Defining an OLEDB Using Windows Authentication in SAS® Management Console
Release Information

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This document explains how to define an OLEDB library in SAS® Management Console in order to access the Microsoft SQL Server using Windows authentication.

The following prerequisites are necessary before you begin defining an OLEDB library.

- Make sure that your Windows user ID (entered in the form domain\userid) has "Log on as a batch job" rights assigned. For details on assigning user rights, refer to your Windows operating system documentation.
- SAS® Foundation install must include SAS/ACCESS® Interface to OLE DB.
- Have Microsoft® SQL Server® 2012 Native Client installed on Windows, where SAS Workspace Server is running on.
- Before you configure the library in SAS Management Console, make sure that you can submit a LIBNAME statement successfully in Base SAS® software.

Example of a LIBNAME Statement

``` Sas
libname sqlole oledb
init_string="Provider=SQLNCLI11;
Integrated Security=SSPI;
Persist Security Info=True;
Initial Catalog=Users;
Data Source=sqlhost.sas.com"
schema=DBO;
```

Note: If you cannot see SQL Server tables in the SAS® Explorer window, then you need to submit the following SQL procedure (PROC SQL) to find the table names and the corresponding schema for each table.

``` Sas
proc sql;
connect using sqlole as oledb
   select table_name, table_schema from connection
to oledb (OLEDB::Tables);
quit;
```

Adding a User with the SAS® Management Console User Manager

The first step in defining an OLEDB library is to add your user definition to SAS Management Console by using the User Manager plug-in. The following steps show how to add your user definition.

1. Start SAS Management Console login with your administrator account. For example, sasadm@saspw.
2. From the SAS Management Console navigation tree, right-click the User Manager icon; then select New ► User. SMC displays the New User Properties dialog box, as shown in Display 1.
3. On the **General** tab, enter your name in the **Name** field. Note that you can enter any user name you want to use (for example, a single name, your full name, and so on).
4. Select the **Accounts** tab and click **New** to display the **New Login Properties** dialog box.
5. Enter your Windows domain and user ID (domain\userid) and the password.
6. Select DefaultAuth as the authentication domain.
7. Click OK to add the login to the user.
8. Click OK to close the New User Properties dialog box.
9. Click User Manager to verify that your name appears in the user name list, as shown in the next display.

Display 3. New Login Properties dialog box

Display 4. New user listing in the User Manager panel
Defining the OLEDB Server

1. From the navigation tree, right-click Server Manager. Then select New Server to display the New Server Wizard.

2. In the wizard, expand the Database Servers folder and select OLE DB Server.

3. Click Next, which displays data entry fields where you can enter the name and description for the new OLE DB Server.

4. In the Name field, type the server name (for example, ledb_sqincli_iwa).
5. Click **Next** to display the server properties.
6. Change Data Source Type to **OLE DB – Microsoft SQL Server(PC Client)**.
WARNING: The following server properties displayed in the data entry box are default values and should **NOT** be changed:

- Major version number
- Minor version number
- Software version
- Vendor

**Note:** The Associated Machine property refers to the SAS Application Server—**NOT** the SQL Server machine. Click **Next** to display the OLE DB connection information.

7. Type the SQL Server name with instance name, for example, "sqlhost\MSSQL2016" with quotation marks for the SQL Server in the **Datasource** field.

8. Type **SQLNCLI11** in the **Provider** field. And change **Authentication type** to (None). Leave **Authentication domain** as (None).
9. Click the **OLE DB Connection Information Options** button to display the OLE DB Connection Information Options dialog box.

*Display 9. OLE DB Connection Information Options dialog box*
10. Enter the following text in the **Init String** field. Note: Type the entire string, within quotation marks (" "), **all in one line**.

```
"Provider=SQLNCLI11;
    Integrated Security=SSPI;
    Persist Security Info=True;
    Initial Catalog=Users;
    Data Source=sqlhost.sas.com"
```

11. Click **OK**.

12. Click **Next**. A confirmation screen will display with a message stating that the definition of a new server has been completed.

13. Then click **Finish**.

14. In SAS Management Console, click the **Server Manager** icon. The new OLEDB server name, **oledb_sqlncli_iwa**, should appear in the **Name** list in the right panel.

*Display 10. Server Manager icon*
Defining the OLEDB Library

1. From the navigation tree in SAS Management Console, expand Data Library Manager.
2. Under Data Library Manager, right-click SAS Libraries and select New Library.

Display 11. Selecting New Library from the SAS Libraries menu

4. In the wizard, expand the **Database Libraries** folder and select **OLE DB Library**. Click **Next**.

5. Type the library name (for example, `oledb_sqlncli_iwa_lib`) in the **Name** field, as shown in the next display.

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*Display 12. Expanded Database Libraries folder with OLE DB Library selected*
Display 13. Entering the OLE DB library name and description

6. Click **Browse** to select the location of the folder. Then click **Next**.

**Note**: Make sure you have ReadMetadata, WriteMemberMetadata, and other appropriate permissions as shown in the next display.
Display 14. Permissions to access the target folder

7. Select **SASApp** and click **Next**.
Display 15. Selected Servers

8. Type the libref name (for example, sqliwa) in the Libref field and click Next.
9. In the **Database Server** field, select the OLE DB server (**oledb_sqlncli_iwa**) that you created previously in "Defining the OLEDB Server." Click **Next**. Then **Finish** to create the new library.
Display 17. Select database server
Verifying the Library Definition and Registering SQL Server Tables

To check the accuracy of the LIBNAME statement that was generated in the previous section, perform the following steps:

Verify the SQL Server Tables, Which Are Listed in SAS® Explorer

1. From the navigation tree in SAS Management Console, right-click Data Library Manager.
2. Under Data Library Manager, locate and right-click the library that you just created (oledb_sqlncli_iwa_lib) and select Display LIBNAME statement.
3. The Display LIBNAME Statement message window appears, as shown in the next display with the LIBNAME statement that is generated for your server.

![Display LIBNAME Statement](image)

Display 18. The LIBNAME statement generated for oledb_sqlncli_iwa_lib

4. Copy the LIBNAME statement from the Display LIBNAME Statement window and paste it into your SAS program editor.
5. Submit the LIBNAME statement and verify that the appropriate tables are listed in the SAS Explorer window.
6. Right-click the library (oledb_sqlncli_iwa_lib) again and select Properties. Click the Authorization tab. Make sure that authorized SAS users have permission to read and write the library data. Or you assign the appropriate permissions as you need here.
Import the SQL Server Tables

1. From the navigation tree in SAS Management Console, expand Data Library Manager.
2. Under Data Library Manager, locate and right-click oledb_sqlncli_iwa_lib and select Register Tables.
3. Check the box for Enable case-sensitive DBMS object names.
4. Check the box for Enable special characters within table or column object names.
5. Click **Next** again, and the Define Tables dialog box displays with a list of SQL server tables.
6. In the list, click the table name for which you want to import metadata.
7. Click **Next** and the application will display the table you selected.
8. Click **Finish** and you will now be able to use the specified table in any SAS® BI client.
9. Your SAS® Enterprise Guide® users will see the defined library and registered tables.

Resources


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