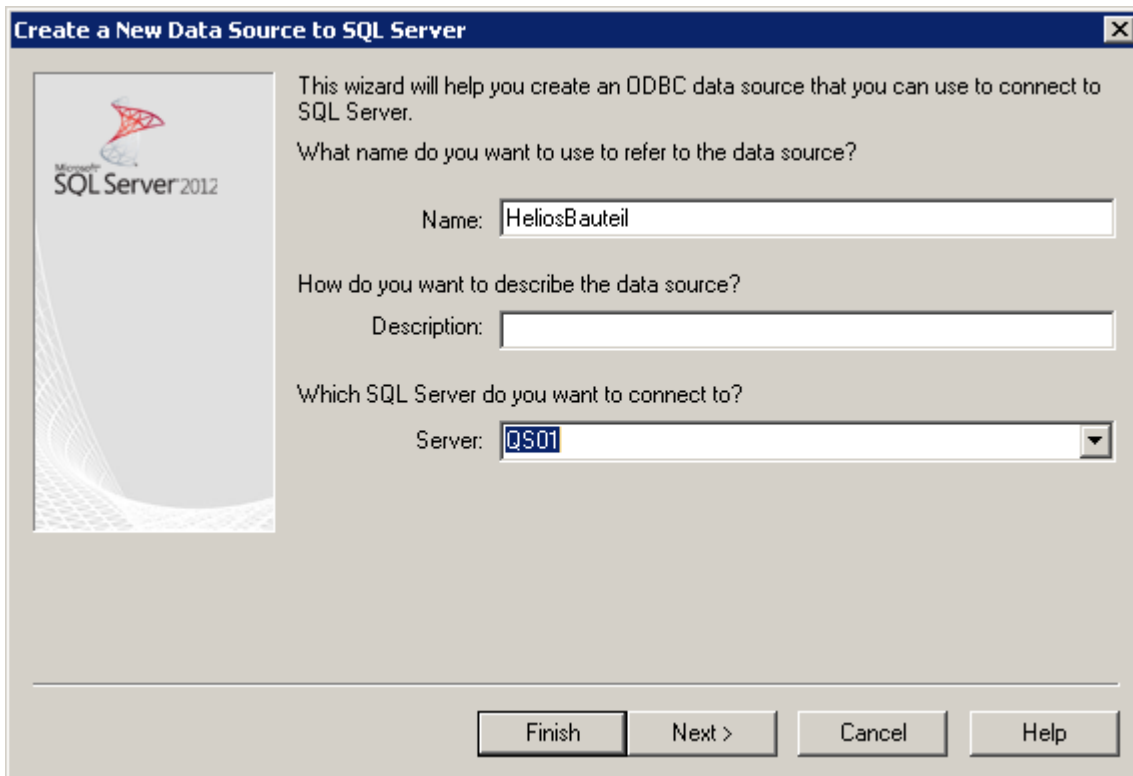


Image 25: Definition of the data source

Activate the **With SQL Server authentication...** option, enter **hacad** in the **Login ID** field and your **Password** in the same-named field below.

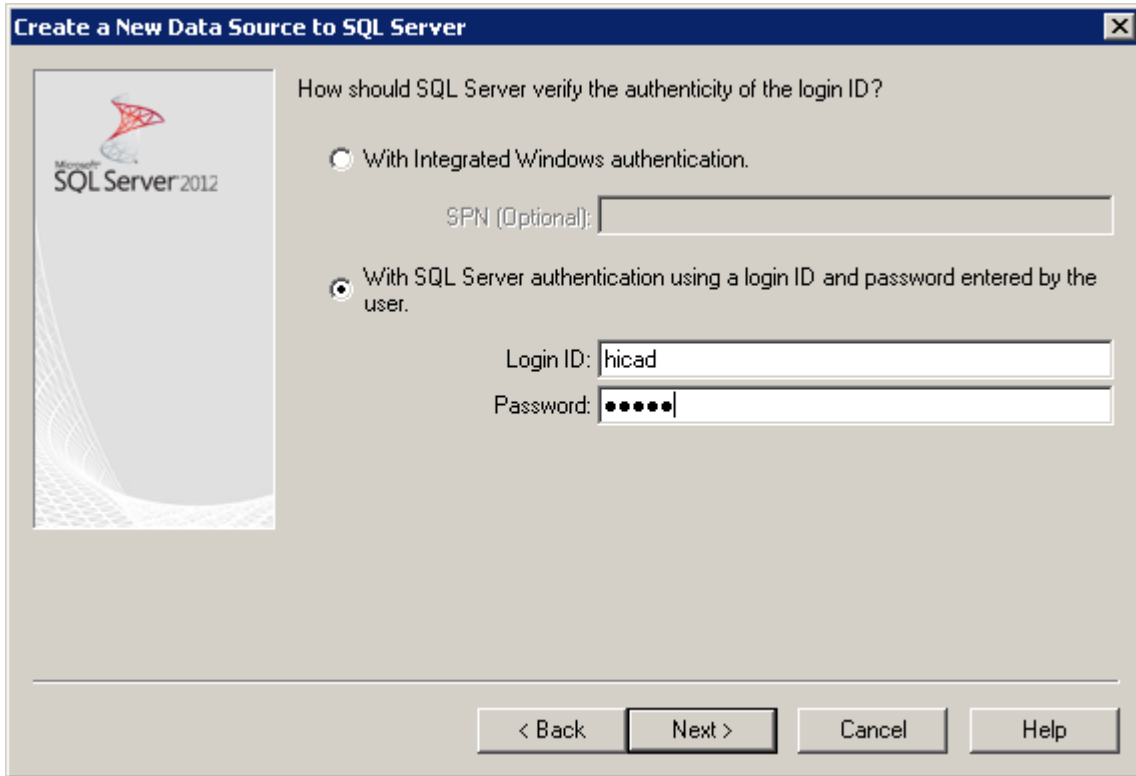


Image 26: User input

Activate the **Change the default database to:** checkbox and select the **bauteil** database. All other options must correspond to those shown in the image below:

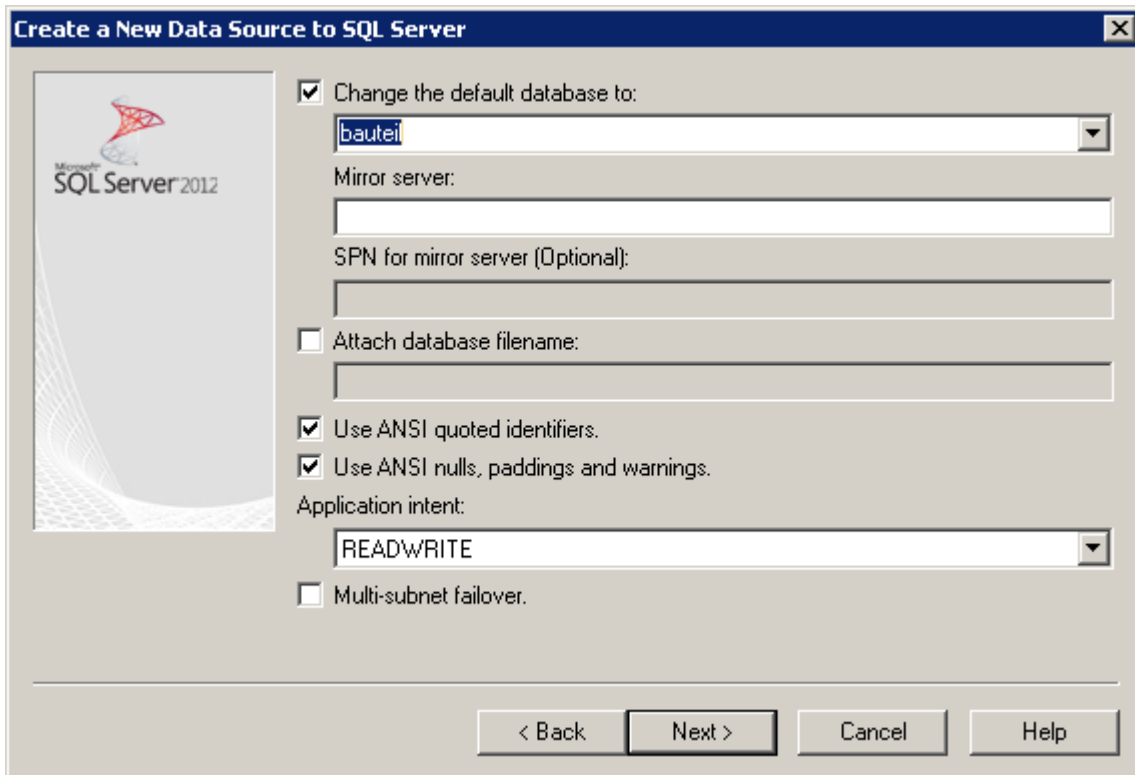


Image 27: Database selection

Deactivate all options and click **Finish** to finalize the creation of the connection.

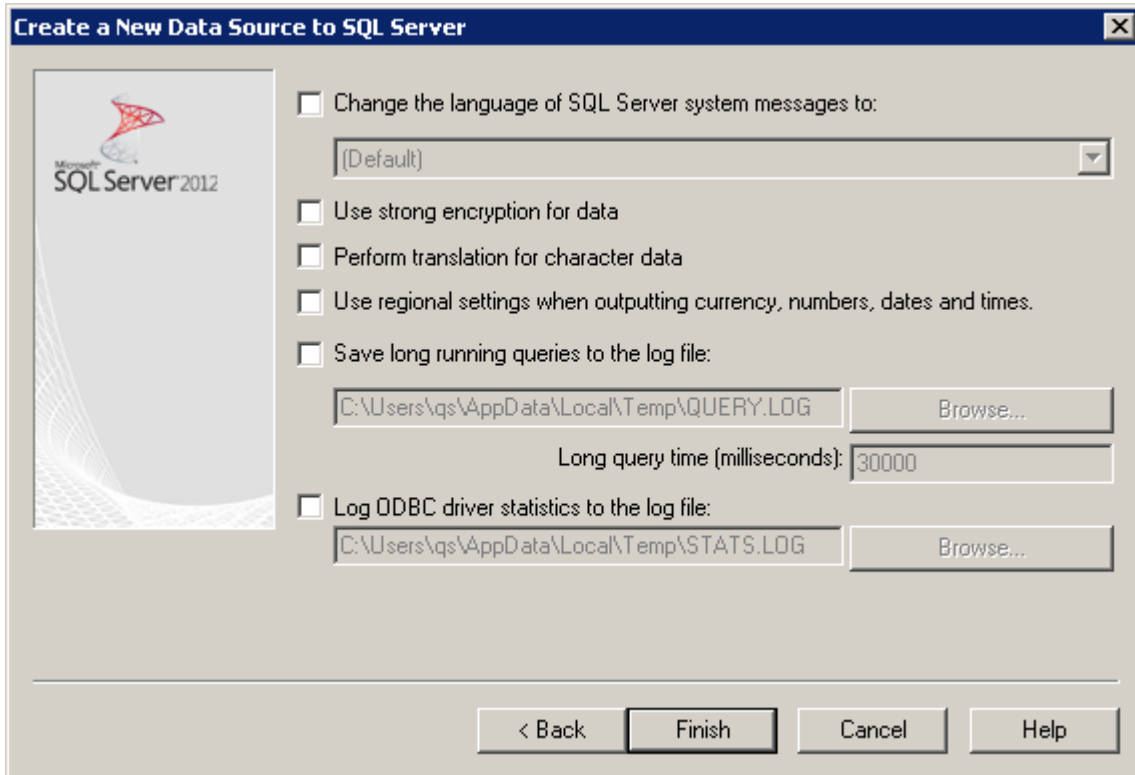


Image 28: Settings for ODBC connection

The window below offers the option to test the data source and completely finalize the creation by clicking **OK**. The ODBC Data Source Administrator can now be closed as well.

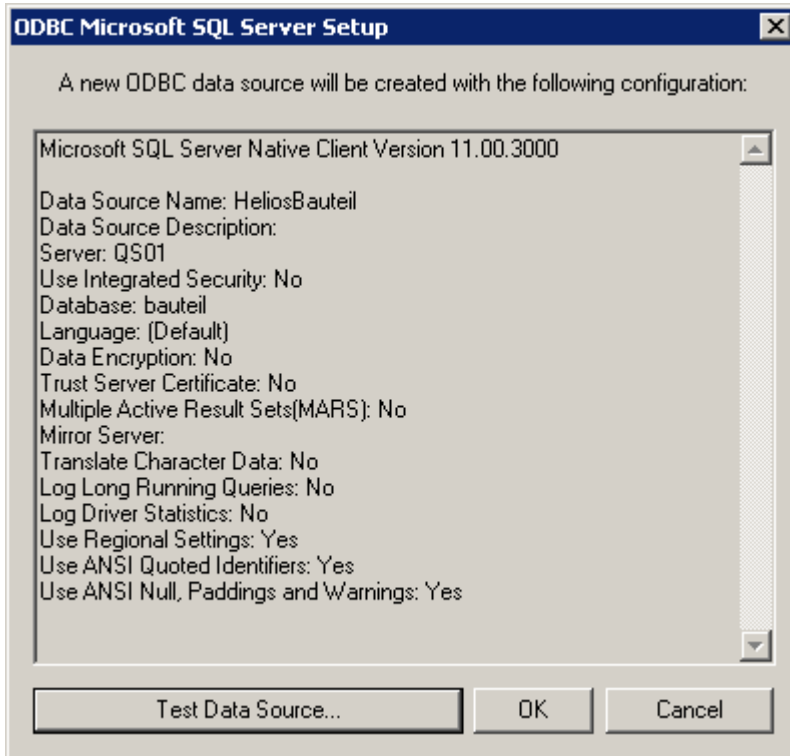


Image 29: Testing the data source and complete finalization of the creation

## 7 Establishing the HELiOS Connection

Finally, you need to tell HELiOS the name of the data source you have defined in the previous chapter. Click the **Start** icon of the Windows task bar and select **All Programs > ISD Software und Systeme > Administration > DB Manager**. Activate the **Connections** tab.

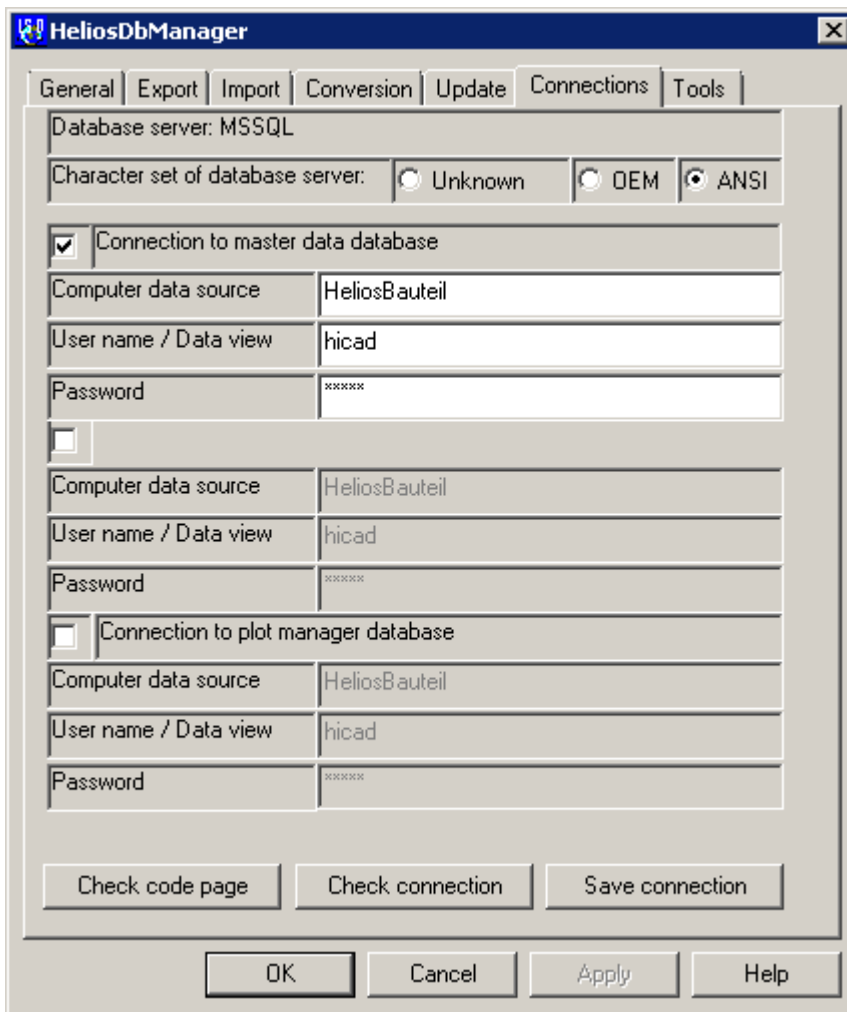


Image 30: DB Manager

### **Important notes on the DB Manager:**

Please note the setting for **Character set of database server**: Here, it is important that you select the **ANSI** option. Then, activate the **Connection to master data database** checkbox and enter the previously defined name of the ODBC data source in the **Computer data source** field, **hacad** in the **User name** field, and your Password in the same-named field. The setting options for the “Connection to plot manager database” are only there for historical reasons and are of no relevance.

Click **Save connection** to save your settings, then close the DB Manager with **OK**. All steps required for the installation are now completed. You can now start HELiOS.