Using BOC Management Office® Products with Microsoft® SQL Server

Preparing a BOC Management Office® Database with Microsoft® SQL Server 2016/2017/2019/2022

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1 Introduction

This document explains how to create a Microsoft SQL Server database for BOC Management Office® products. You can create the database automatically via the Windows Command Prompt or create the database manually using SQL Server Management Studio.

2 Setting up the Database Server

For the steps described in the upcoming chapters, certain rights for the SQL Server instance are required: "create database", "create any database" or "alter any database" (one of the three), as well as "alter any login" and "alter any user".

2.1 Creating a Database Automatically

BOC Management Office® products require a dedicated database that can be created automatically via the Windows Command Prompt. Perform the following operation on the machine where the application server is installed.

1. Open the Command Prompt as administrator and navigate to the application server installation directory.

Fig. 1: Open the Command Prompt

2. Adapt the following command with your actual values and execute it:
   `.\amain.exe -mode install -db <new-database-name> -dbadmin <my-database-admin-name> -dbadminpw <my-database-admin-password> -dt SQLServer -lib "<pathname>\<library file>.axl" -lic "<pathname>\<licence file>.xxl"`

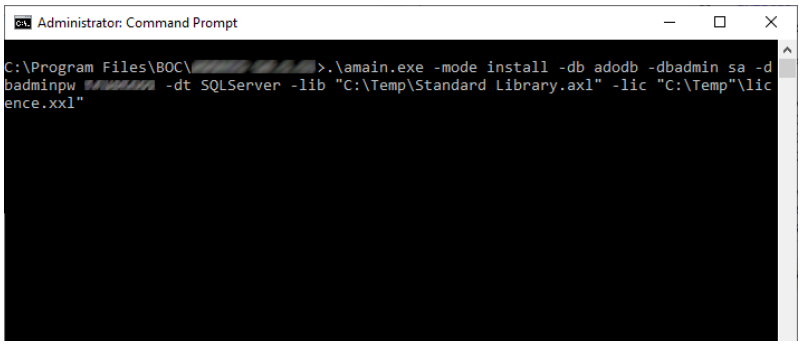

Fig. 2: Create database automatically

The database is ready for use.

Placeholders

Here is an explanation of the placeholders in the command:

- **<new-database-name>**: The name of the new database.
- **<my-database-admin-name>**: The username of your database administrator.
- **<my-database-admin-password>**: The password of your database administrator.

- **<pathname>\<library file>.axl**: The full path and filename of the library file. Wrap in quotes.
- **<pathname>\<licence file>.xxl**: The full path and filename of the licence file. Wrap in quotes.

Example:

```
.\amain.exe -mode install -db adodb -dbadmin sa -dbadminpw secret -dt SQLServer -lib "C:\Temp\Standard Library.axl" -lic "C:\Temp\licence.xxl"
```

Default instance

If the database is created on the same machine that hosts the database system, simply enter the name of the new database.

If the database is created on a different machine, both the host name and the database name must be entered in the following form: `<HOST_NAME>:<DB_NAME>`. For example, use `sqlsrv1:adodb` if the machine hosting the database system is named `sqlsrv1`.

Named instance

If the new database is created in a named instance, the value entered has to be `<HOST_NAME>\<INSTANCE_NAME>:<DB_NAME>`, e.g. `sqlsrv1\instance1:adodb` if the name of the machine that hosts the database system is `sqlsrv1` and the name of the target instance is `instance1`.

2.2 Creating and Configuring a Database Manually

As an alternative to creating the database automatically you can create and configure a database manually using Microsoft SQL Server Management Studio. SQL Server Management Studio is a graphical administration tool for managing SQL Server 2014/2016/2017/2019/2022. It is not included in the standard installation of SQL Server, but it can be downloaded and installed separately if needed.

Attention: This section is e.g. relevant if Microsoft Windows Server with enforced password policy is used as operating system.

Overview

1. Start SQL Server Management Studio.
2. Create a new database.
3. Create a new database login »ADOxx«.
4. Create new schema »ADOxx«.
5. Assign schema »ADOxx« as default schema to database user »ADOxx«.
6. Edit permissions of database user »ADOxx«.
7. Create ODBC data source.
8. Create tables
9. Create a new database login »ADOXX_BOOT«
10. Initialize SQL Server database for the BOC Management Office®.
11. Change password of user »ADOxx« (optional).

2.2.1 Start SQL Server Management Studio

1. Start SQL Server Management Studio. By default, the login window for connecting to the server will appear after startup.

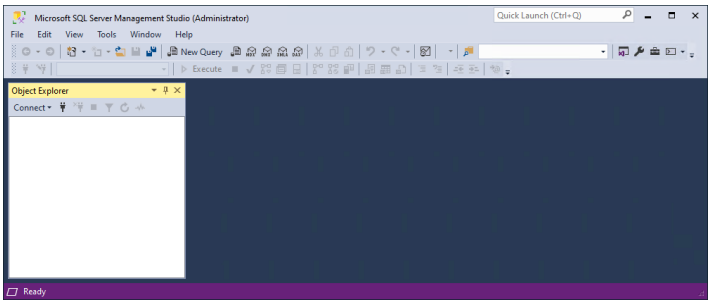

Fig. 3: SQL Server Management Studio

2. In case that no login screen appears automatically, use »Connect Object Explorer« from the menu »File«.

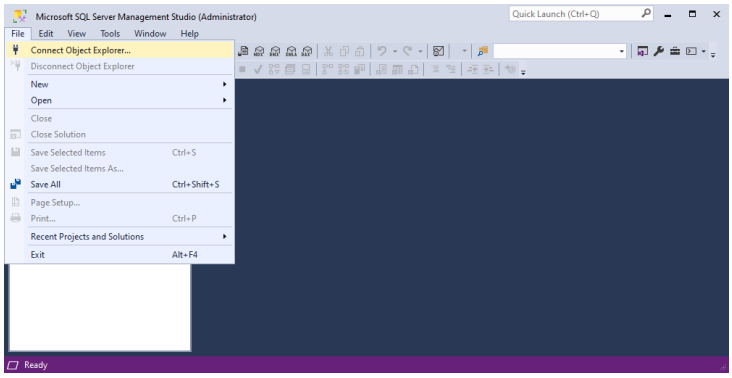

Fig. 4: Connect Object Explorer

3. To establish the server connection, enter the server name of the DB server into the field »Server name« in the format `<HOST_NAME>` respectively `<HOST_NAME>\<INSTANCE_NAME>`. Enter the password into the field »Password« and confirm with »Connect«.

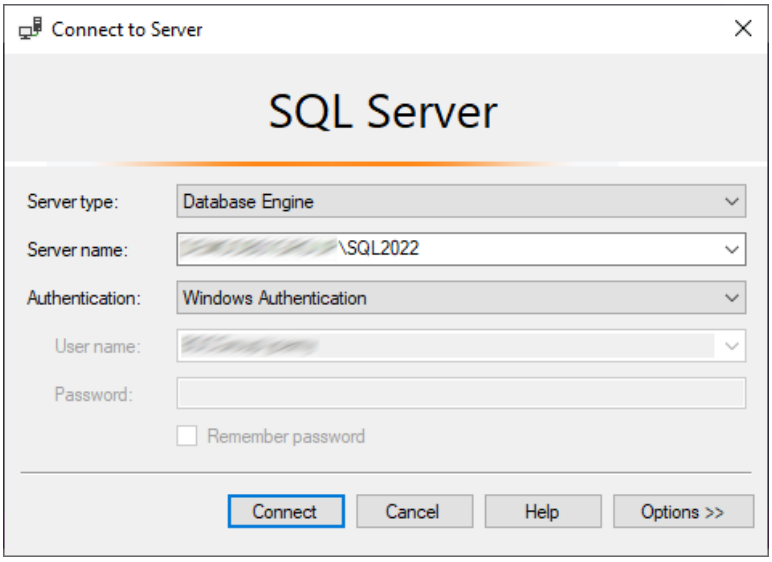

Fig. 5: Connect to Server

The connection is established. The databases available on the server and the server settings are displayed.

2.2.2 Create a New Database

1. Select the entry »Databases« in the Object Explorer and choose its context menu (right-click) entry »New Database«.

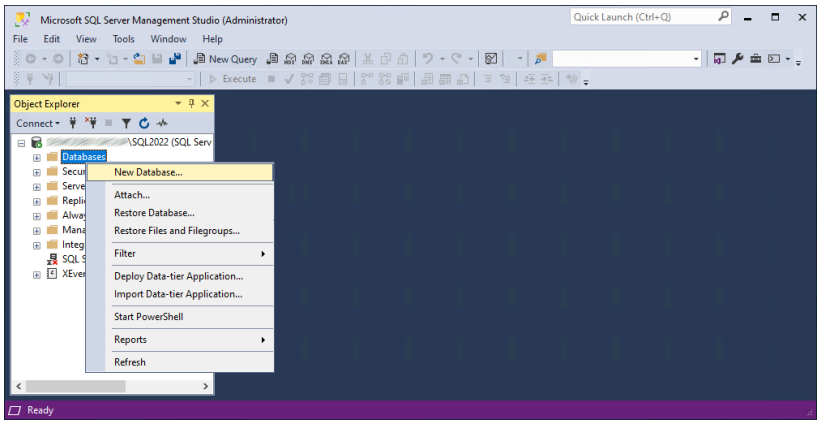

Fig. 6: Create a new database

2. Enter the name of your new BOC Management Office® database into the field »Database name«, e.g. »adodb«. It is recommended to use at least 100 MB for the start size (autogrowth by 75 MB, unrestricted growth) and 50 MB for the transaction log (autogrowth by 75 MB, unrestricted growth).

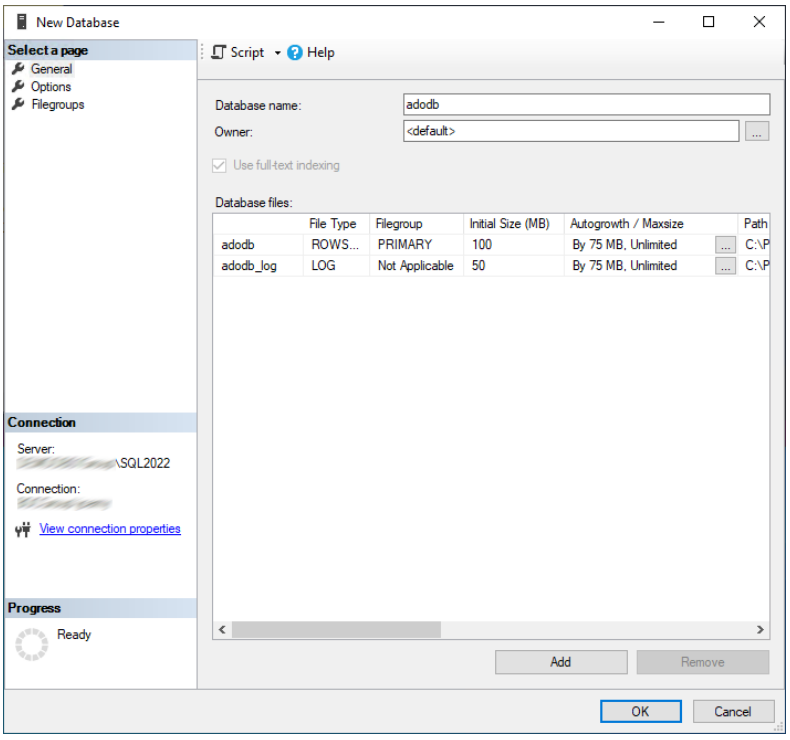

Fig. 7: Enter database name

3. Switch to the page »Options«. Select a case-sensitive collation in the field »Collation« (e.g. Latin1_General_CS_AS). Change the value of »Auto Update Statistics Asynchronously« to »True«. Leave all other settings untouched. Confirm with »OK«.

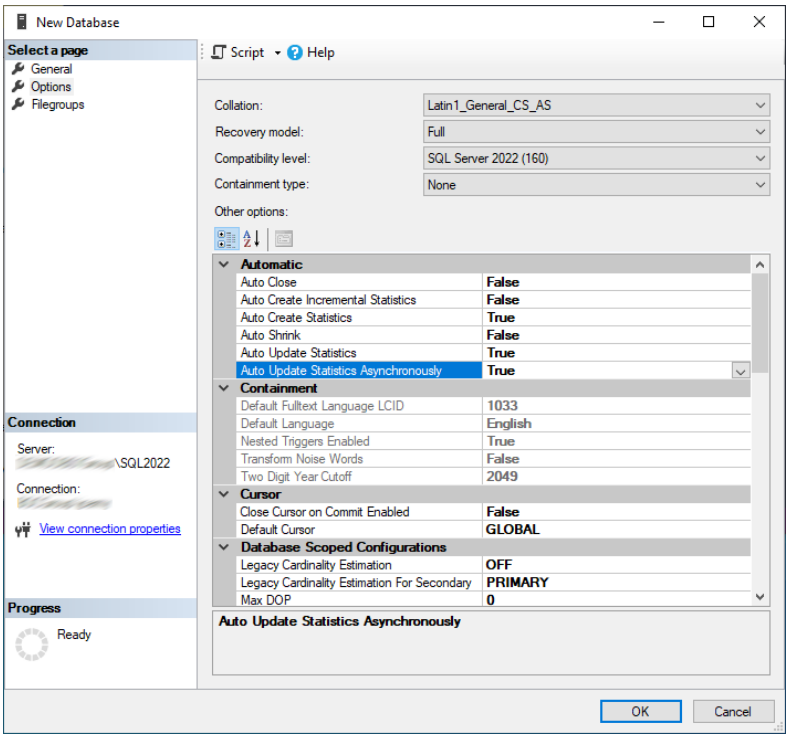

Fig. 8: Select collation

The new database is created. Please note the following:

- The name of the database must consist of 3–32 alphanumeric characters; the first character must be a letter, not a numeral.
- The database name must not be »**ADOxx**«.

2.2.3 Create a New Database Login »ADOxx«

The login on a BOC Management Office® database requires a database user (database login) »ADOxx«[1].

1. Expand the entry »Security« in the Object Explorer. Open the context menu of the sub entry »Logins« and choose »New Login«. The window »Login – New« appears.

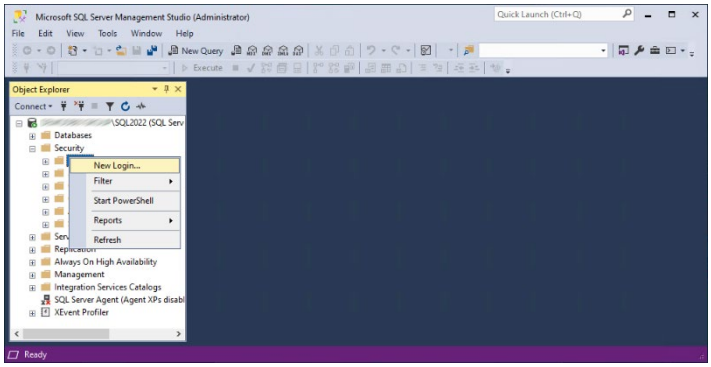

Fig. 9: Create a new database login

[1] The name of the default database user **ADOxx** is the same for all BOC Management Office products.

2. Enter the following information on the »General« page:
   - Set »Login name« to »ADOxx«.
   - Choose »SQL Server authentication« and set the password to »r0KaQIFA]cPd2Ave«.
   - Deactivate »Enforce password policy«.

   Leave all other settings on this page untouched.

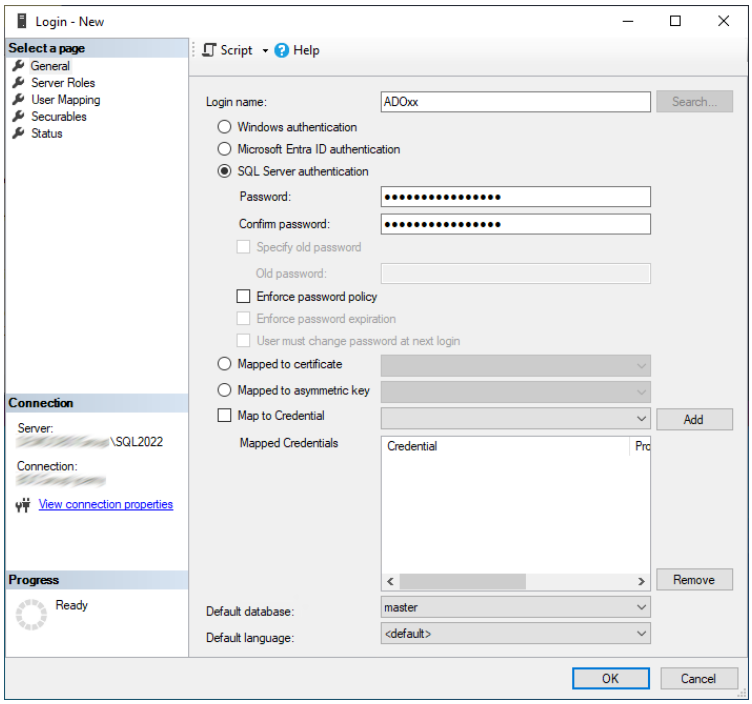

Fig. 10: Enter login name and password

3. Switch to the page »User Mapping«. Activate the mapping of the new database `adodb` and the new database user `ADOxx`.

   Leave all other settings untouched. Confirm with »OK«.

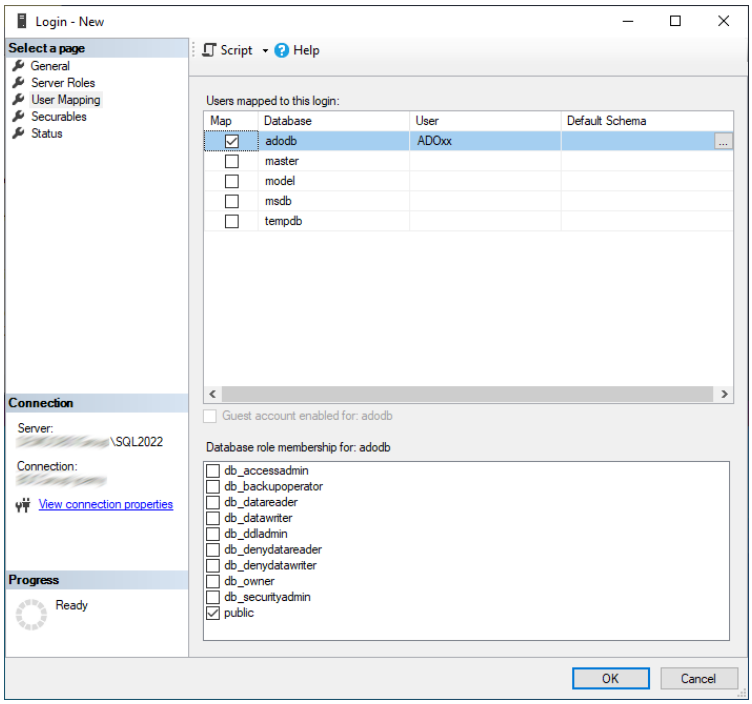

Fig. 11: Map user to new login

The database user **`ADOxx`** is now available.

2.2.4 Create New Schema »ADOxx«

Creating tables in a BOC Management Office® database (see chapter **Create Tables**) requires a database schema »ADOxx«.

1. Expand the entry »Databases«, its sub entry »adodb« and its sub entry »Security« in the Object Explorer. Open the context menu of »Schemas« and choose »New Schema…«. The window »Schema – New« appears.

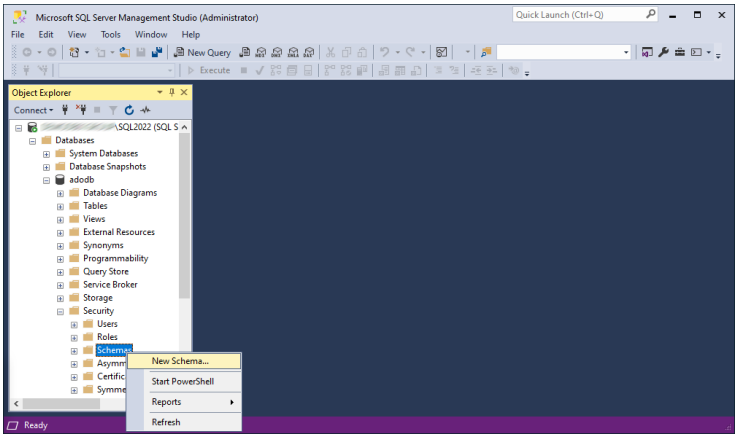

Fig. 12: Create new schema

2. On the »General« page, set »Schema name« to »ADOxx«. Leave all other settings untouched. Confirm with »OK«.

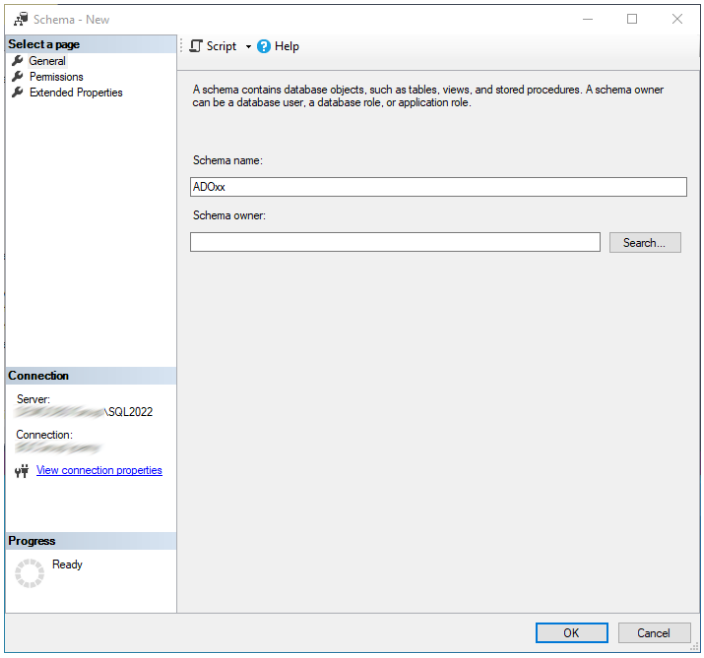

Fig. 13: Enter schema name

The new schema **ADOxx** is created.

2.2.5 Assign Schema »ADOxx« as Default Schema to Database User »ADOxx«

1. Expand the entry cascade »Databases«, »adodb«, »Security« and »Users« in the Object Explorer. Open the context menu of the entry »ADOxx« and choose »Properties«. The window »Database User – ADOxx« appears.

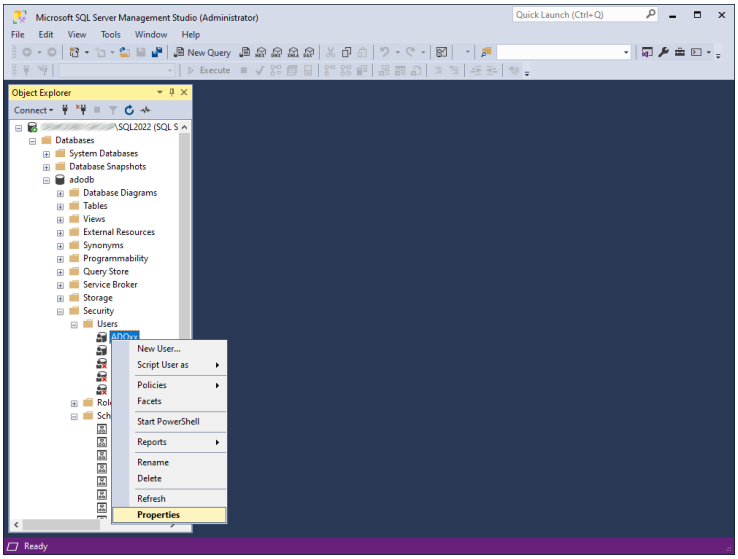

Fig. 14: Edit properties of the user ADOxx

2. On the »General« page, set »Default schema« to »ADOxx« or select the schema »ADOxx«. Leave all other settings untouched. Confirm with »OK«.

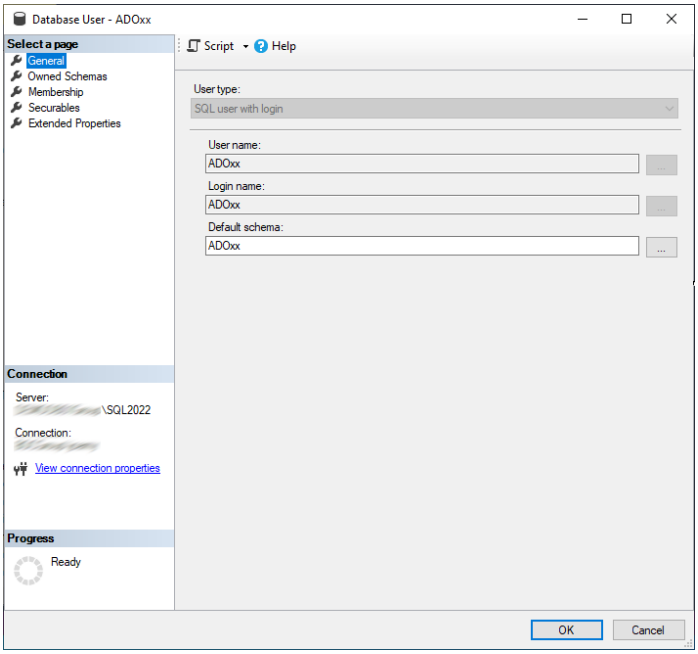

Fig. 15: Assign schema ADOxx to database user ADOxx

The schema **ADOxx** is assigned to the database user **ADOxx** as the default schema.

2.2.6 Edit Permissions of Database User »ADOxx«

1. Expand the entry cascade »Databases«, »adodb«, »Security« and »Schemas« in the Object Explorer. Open the context menu of the entry »ADOxx« and choose »Properties«. The window »Schema Properties – ADOxx« appears.

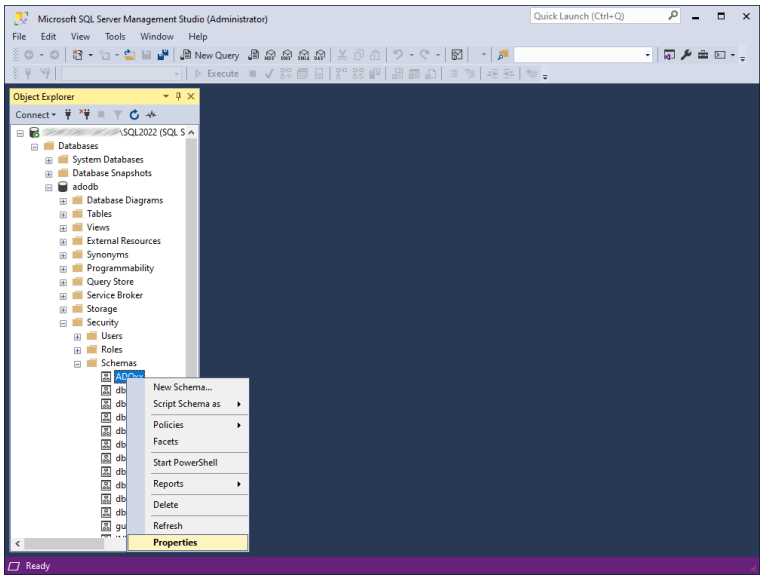

Fig. 16: Edit properties of schema »ADOxx«

2. Switch to the page »Permissions«. Add the user »ADOxx« via the button »Search…«. In the table »Permissions for ADOxx« activate »Grant« for »Alter«, »Delete«, »Insert«, »Select« and »Update«. Leave all other settings untouched. Confirm with »OK«.

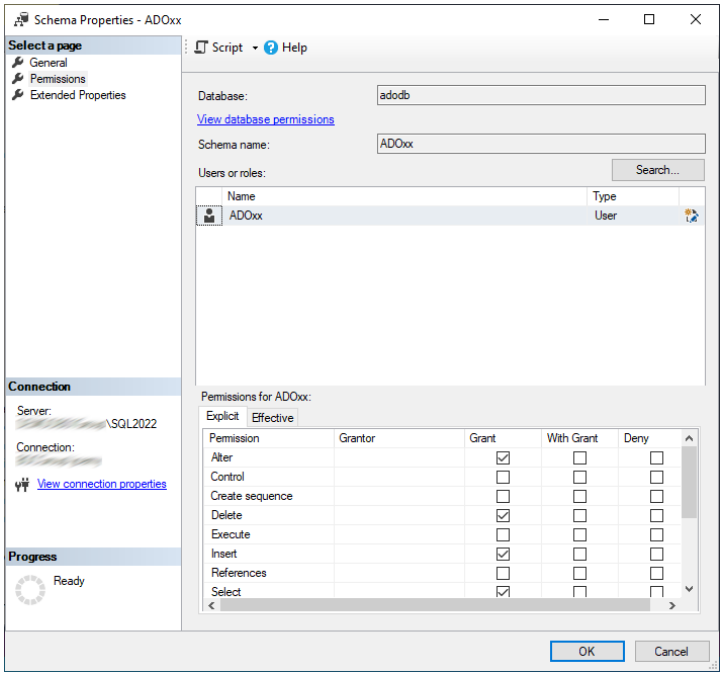

Fig. 17: Assign permissions for the database user `ADOxx`

The modified permissions for the database user **`ADOxx`** are saved.

2.2.7 Create Tables

Next, tables and other database objects must be created per SQL script.

The tables can be generated with the script »`sqlserver.sql`«. You can find the script in the installation package of your BOC Management Office® product in the folder »`dbinfo`«.

1. In SQL Server Management Studio, click the “Open File” button to browse to and open the script »`sqlserver.sql`« Select your new database from the drop-down list “Available Databases”. Run the script with “Execute“ (“F5”).

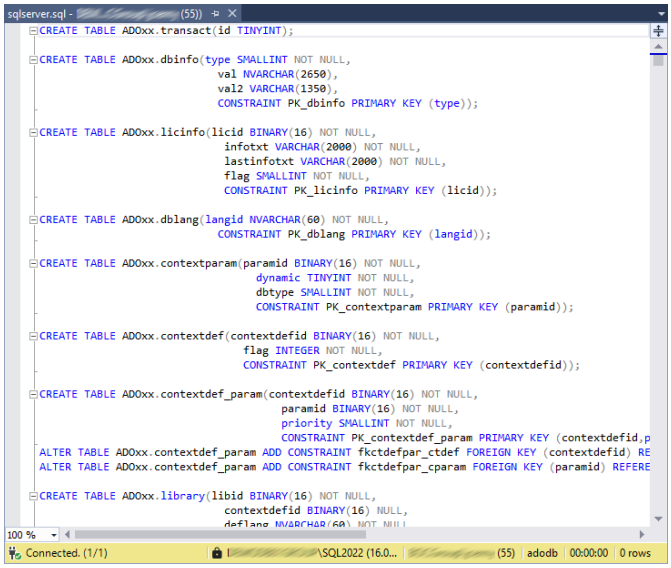

Abb. 18: Create tables

2.2.8 Create a New Database Login »ADOXX_BOOT« by Script

The database user (database login) »ADOXX_BOOT« is needed to change the password of the user »ADOxx«. The user »ADOXX_BOOT« can be generated with the script »`sqlserver_create_ADOXX_BOOT.sql`«. You can find the script in the installation package of your BOC Management Office® product in the folder »`dbinfo`«.

1. In SQL Server Management Studio, open the script »`sqlserver_create_ADOXX_BOOT.sql`«. Select your new database from the drop-down list “Available Databases”. Replace the placeholder `<Database name>` in the script with the name of your new database. Run the script with „Execute“ (“F5”).

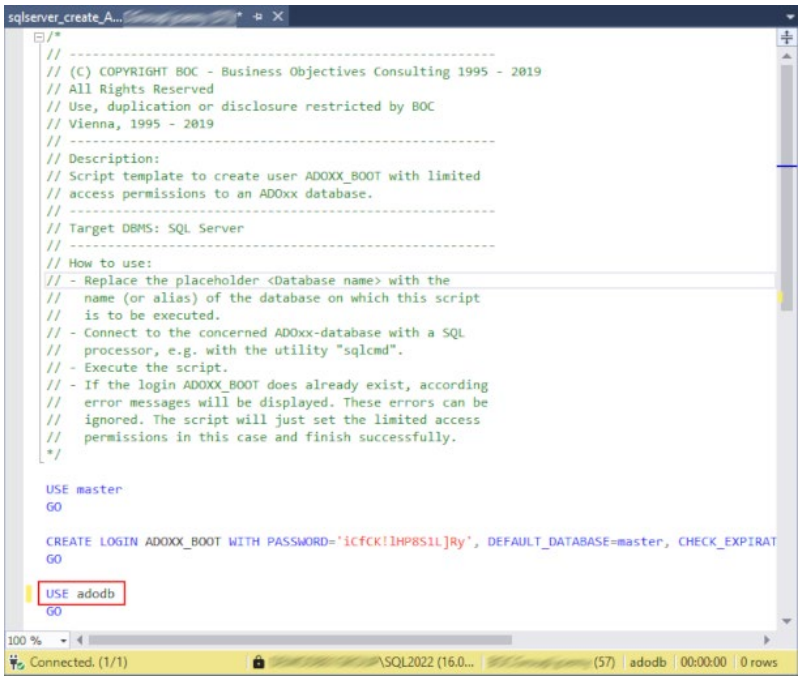

Abb. 19: Create new database login »ADOXX_BOOT«

For security reasons, the password of the user »ADOxx« should be changed later after the initialisation of the database [see Change Password of User »ADOxx« (Optional)].

2.2.9 Create ODBC Data Source

Create the ODBC data source for SQL Server on the machine where the application server is installed by executing the Windows system program »ODBC Data Sources (64-bit)« (**`odbcad32.exe`**).

You must create the ODBC data source by using the 64-bit version of the »**`odbcad32.exe`**« file located in the `%WINDIR%\system32` folder. `%WINDIR%` stands for your Windows installation directory.

1. Go to chapter »System DSN« and click »Add«.

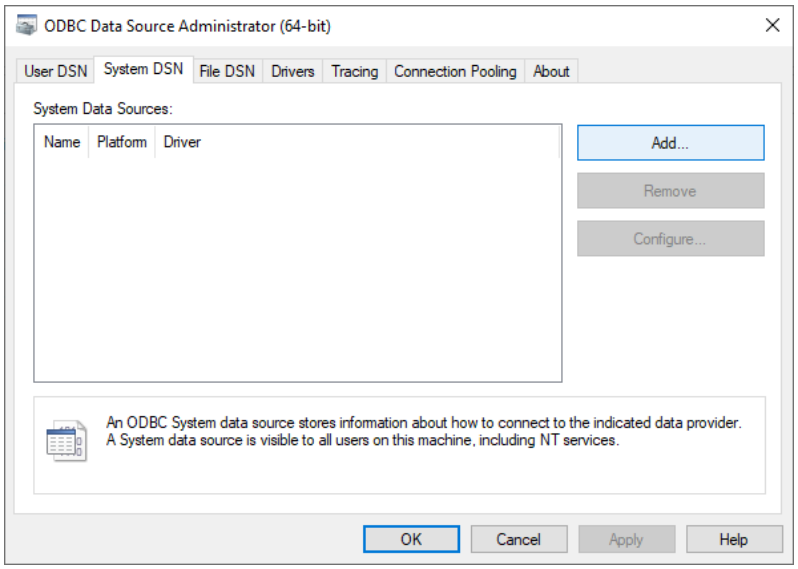

Fig. 20: Add ODBC connection

2. Select a driver. You can use »ODBC Driver for SQL Server« or »SQL Server Native Client«. Click »Finish«.

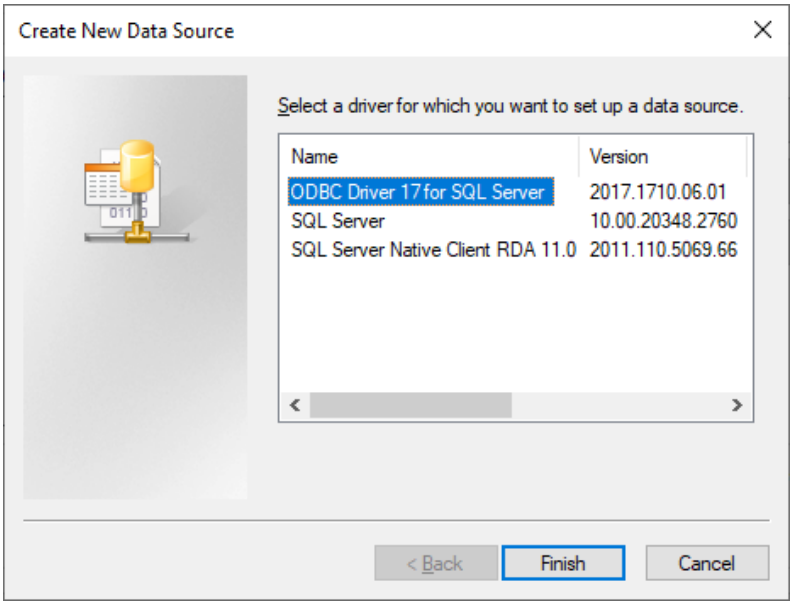

Fig. 21: Select driver

3. Enter a name for the database into the field »Name« and the name of the host into the field »Server«. If the database that should be accessed is installed in a named instance, the value of the field »Server« has to be `<HOST_NAME>\<INSTANCE_NAME>`, e.g. »sqlsrv1\instance1«. Otherwise it has to be `<HOST_NAME>`. You can enter »(local)« in the »Server« field when you're using the same computer as SQL Server. Click »Next«.

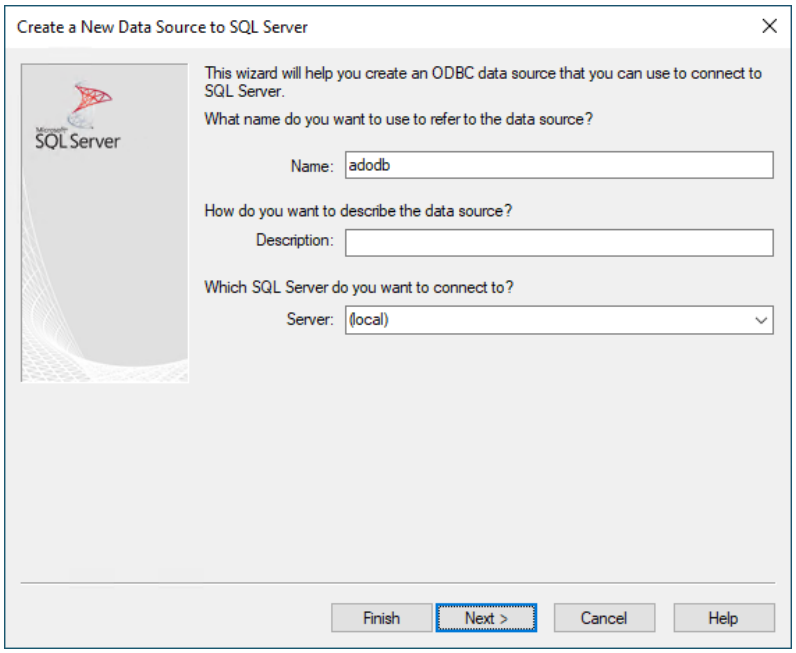

Fig. 22: Enter database name

4. Choose »With SQL Server authentication using a login ID and password entered by the user«. Enter »ADOxx« in the field »Login ID« and »r0KaQIFA]cPd2Ave« in the field »Password«. Click »Next«.

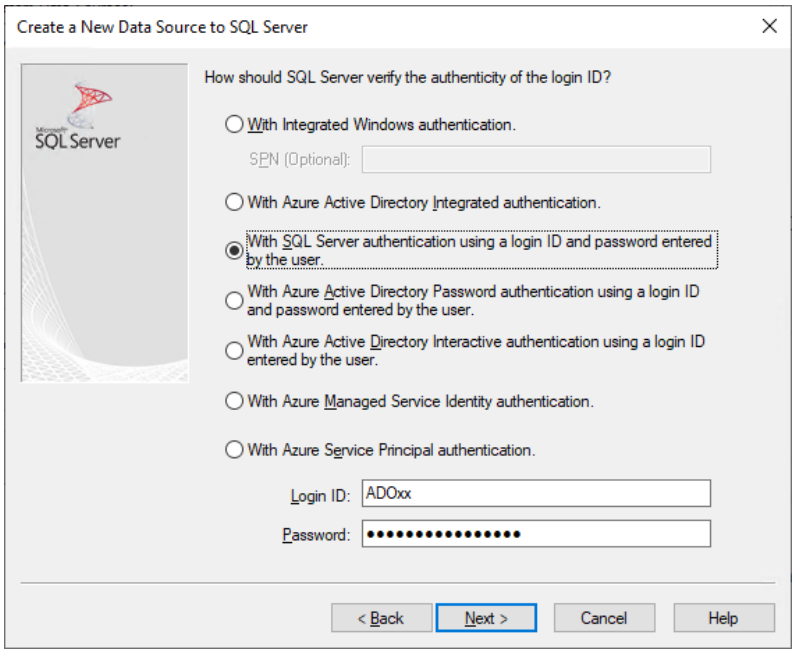

Fig. 23: Enter login and password

5. Change the default database to the name of the database that you want to connect to on the server specified before. Leave all other settings untouched. Click »Next«.

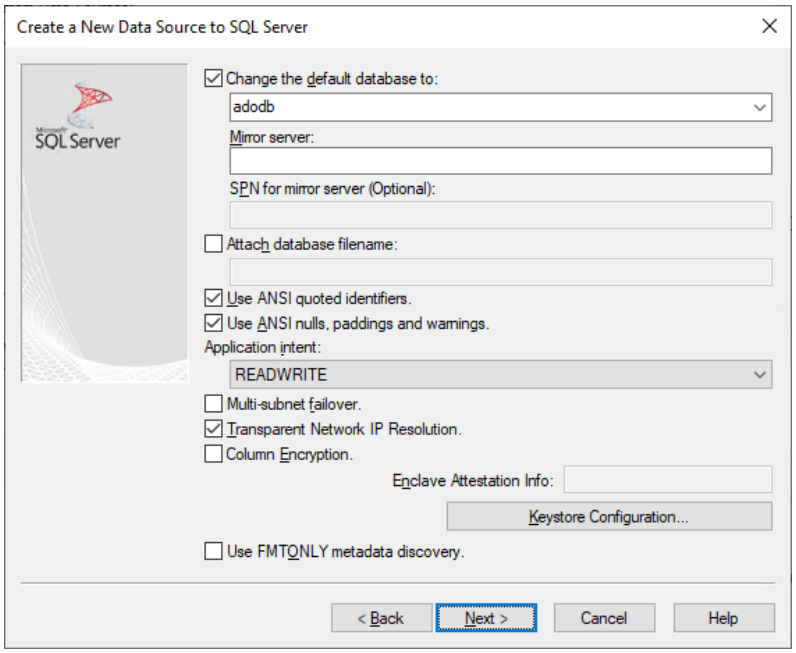

Fig. 24: Change default database

6. Leave all settings untouched and click »Finish«.

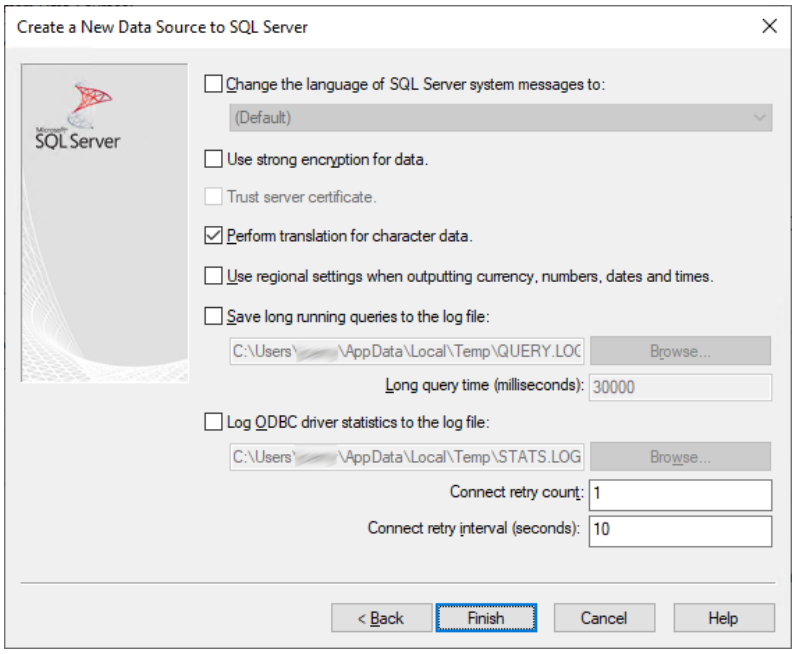

Fig. 25: Finish

7. Click »Test Data Source« to test the newly created connection. If the test is successful, the database can be used.

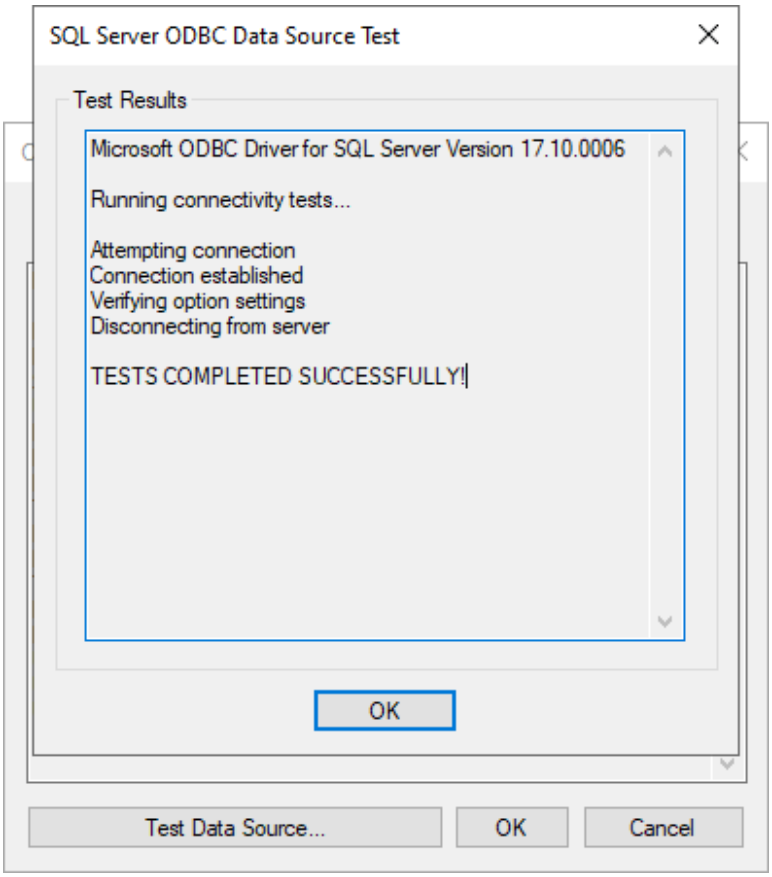

Fig. 26: Test the database

2.2.10 Initialise Database

Finally, you need to initialise the database. Perform the following operation on the machine where the application server is installed.

1. Open the Command Prompt as administrator and navigate to the application server installation directory.

Fig. 27: Open the Command Prompt

2. Adapt the following command with your actual values and execute it:
   `.\amain.exe -mode install -dbimode initonly -db <new-database-name> -dbadmin <my-database-admin-name> -dbadminpw <my-database-admin-password> -dt SQLServer -lib "<pathname>\<library file>.axl" -lic "<pathname>\<licence file>.xxl"`

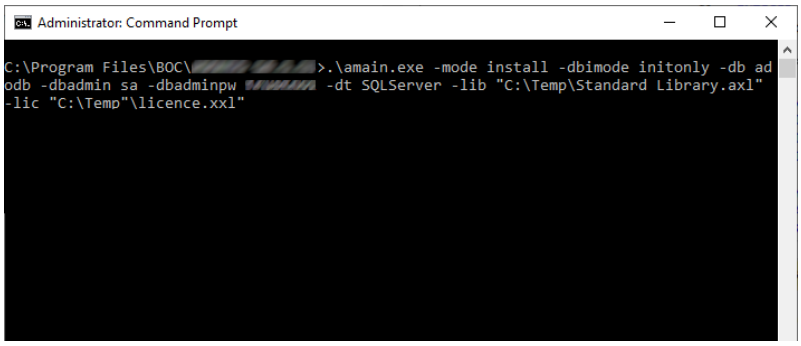

Fig. 28: Initialise database

The database is ready for use.

Placeholders

Here is an explanation of the placeholders in the command:

- **<new-database-name>**: The name of the new database.
- **<my-database-admin-name>**: The username of your database administrator.
- **<my-database-admin-password>**: The password of your database administrator.

- **<pathname>\<library file>.axl**: The full path and filename of the library file. Wrap in quotes.
- **<pathname>\<licence file>.xxl**: The full path and filename of the licence file. Wrap in quotes.

Example:

```
.\amain.exe -mode install -dbimode initonly -db adodb -dbadmin sa -dbadminpw secret -dt SQLServer -lib "C:\Temp\Standard Library.axl" -lic "C:\Temp\licence.xxl"
```

2.2.11 Change Password of User »ADOxx« (Optional)

The database user »ADOxx« is required for login on a BOC Management Office® database. For security reasons, the default password »r0KaQIFA]cPd2Ave« of the user »ADOxx« should be changed after the initialisation of the database. Before doing this, ensure that the database user »ADOXX_BOOT« has been created (see Create a New Database Login »ADOXX_BOOT« by Script). Perform the following steps on the machine where the application server is installed.

1. Open the Command Prompt as administrator and navigate to the application server installation directory.

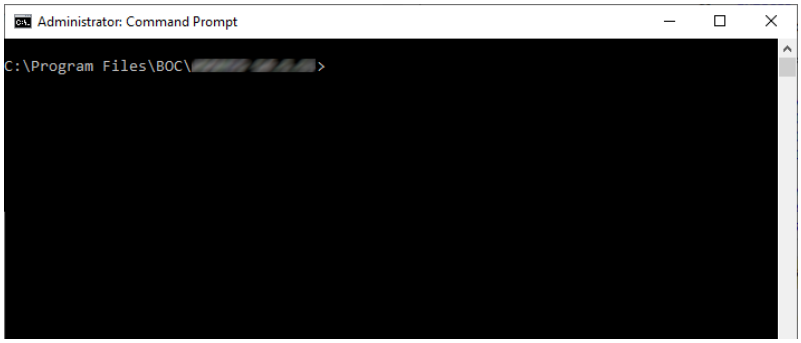

Fig. 29: Open the Command Prompt

2. Adapt the following command with your actual values and execute it:
   `.\amain.exe -mode install -db <my-database-name> -dbadmin ADOxx -dbadminpw <old-database-user-password> -dt SQLServer -changeownerpw -newpw <new-database-user-password>`

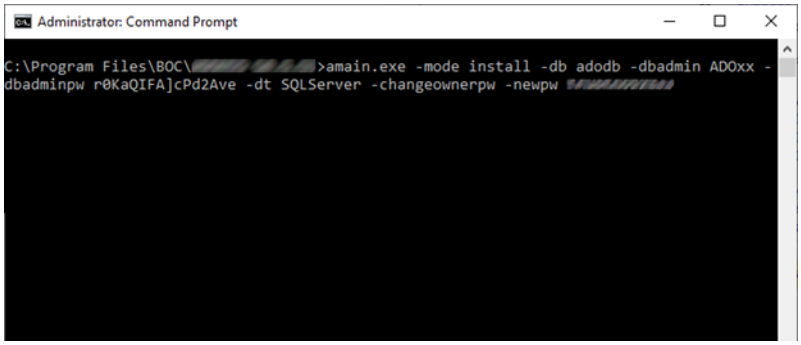

Fig. 30: Change Password of User »ADOxx«

The password of the user »ADOxx« is changed.

Placeholders

Here is an explanation of the placeholders in the command:

- **<my-database-name>**: The name of the database.

- **<old-database-user-password>**: The current password of the database user »ADOxx«.
- **<new-database-user-password>**: The new password that you want to assign to the database user »ADOxx«.

Example:

```
.\amain.exe -mode install -db adodb -dbadmin ADOxx -dbadminpw
r0KaQIFA]cPd2Ave -dt SQLServer -changeownerpw -newpw secret
```

Note: If the database user »ADOxx« is assigned to multiple BOC Management Office® databases within the same SQL Server instance, the password has to be identical for all databases. To store the changed password (encoded) in every database, append the parameter `-onlystorenewpw` to the command above and execute the command for all other databases (using the new password both for `-dbadminpw` and `-newpw`).

Example:

```
.\amain.exe -mode install -db otherdb -dbadmin ADOxx -dbadminpw secret -dt
SQLServer -changeownerpw -newpw secret -onlystorenewpw
```

3 Database Communication

The necessary communication between the BOC Management Office® product and the database is processed via two database users:

1) ADOXX_BOOT

An auxiliary user. During login, »ADOXX_BOOT« connects to the database (CONNECT rights) and retrieves the encrypted user name/password combination of the actual DB user »ADOxx« (SELECT rights on one single configuration table). »ADOXX_BOOT« has no further rights and cannot decrypt the password.

2) ADOxx

The database user in whose context the DB session is established. The entire database communication of the application is processed in the context of this user. For this, »ADOxx« has sufficient rights on the tables of the BOC Management Office® product. This user can be replaced by an individual database user or by Windows users.

Note: Within the same SQL Server instance, different BOC Management Office® databases can use different users for database communication (e.g. »ADOxx« and »ADOuser«).

4 Variants

4.1 Creating a Database Manually with an Individual DB User

When you create a database manually, you can replace the default database user »ADOxx« by any other user name/password combination. In order to do so, follow the same steps as described in **2.2**, with the following exceptions:

Create a New Database Login

- Create an individual database user in place of the database user »ADOxx«. Choose a different user name (e.g. »ADOuser«) and a different password.

Create New Schema

- Create an identically named new schema (e.g. »ADOuser«)

Create Tables

- Adapt the schema name in the script »`sqlserver.sql`«. For example, replace all occurrences of »ADOxx« with »ADOuser«.

Create a New Database Login »ADOXX_BOOT«

- Replace the placeholder `<Database name>` in the script with the name of your new database.
- Give the user »ADOXX_BOOT« the authorisation SELECT to the table <individual DB User>.dbinfo. For example, replace »ADOxx.dbinfo« with »ADOuser.dbinfo«.

Initialise database

- You need to append the command line call with the name and password of the database user. Replace the placeholders with your actual values and execute the following command in the Command Prompt:

```
.\amain.exe -mode install -dbimode initonly -db <new-database-name> -dbadmin <my-database-admin-name> -dbadminpw <my-database-admin-password> -dt SQLServer -lib "<pathname>\<library file>.axl" -lic "<pathname>\<licence file>.xxl" -customschema -schemaowner <my-custom-user-name> -schemaownerpw <my-custom-user-password>
```

Change Password of User »ADOxx« (Optional)

- Skip this step. Since you are using an individual user instead of the default database user »ADOxx«, and this individual user was just created with a new password, it is not necessary to change the password again immediately.

4.2 Creating a Database Manually with Windows Authentication

By default, BOC Management Office® products use SQL Server logins for the entire database communication (the database users »ADOxx« and »ADOXX_BOOT«, see **3**). As an alternative, you can use Windows users.

Which Windows Users Need Access to the Database?
The following user needs access to the database:

- the user under which the application server will run

Read on to find out how to set up this user in SQL Server.

Note: This manual describes how to use Windows users for granting access. Alternatively, you can use Windows groups to authorize users.

Windows users (or groups) need to be in the same domain as the SQL Server instance.

Prerequisite: Enable Windows Authentication
First, you have to change the authentication mode of the BOC Management Office® product. The application will use the current Windows user for database communication in the following situations:

- to initialise a database
- to perform all communication with the database when the BOC Management Office product is up and running

To enable Windows authentication:

1. Navigate to the folder `<application server>\conf>`.
2. Open the file `adoxx.conf` in a text editor (e.g. Notepad++).
3. Scroll down to the parameter `ADOXX_SQLSERVER_USE_WINDOWS_AUTHENTICATION`
4. Remove the leading character # from this line to enable Windows authentication.

Creating the Database
Once Windows authentication is enabled, the database can be created. The procedure is similar to that in section **2.2**. Some steps are different, and these are described in detail below:

1) **Start SQL Server Management Studio**
   - See **2.2.1**. If you are using Windows authentication to establish the server connection, your user must be a member of the **sysadmin** server role in Microsoft SQL Server.

2) **Create a New Database**
   - See **2.2.2**. By default, the user account that creates a database will be set as its owner. To change the owner of the database, simply enter the name of the new owner in the **Owner** box.

3) **Create New Database Logins**

Create a login for the Windows user under which the application server will run (instead of the database user »ADOxx«):

1) In the »Object Explorer«, expand »Security« > »Logins«.
2) Right click »Logins«, and then click »New Login«.
3) On the »General« page, select »Windows authentication« and enter the name of the user in the »Login name« box in the `domain\username` format (either manually or via the support dialogue »Search…«).
4) On the »User Mapping« page, select »Map« for the new database.
5) Click »OK« to create the login.

4) **Create New Schema »ADOxx«**
   - See **2.2.4**. You can rename the schema according to your organisation's naming conventions, such as using the `domain\username` format for the Windows user under which the application server will run.

5) **Assign Schema »ADOxx« as Default Schema to Database Users**

Assign the schema »ADOxx« (or any other name you have changed it to) to the Windows user under which the application server will run:

1) In the »Object Explorer«, expand »Databases« > »`<my-database-name>`« > »Security« > »Users«.
2) Right click the Windows user, and then click »Properties«.
3) On the »General« page, set »Default schema« to »`<my-schema-name>`« (either manually or via the support dialogue »…«).
4) Click »OK«.

6) **Edit Permissions of Database Users**

Edit the permissions of the Windows user under which the application server will run:

1) In the »Object Explorer«, expand »Databases« > »<my-database-name>« > »Security« > »Schemas«.
2) Right click the schema »<my-schema-name>«, and then click »Properties«.
3) On the »Permissions« page, add the Windows user via the button »Search…«.
4) In the table »Permissions for »<domain\username>«, activate »Grant« for »Alter«, »Delete«, »Insert«, »Select« and »Update«.
5) Click »OK«.

7) Create Tables

The tables can be generated with the script »sqlserver.sql« which you can find in the installation package of your BOC Management Office® product in the folder »dbinfo«. You need to adapt the script.

1) In SQL Server Management Studio, click the »Open File« button to browse to and open the script »sqlserver.sql«.
2) Replace the name »ADOxx« in the script with the name of the Windows user under which the application server will run in the [domain\username] format. Then run the script with »Execute« (“F5”).

Note: The square brackets around the name are required.

8) Create a New Database Login »ADOXX_BOOT«

- Skip this step. When using Windows authentication to connect to the database, the user »ADOXX_BOOT« is not required.

9) Create ODBC Data Source

- See **2.2.9**. When prompted to identify how SQL Server should verify the authenticity of the login ID, choose »With integrated Windows authentication«.

10) Initialise Database

To initialise the database, you need to specify the name and password of the current Windows user as the database admin in the command line call. Replace the placeholders with your actual values and execute the following command in the Command Prompt:

```
.\amain.exe -mode install -dbimode initonly -db <new-database-name> -dbadmin
<current-windows-user-name>  -dbadminpw  <current-windows-user-password>  -dt
```

```
SQLServer -lib "<pathname>\<library file>.axl" -lic "<pathname>\<licence file>.xxl"
```

11) Change Password of User »ADOxx« (Optional)

- Skip this step. When using Windows authentication to connect to the database, the user »ADOxx« is not required.

4.3 Create a New Database Login »ADOXX_BOOT« manually

As an alternative to creating the database user »ADOXX_BOOT« by script (see **2.2.8**), you can manually create the user.

1. Expand the entry »Security« in the Object Explorer. Open the context menu of the sub entry »Logins« and choose »New Login«. The window »Login – New« appears.

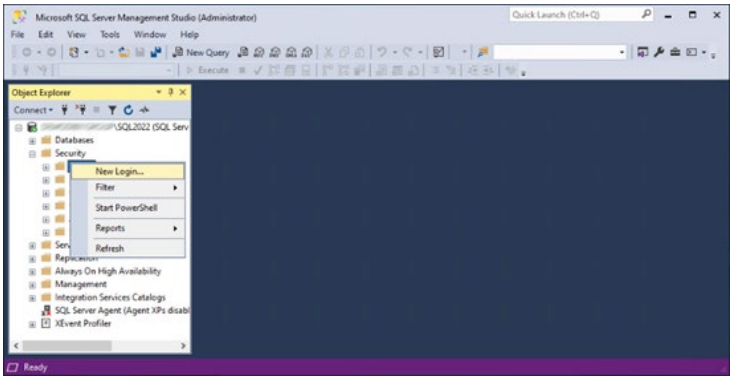

Fig. 31: Create a new database login

2. Enter the following information on the »General« page:
   - Set »Login name« to »ADOXX_BOOT«.
   - Choose »SQL Server authentication« and set the password to »iCfCK!lHP8S1L]Ry«
   - Deactivate »Enforce password policy“.

   Leave all other settings on this page untouched.

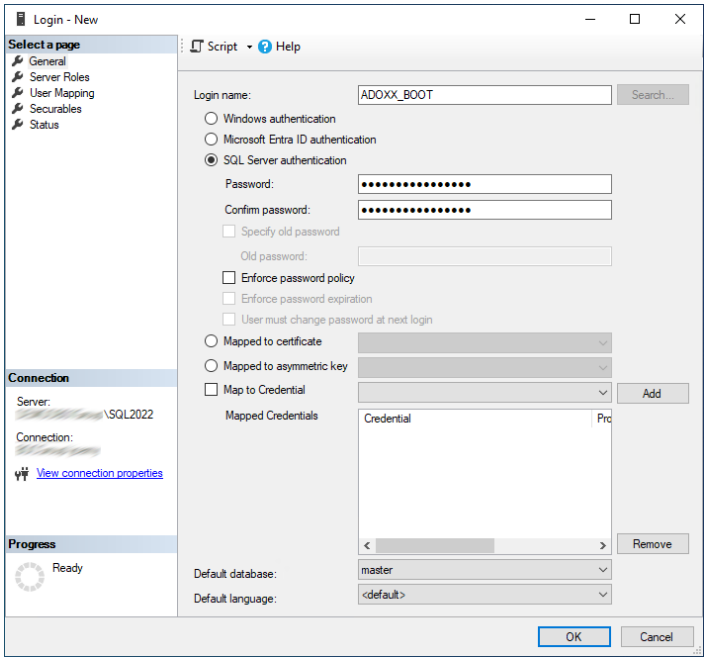

Fig. 32: Enter login name and password

3. Switch to the page »User Mapping«. Activate the mapping of the new database »adodb« and the new database user »ADOXX_BOOT«. Set »Default schema« to »ADOxx«.
   Leave all other settings untouched. Confirm with »OK«.

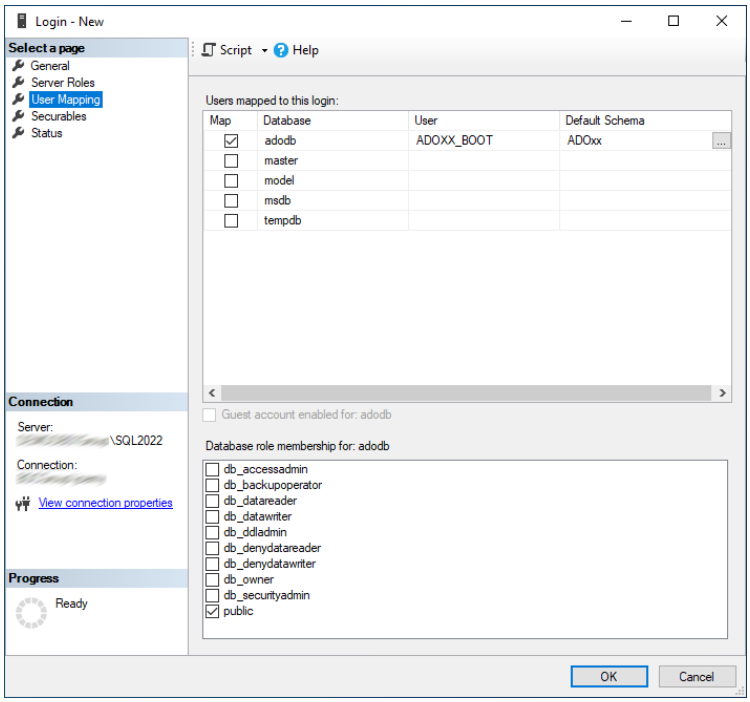

Fig. 33: Map user to new login

The database user »ADOXX_BOOT« is now available.

4. Expand the entry »Databases«, its sub entry »adodb« and its sub entry »Tables« in the Object Explorer. Open the context menu of »ADOxx.dbinfo« and choose »Properties«.
   The window »Table properties – dbinfo« appears.

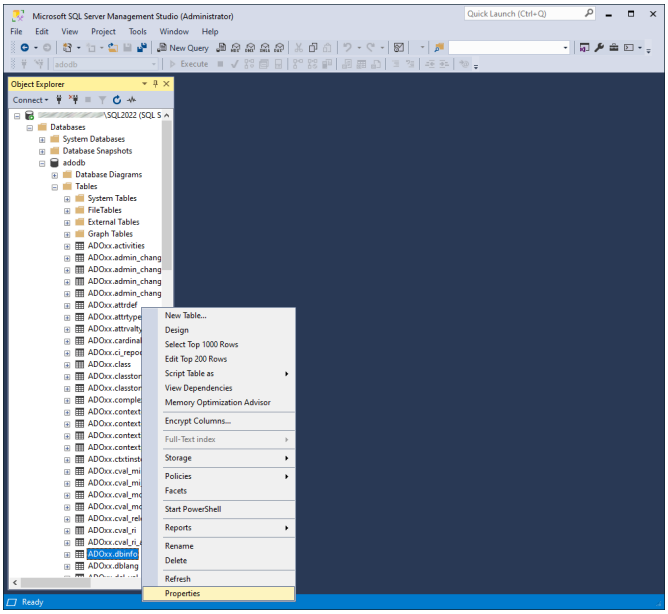

Fig. 34: Edit properties of table »ADOxx.dbinfo«

5. Switch to the page »Permissions«. Add the user »ADOXX_BOOT« via the button »Search…«. In the table »Permissions for ADOXX_BOOT« activate »Grant« for »Select«. Leave all other settings untouched. Confirm with »OK«.

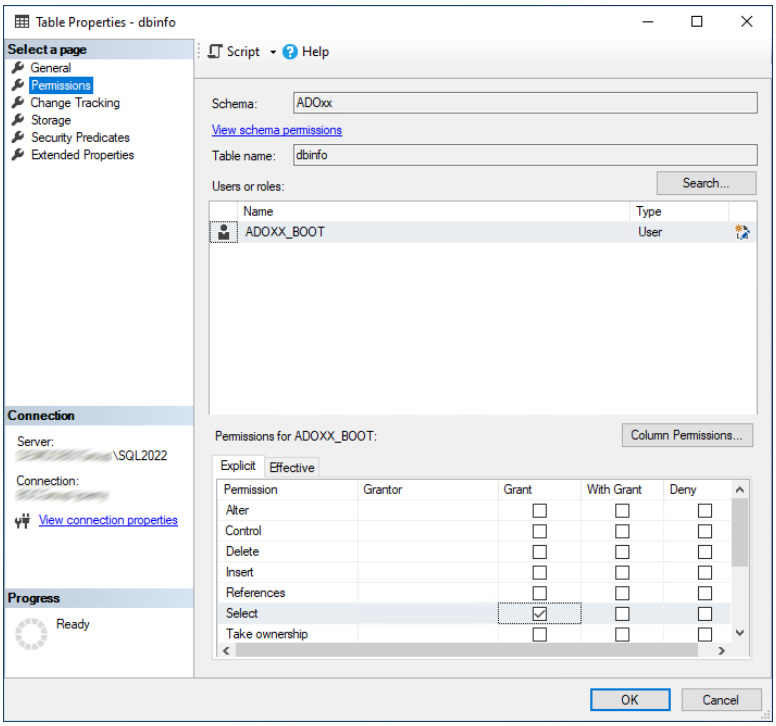

Fig. 35: Assign permissions for the database user »ADOXX_BOOT«

The modified permissions for the database user »ADOXX_BOOT« are saved.

4.4 Drop Tables: Preparing a Database for Reuse

Instead of creating a new database, you can reuse an existing BOC Management Office® database for a new product version. This is especially useful when you only have access to one database (e.g. because of specific organisational restrictions).

To reuse a database, you need to drop all product specific tables, and then initialize the database with the new product version. Settings such as the created database users (see **Database Communication**), schemas and permissions are retained. All table data (models and objects and their relations, the user accounts and the defined user rights) are permanently deleted.

The tables can be dropped with the script »`sqlserver_dropadoxxtables.sql`«. You can find the script on the installation medium of your BOC Management Office® product in the folder »`02 Application Server\dbinfo\sqlsvr`«.

Prerequisites
Before you begin:

- We strongly recommend creating a backup of the database.

- Export the library-specific component settings and a migration package as described in the **Administration Help**. This step is necessary because the data will be re-imported into the database later.

Prepare Database for Reuse

In order to prepare a Microsoft SQL Server database for reuse:

1. In SQL Server Management Studio, click the “Open File” button to browse to and open the script »`sqlserver_dropadoxxtables.sql`« Select your database from the drop-down list “Available Databases”. Run the script with “Execute“ (“F5”).
2. Create new tables as described in **2.2.7**.
3. Initialize the SQL Server database for the BOC Management Office® as described in **2.2.10**.

The database is ready for use. Now you can perform the migration from the earlier version of the BOC Management Office® product to the new version as described in the **Installation Manual**.

Note: If you are using an individual DB User (see **Creating a Database Manually with an Individual DB User**), you have to adapt the script »`sqlserver_dropadoxxtables.sql`« before using it. Replace all occurrences of »ADOxx« with your user (e.g. »ADOuser«).

5 Appendix

5.1 Required Database Permissions

This section describes the database user permissions that are required by BOC Management Office® products to run properly.

1) ADOXX_BOOT

The user »ADOXX_BOOT« must have the following permissions:

- CONNECT
- SELECT ON ADOxx.dbinfo

2) ADOxx

The user »ADOxx« must have the following permissions:

- CONNECT
- SELECT, INSERT, UPDATE, DELETE, ALTER ON SCHEMA ADOxx

3) Database Administrator (e.g. ‘sa’)

The database administrator user must have the following permissions.

To create the database:

1) If only a login for the database creator user exists:
   CREATE **ANY** DATABASE on the server
   ALTER ANY LOGIN on the server
2) If also a user (for the login) of the database creator user in the master database exists:
   CREATE DATABASE in the master database
   ALTER ANY LOGIN on the server

Or:

- Add the login of the database creator user to the server roles **dbcreator** and **securityadmin**.

To create the tables:

- The user must be the owner of the database (member of the role **db_owner** or the creator of the database)