SQL Data Export for PS/PSS

Version 3.1.0

USER MANUAL

(M98232701-03-19A)

INDEX

1.- SQL Data Export software installation

Warning: Version 3.0.0 and later versions of this software use a different data structure. If you are currently updating from a version earlier than 3.0.0, **the data will be migrated** from the old structure to the new one; however, **only the data of the engines that are currently configured will be migrated**.
If your database contains engine data that is not included in the current configuration, this data will not be migrated.

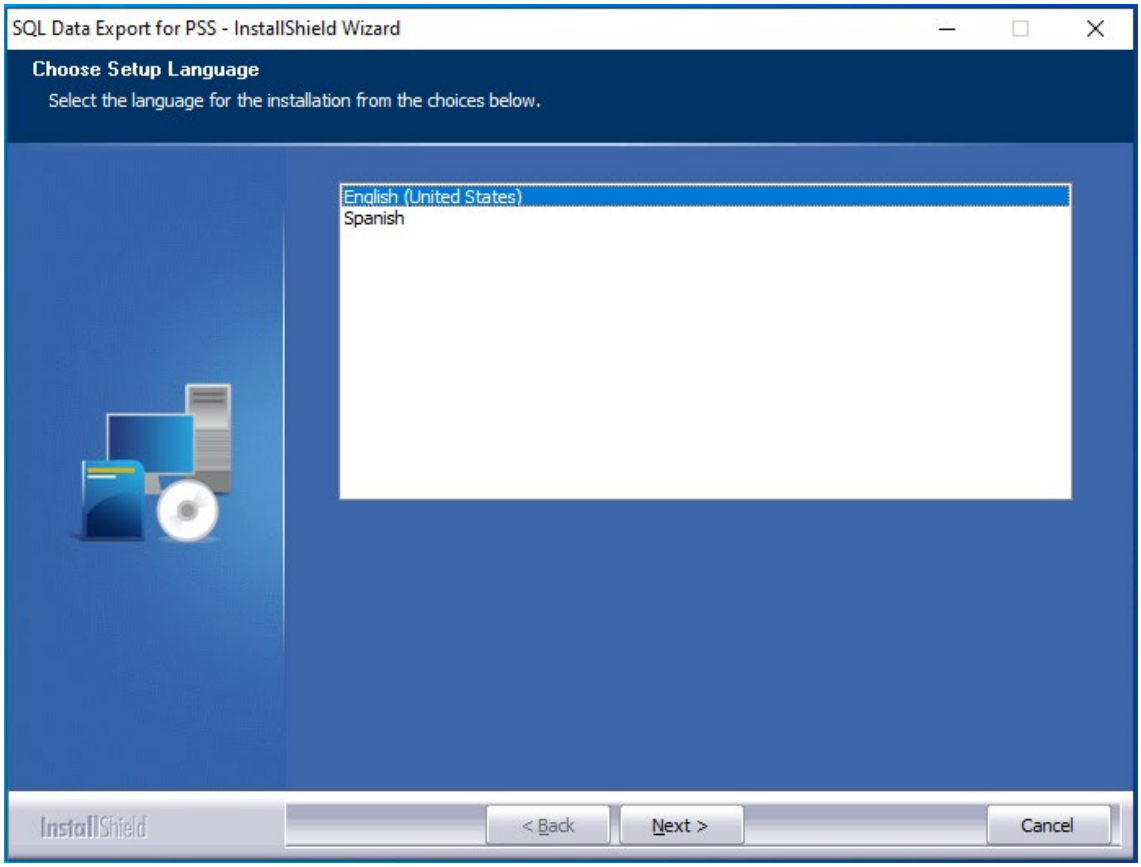
The minimum necessary requirements for SQL Data Export to work properly on your PC are:

Windows XP SP3, Windows Vista, Windows 7, Windows 8, Windows 10.(x32,x64)

Windows Server 2003 SP1, Windows Server 2008, Windows Server 2012. (x32, x64)

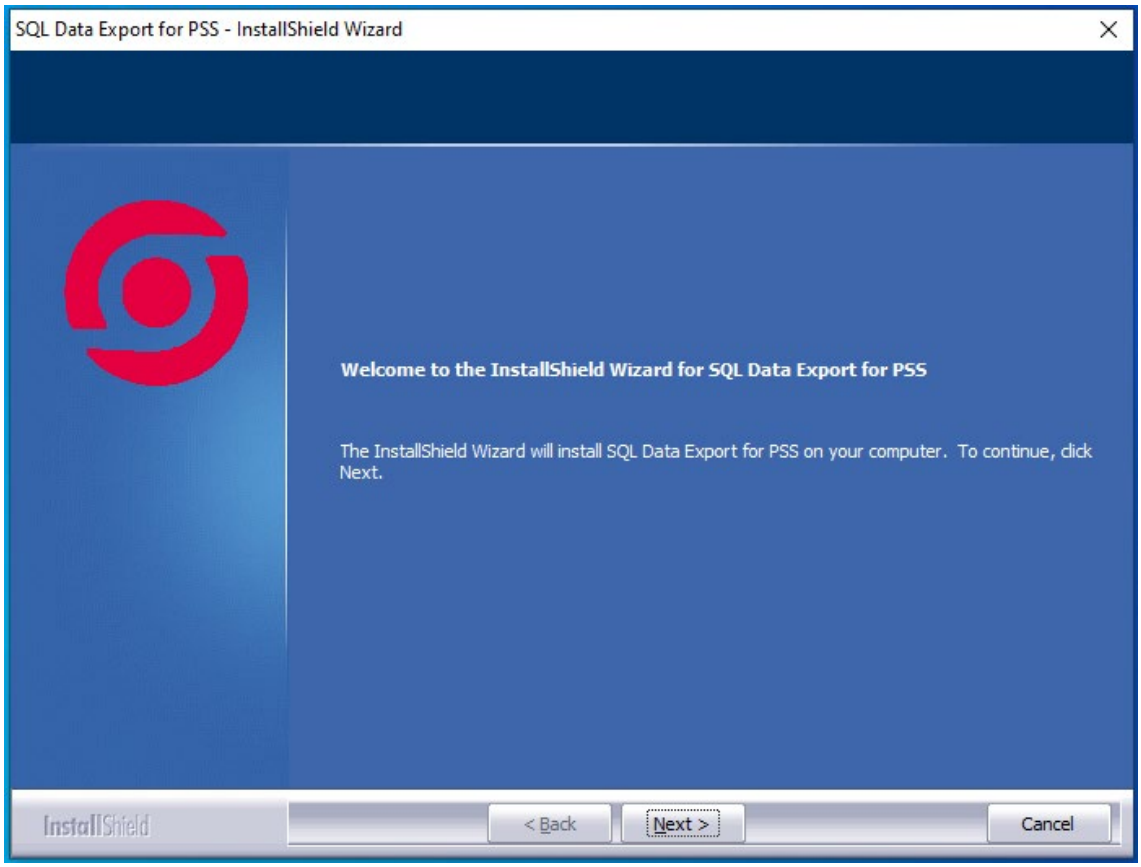
PowerStudio/PowerStudio Scada version 3.0.1 or higher.

When the SQL Data Export installation starts a dialogue window will appear to select the installation language.



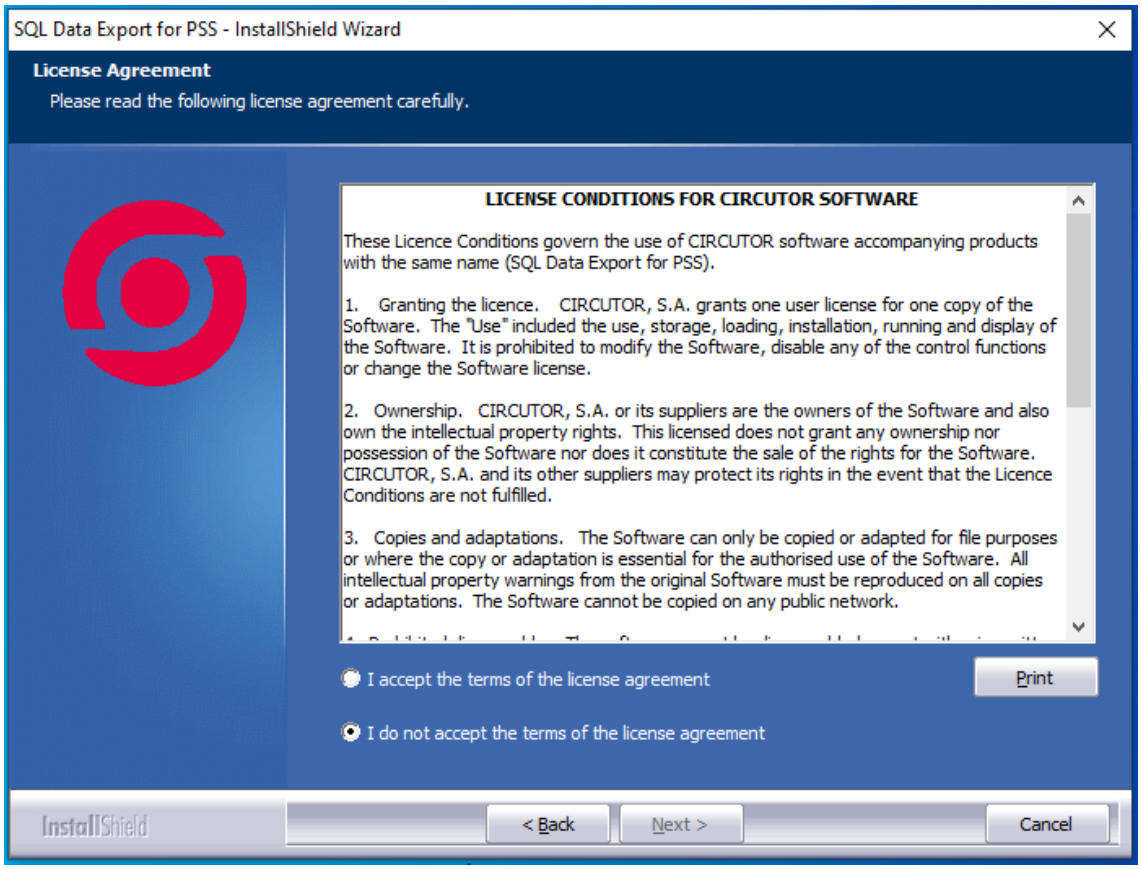
Installation language

After selection of the language when the "***Next***" button is pressed a presentation screen appears.



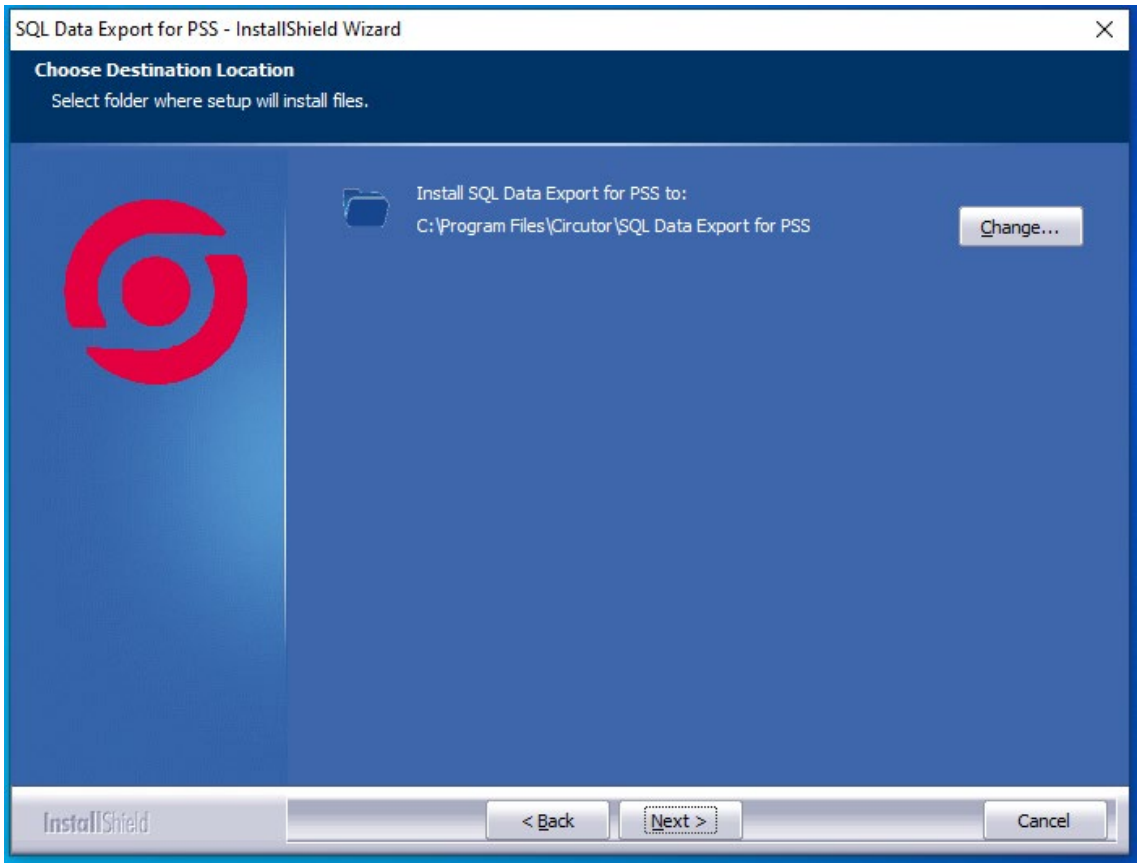
Welcome screen

After pressing the "***Next***" button the license screen is accessed where we must accept its terms to continue.



License terms

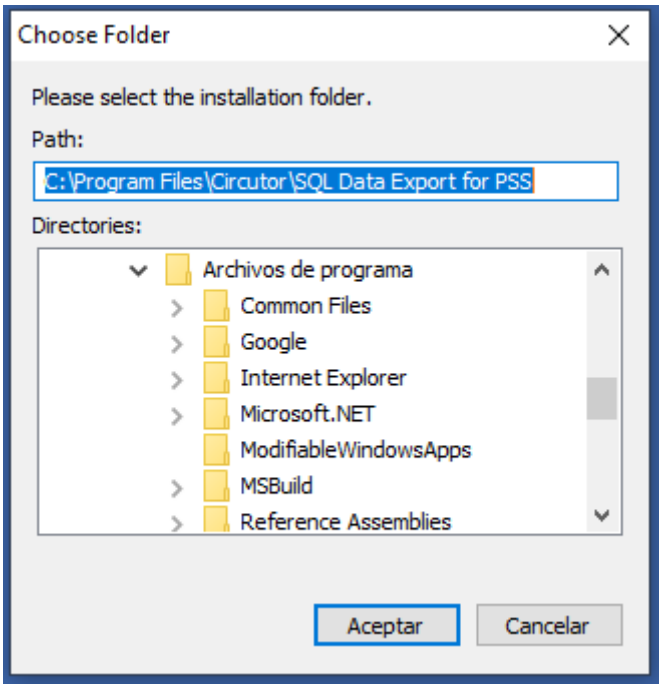
After completing the installation preparation process a dialogue will appear where you will be asked for the application installation directory.



Selection dialogue for the installation folder

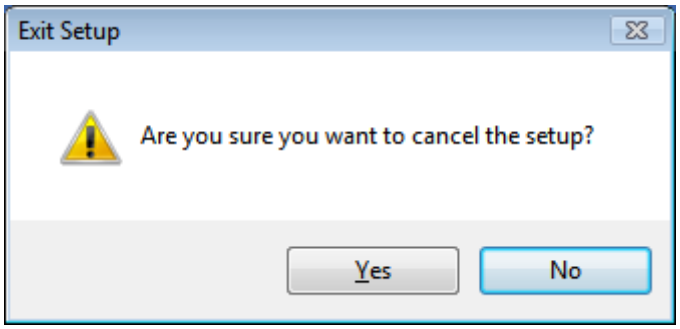
Here you may select the directory in which to install the application. As you will see, the installation program proposes a destination directory for the application, which you can change by pressing the "***Next***" button.

If you press this button, a dialogue box will appear where you may choose the new application installation directory.



Selection dialogue for the new installation folder

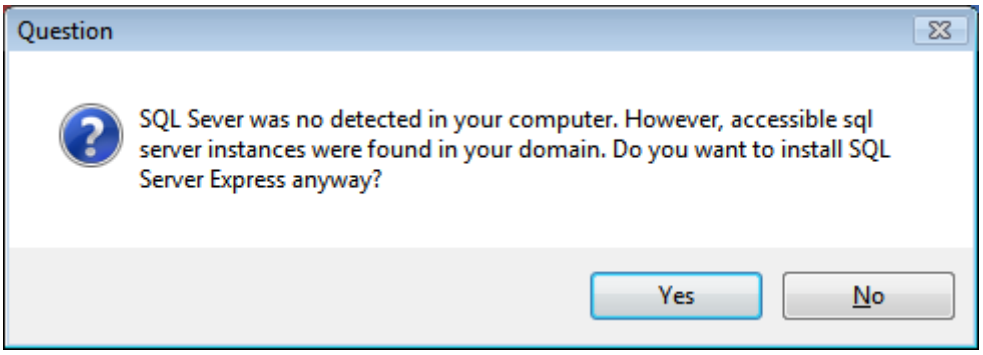
Once the application destination directory has been entered you may pass on to the next screen by pressing the "***Next***" button. Note that at any time you may exit the installation by pressing the "***Cancel***" button on the screens that provide it. If you choose this option a confirmation message as follows will appear:



Confirmation message for quitting the installation

If you choose "***No***" the installation will continue from the point where it was left off, otherwise you will quit the installation without saving anything.

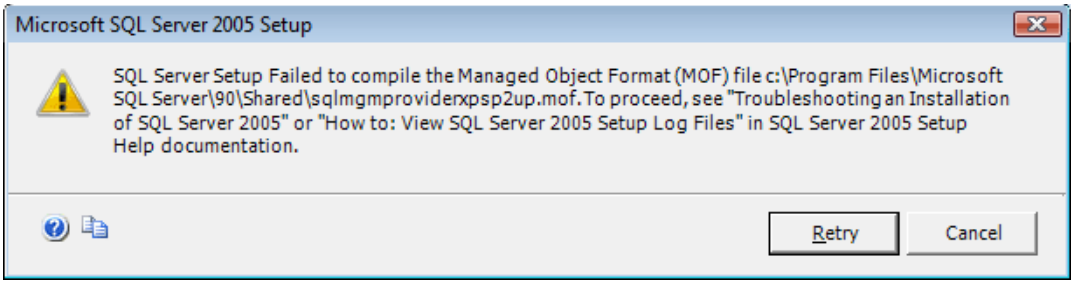
One of the main installation points is to establish the SQL Database Server where you want to create the said database. We can use any server that is already defined in our machine or on one of the machines of the local network. In the event that you do not have a local server installed or you do not wish to use any remote one on the local network, the application allows you to install the free local server SQL Server Express 2005 SP4.



Please note that to be able to see and use servers installed on the other machines in our network, we must have previously configured these to accept remote connections. Point 1.1 explains in detail how to enable remote connections in an SQL Server.

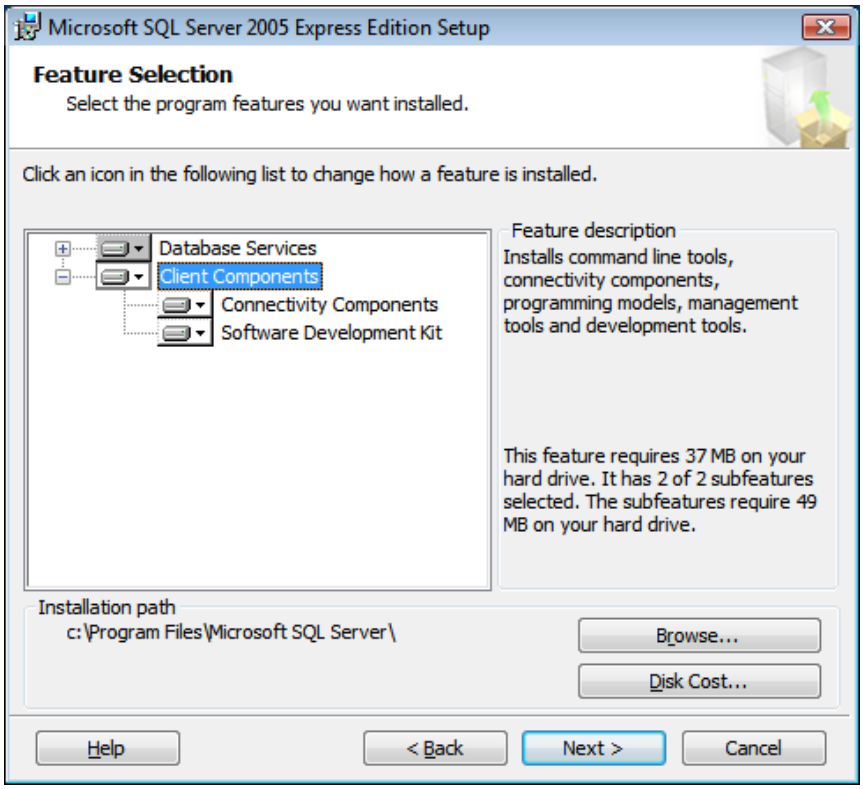
The format of the server names found will always be “machine\instance-server”.

If we are installing SQL Data Export on a Windows Vista or Windows XP "operating system" it is possible that the SQL Server Express installation may malfunction as these come with certain internal modules that are not properly compiled. If this occurs we will see the following message:

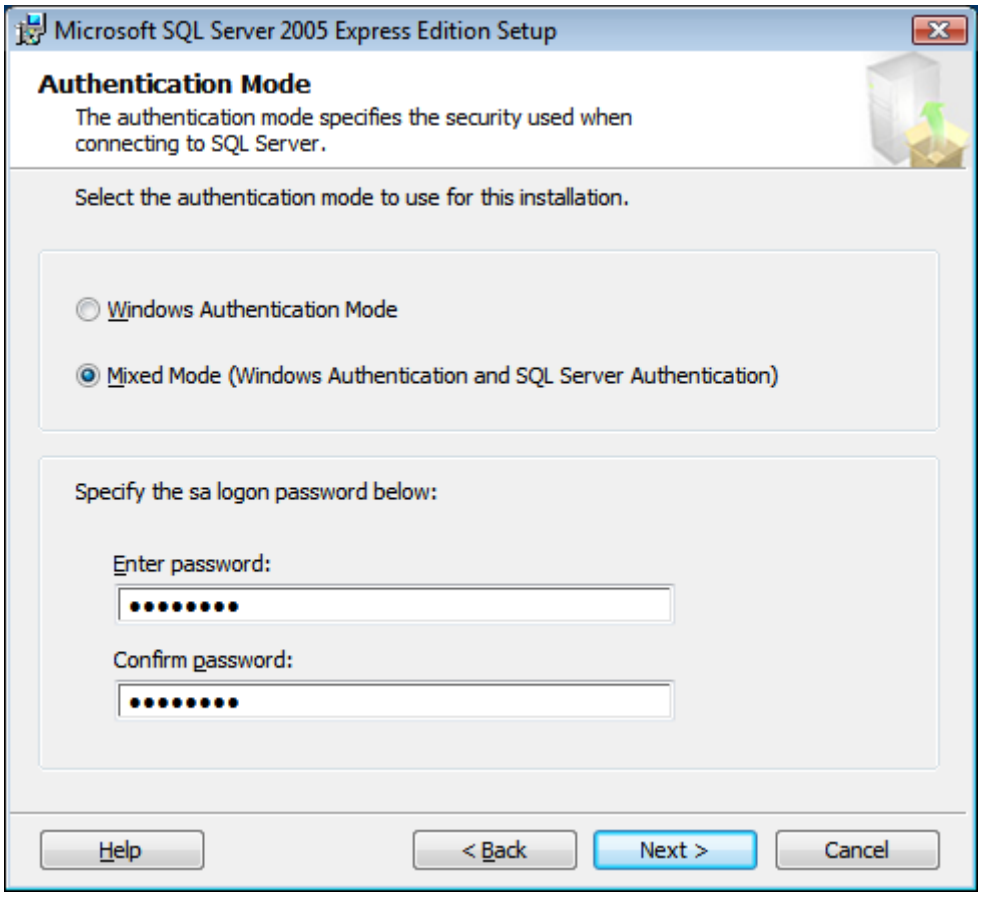


To fix this problem, perform the following steps:

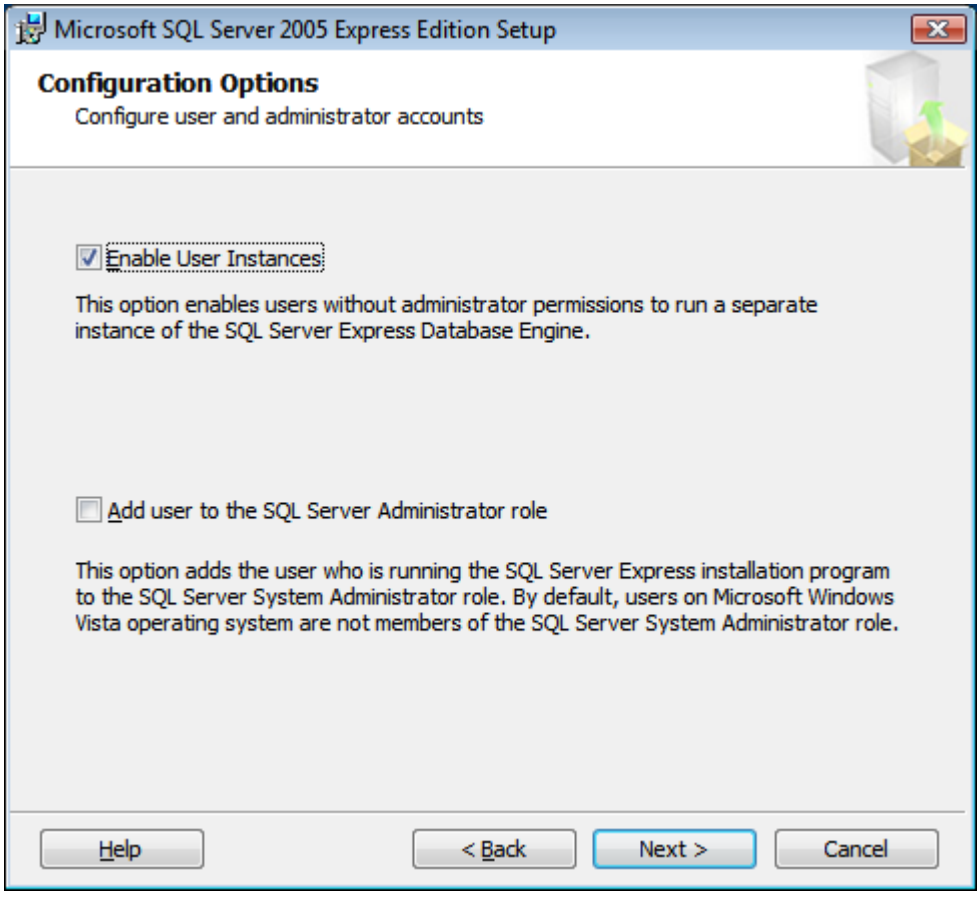
1. Open the command line as Administrator. (Start→Programs→Accessories→System console, click the right mouse button and the select option "Run as... Administrator").
2. Write “winmgmt /verifyrepositor” and press enter.
3. If it says that the repository is incoherent write “net stop winmgmt” and press enter.
4. Next run: “winmgmt /salvagerepository”.
5. When it ends after 2 or 3 minutes, we will be able to install SQL Server Express without any problem.



To configure SQL Server Express properly we must select the "Mixed mode" option on the "Authentication mode" screen and set the password to "**#Rhskj&09PkSlWs**", to start the session for user sa:



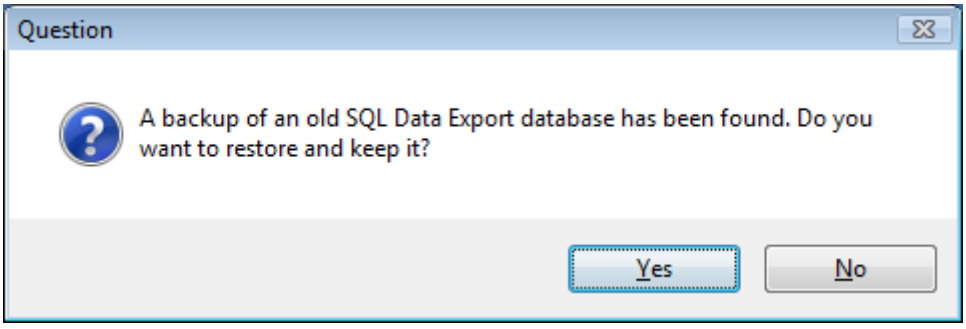
On the next “Configuration options” screen leave the "Enable user instances” checkbox selected:



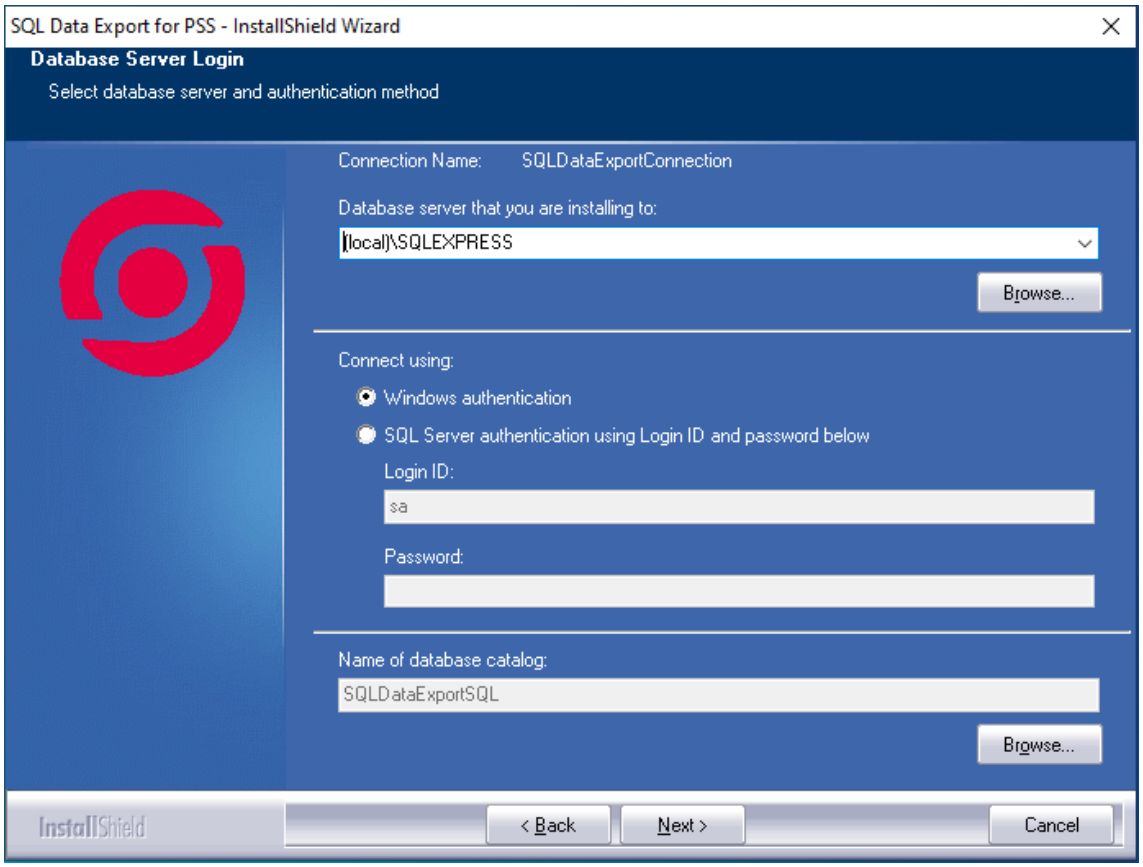
It is most important to set these values properly for the application to work correctly.

In the Windows Vista operating system it is recommended to select the ‘Add user to the SQL Server Administrator function’ option.

Once the installation process of the SQL Server has been completed, if any copy of the SQL Data Export application database is found, we will be given the option of adding it to the SQL Server.



Next, the selection screen for the SQL Server to be used will be displayed, where we can obtain all the accessible servers with the Browse button:



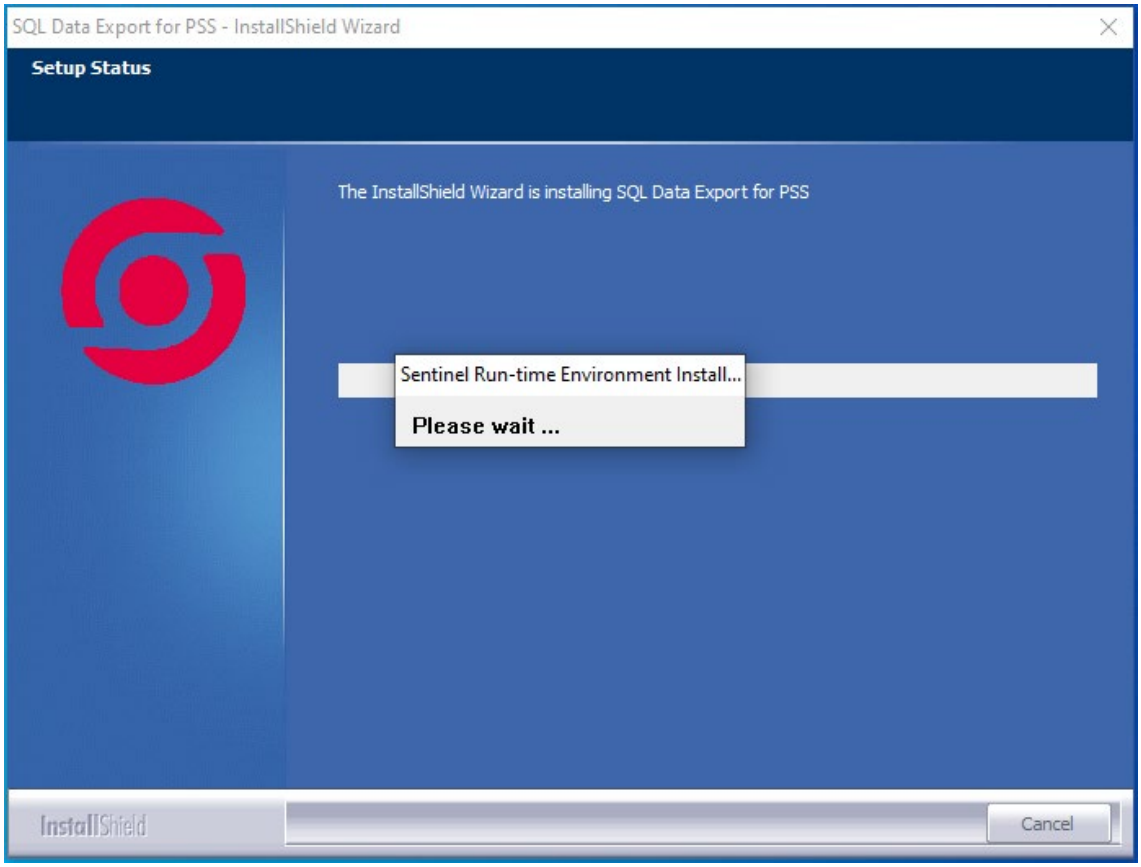
Selection of the SQL Server

Apart from the above-mentioned, the following must be taken into account:

1. The SQL Server must allow access to the database from Windows services. Failing this, run the Windows SQLatDataExportServer service with a Windows user who has access to the database.
    a. If your version of SQL Server is equal to or later than 2012, you can execute the following database instruction to give permissions to Windows services: ALTER SERVER ROLE [sysadmin] ADD MEMBER [NT AUTHORITY\SYSTEM]; This command is valid if the SQLDataExport and the SQLServer are in the same device. If not, consult online how to give SQLServer access permissions to a service in another device. For SQLServer 2008 the sentence is slightly different. EXEC master..sp_addsrvrolemember @loginame = N'NT AUTHORITY\SYSTEM', @rolename = N'sysadmin'
    b. To change the user that executes the service click on service properties (screenshot of example).

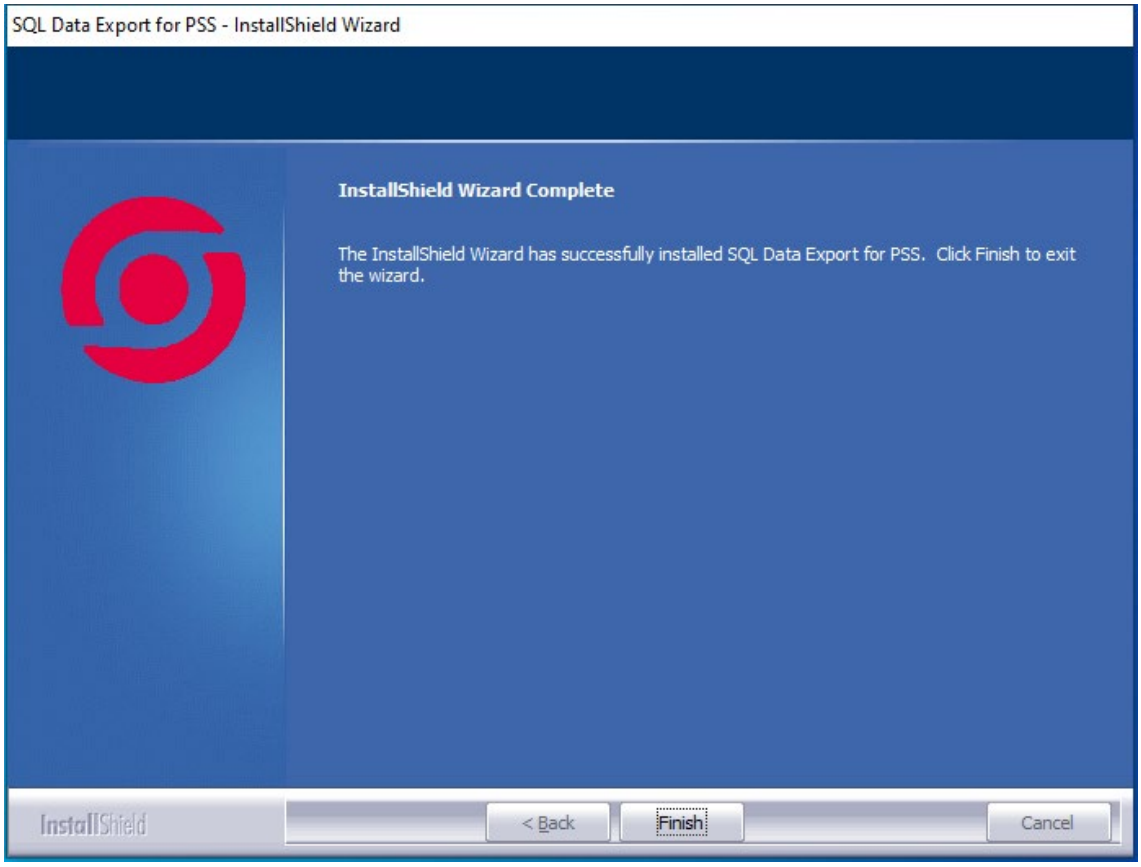
2. If user and password are specified, the user in question must belong to the specified database db_owner role and have login capacity.

After all this process the copying of files will finally commence, the progress of which can be checked on the progress indicator:



Installation progress bar

As you can see the installation process can still be cancelled while the files are being copied, although it is advised to wait until the installation has been completed and if necessary proceed to uninstall it.



Finally, if everything has been completed correctly, the installation process will finish, returning the operating system to its idle state, after which you may run SQL Data Export from the start menu.

Note 1: *It is possible that the installation program may require a reboot for the changes to be effective. In this case, you will see a warning message and it is recommended not to SQL Data Export before having rebooted.*

Note 2: *Depending on the configuration of your computer, it is possible that the installation will need to access the Internet to update certain files, for example to update the .NET Framework version. It is recommended that you have an Internet connection enabled on your computer.*

Note 3*: If you have problems connecting to the server (local)\SQLEXPRESS change the server name to 'machine\SQLEXPRESS' where machine is the name of your computer within the local area network.*

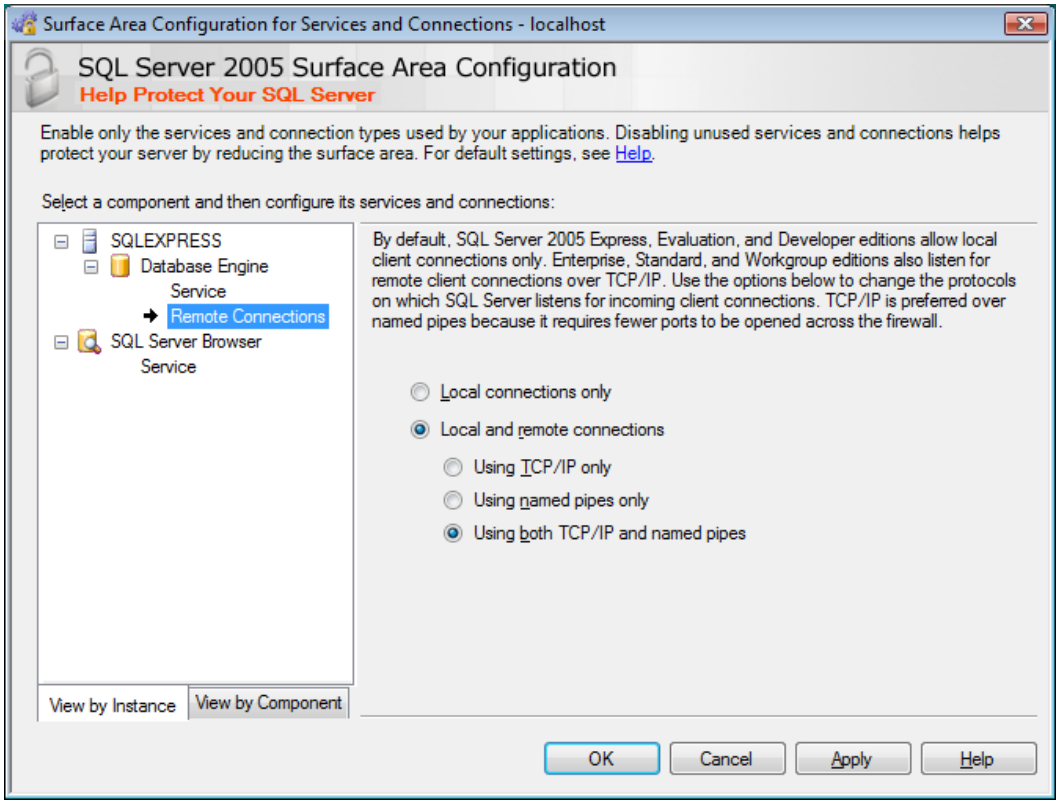
After having rebooted your computer, SQL Data Export will be installed on your computer and you can run it from the **Start** menu.

1.1.- Enable remote connections of the SQL Server

To connect to a database server installed on a machine other than the one where we have installed the application, you will need to configure SQL Server for it to accept the connection. Perform the following steps:

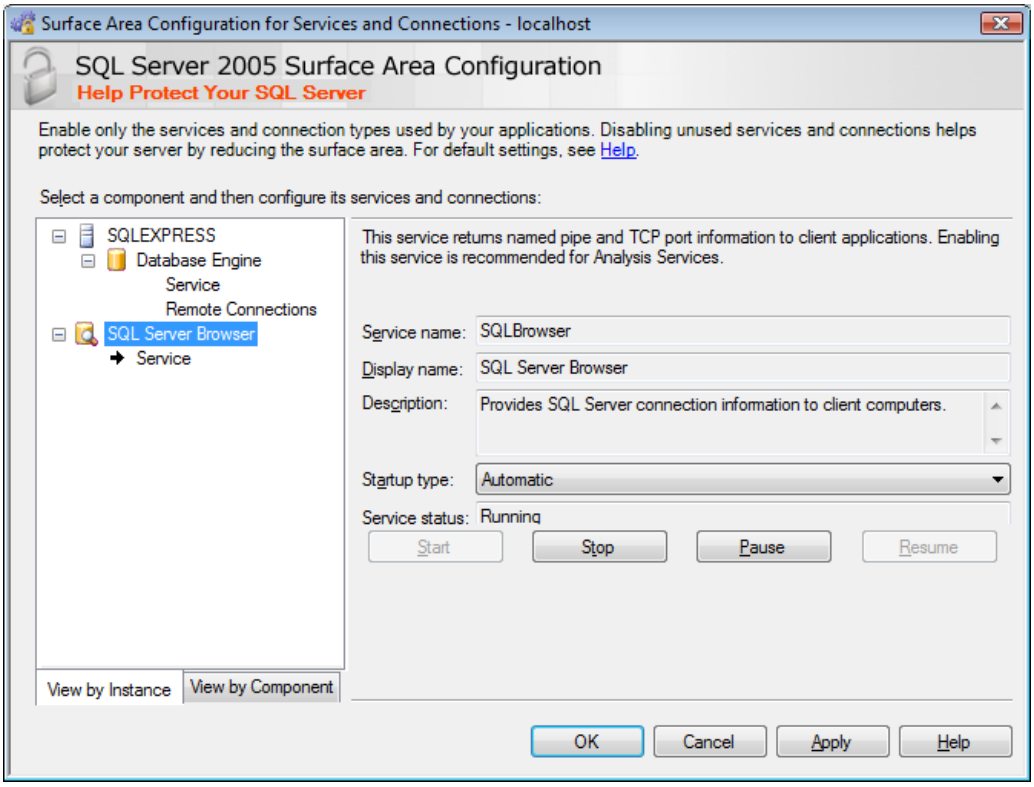
1. Enable remote connections in the SQL Server instance to which you wish to connect from the remote machine.

   - Click on "Start → Programs → Microsoft SQL Server 2005 → Configuration tools → SQL Server surface configuration".
   - In Surface configuration of SQL Server, select the surface configuration option for services and connections.
   - Expand the option "Database Engine → Remote connections" and select local and remote connections and the TCP/IP protocol and channelling by name
   - Click on service, click on Stop, wait until it stops and the click on Start to restart the service.
   -



2. Activate the SQL Server browser service.

   - Click on "Start → Programs → Microsoft SQL Server 2005 → Configuration Tools → SQL Server surface configuration".
   - In Surface configuration of SQL Server, select the surface configuration option for services and connections.
   - Expand the option SQL Server Browser and select automatic start mode, apply the changes and click on Start.



3. Configure the Windows firewall (this step is usually not necessary)

   - Create an exception for SQL Server:

     1. In Windows Firewall, click on the exceptions tab and then click on Add program.
     2. In the Add program window, click on Browse.
     3. Locate the "…\MSSQL.X\MSSQL\Binn\sqlservr.exe" executable program in the folder where MS SQL Server is installed, click Open, then click OK.
     4. Repeat steps 1 to 3 for each instance of SQL Server 2005 that requires an exception.

   - Create an exception for SQL Server Browser:

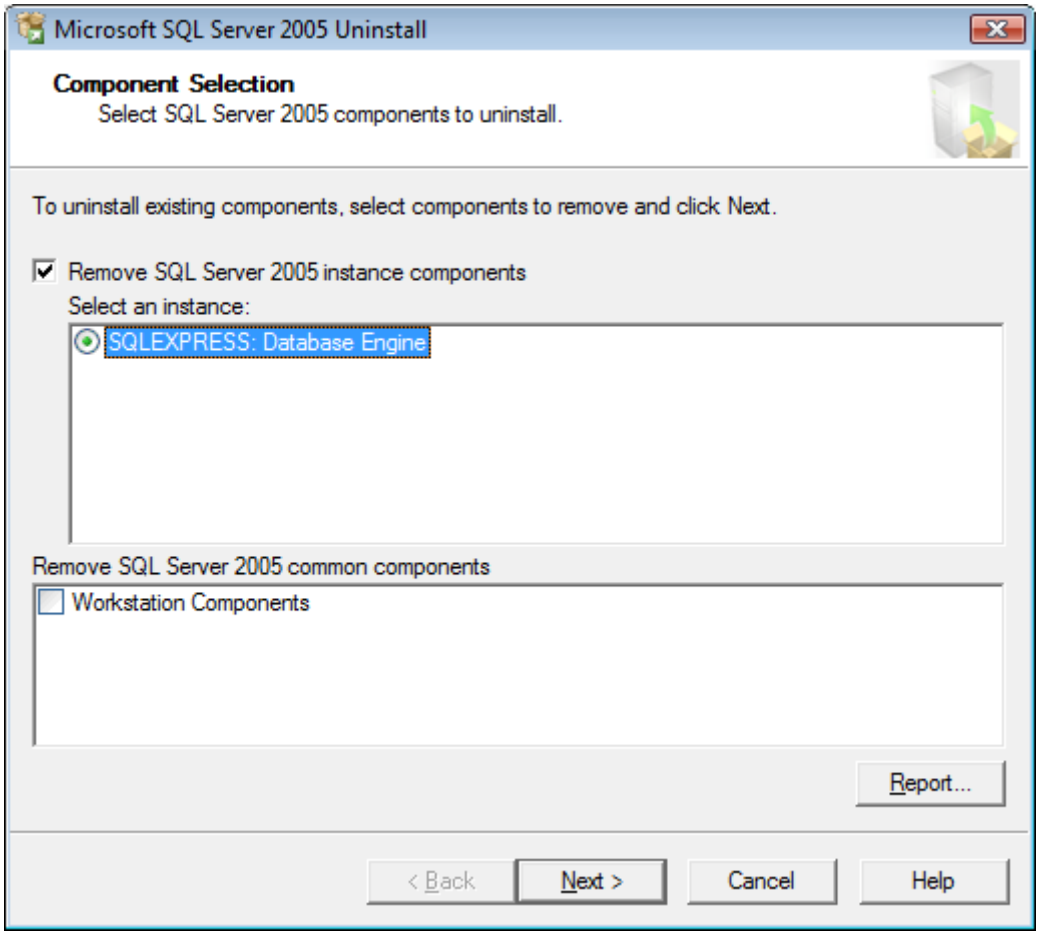
     1. In Windows Firewall, click on the exceptions tab and then click on Add program.
     2. In the Add program window, click on Browse.

3. Locate the "…\90\Shared\sqlbrowser.exe" executable program in the folder where MS SQL Server is installed, click Open, then click OK.

1.2.- Uninstall SQL Server

If for any reason it is necessary to uninstall the local SQL Server Express 2005, follow these steps:

1. From the Windows control panel in Add and Remove Programs, uninstall "Microsoft Sql Server 2005". Select the option "Remove components of the SQL Server 2005 instance" and "SQLEXPRESS: Database engine".



2. From the Windows control panel in Add and Remove Programs, uninstall "Microsoft Sql Server Native Client".

2.- Introduction to SQL Data Export

SQL Data Export is an automatic system for exporting the variables of the devices stored in PSS and facilitates:

- The downloading of variables for the devices added to PSS
  - Select the device from which you would like to download the variables and the variables that will be downloaded.
  - The programming of downloads every so often.

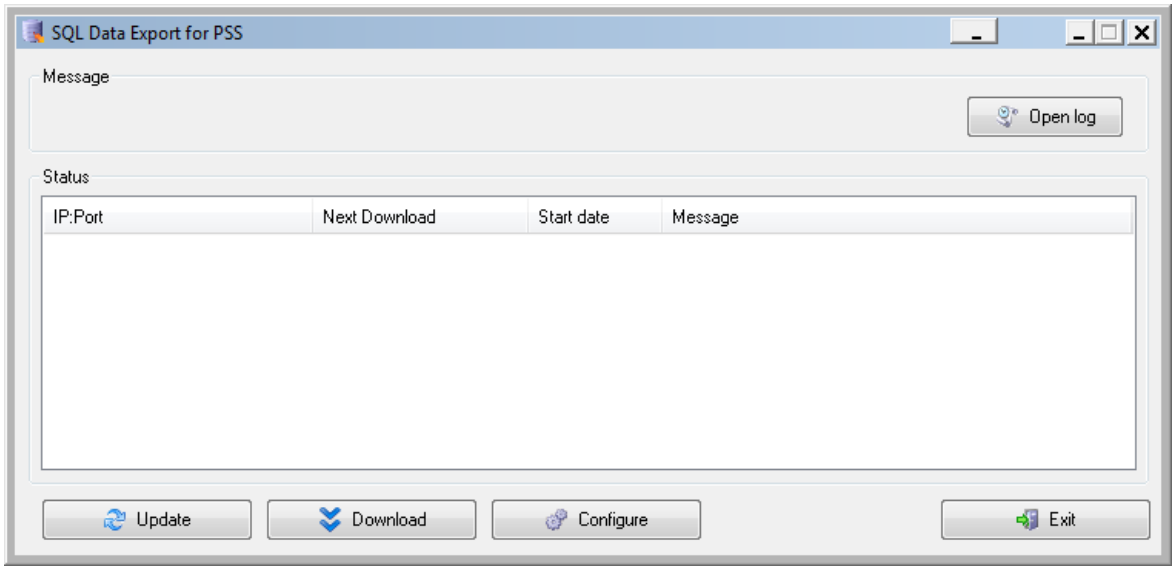
The application includes two parts similar to PSS:

Graphic interface: Allows the application to be configured by adding PSS engines along with their devices and download schedules.

Service: Allows the variables for the configured devices to be downloaded from the graphic interface to the database.

2.1.- Graphic interface

Once the presentation screen appears you can click with the left mouse button or wait a few seconds. If the application detects that the hasp key with the SQL Data Export code is not connected, the application will shut down. Before closing, the hasp key will be checked up to three times to obtain the option to connect the key. If the key is connected, the following screen will appear and the program will be ready for use.



Main screen

From this screen the following actions can be performed:

Update: This button allows the statuses for each engine added to the list to be refreshed. There are three statuses which are indicated by an icon:

- : active engine, the application is waiting for the date of the next download.

-  : engine not connected, the application was unable to connect to the PSS engine because it is stopped or for some other reason.
-  : downloading application, the application is downloading the PSS engine data to the database.

Download: This button forces the immediate downloading of all the active engines in the list. The active engines are indicated with a tick mark  in front of the engine status.

Configure: This button allows you to add, edit and delete the PSS engines in the application.

Exit: This button allows you to close the graphic interface without stopping the service.

Open log: This button opens the "*log_yyyyMM.txt*" file which is located in "C:\Documents and Settings\All Users\Program data\Circutor\SQL Data Export\" or in a similar path depending on the operating system. A log of the actions and incidents detected by the application are saved in this file.

Moreover, a descriptive message if the configuration has failed is displayed in the "Message" field.

Further down, in the list of PSS engines added, you can see the following columns:

IP:Port: address at which the PSS engine is located.

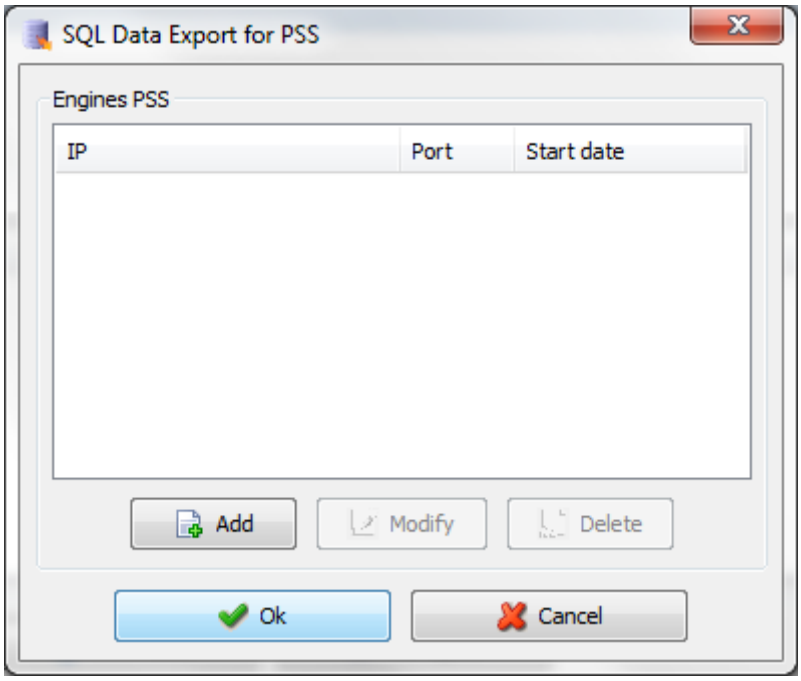
Next download: next time data will be downloaded from this engine.

Start date: Date when the data will start to be downloaded from the PSS search engine.

Message: explanatory message on this engine, for example, that the next download time has not been defined.

Once the components of the main screen have been explained, the first step will be to configure the application by adding the IP address and the port for the PSS engines so that the application can connect to these engines.

The following dialogue box will appear when you click "Configure":

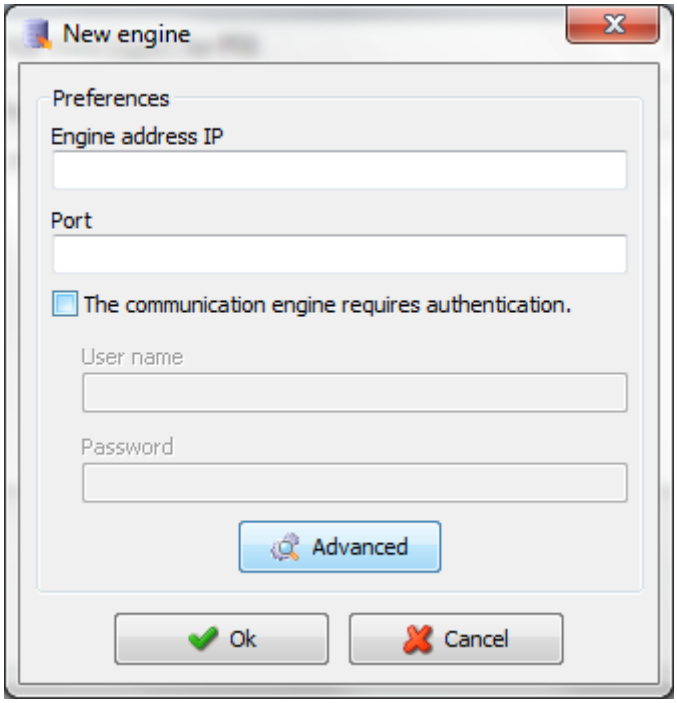


From this dialogue box you can add, modify and delete PSS engines.

To edit an engine you must select it and click on the "Modify" button or double click on the selected engine.

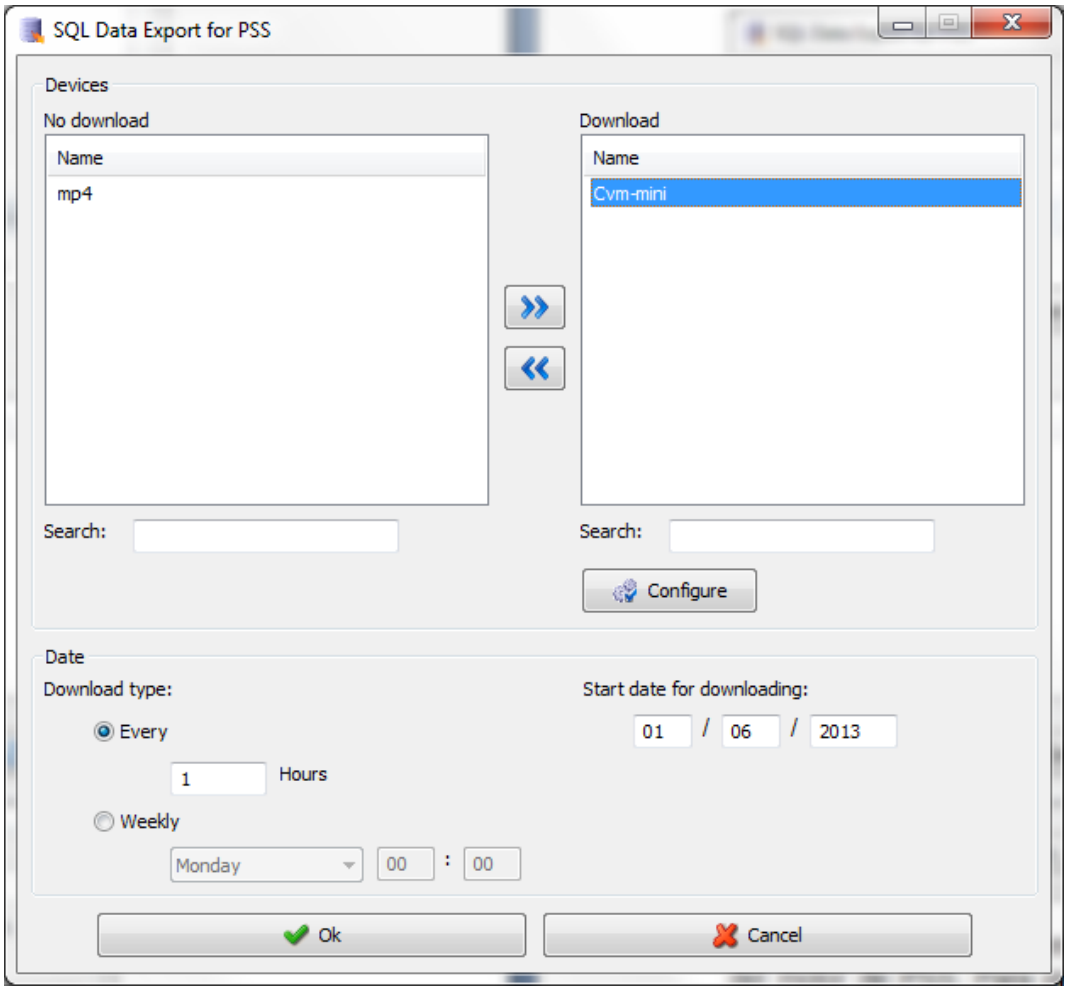
To delete an engine, you must select it and click on the "Delete" button or press the "Delete" key on the keyboard.

The following dialogue box will appear when you click "Add" or press the "Insert" key on the keyboard:



In this dialogue box, we can add the fields for the new engine such as the IP address and port. If the PSS engine has authentication activated, the username and password fields must be filled in for a valid user in this engine.

If you press the "Advanced" button, we can select from which devices the data will be downloaded to the database and the frequency at which these data will be downloaded.

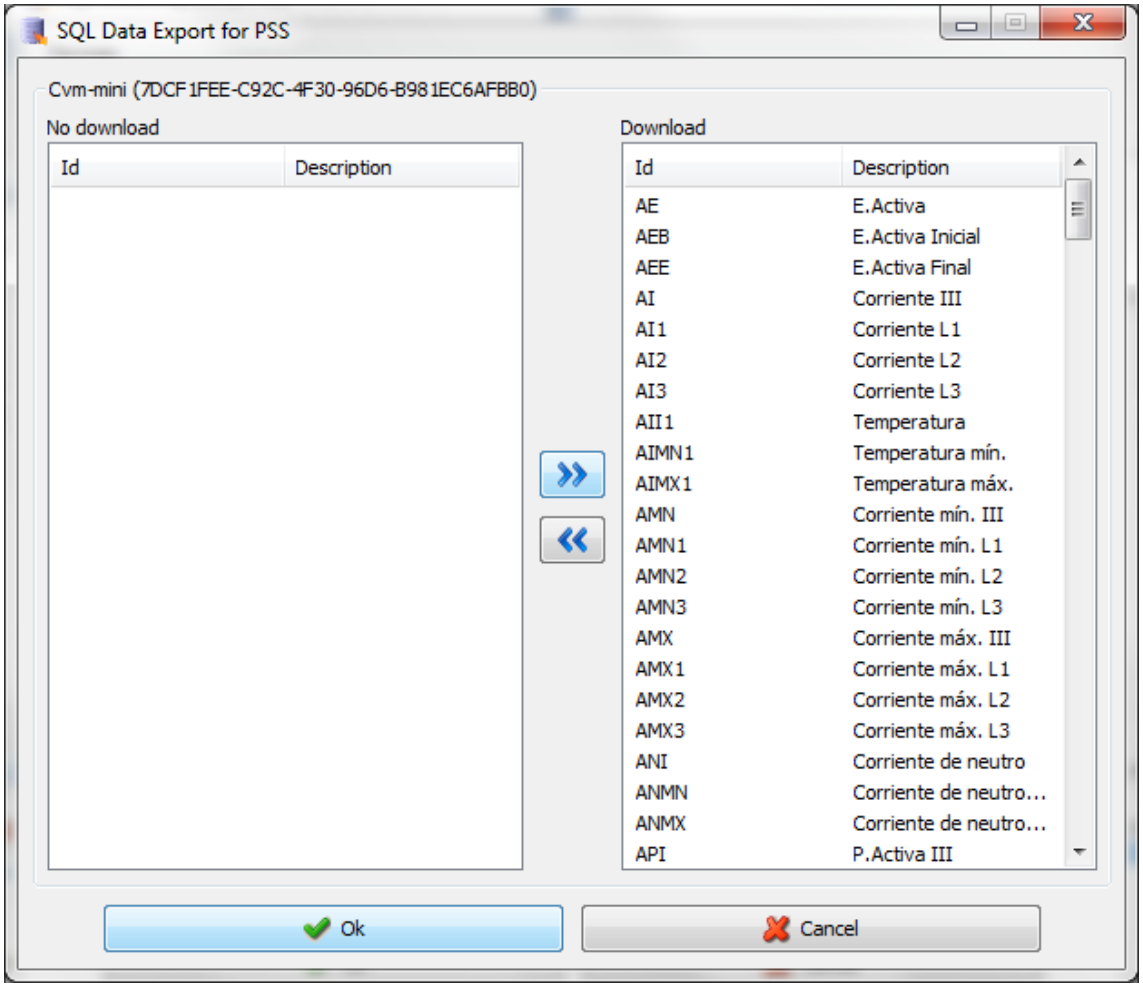


Initially, in the list on the left, we will have all the devices for the PSS engine. To program the download of the variables of a device, it must be selected and sent to the list of devices to download by double-clicking with the mouse or by using the  button. To not download the variables of a device, simply move it over to the list on the left. More than one device can be selected with the mouse, so it is sent together to a different list.

Assign a start date, i.e., when the data will start to be downloaded. This date can not be edited later on and will be common for all devices that use this search engine.

The option to download each day performs a daily download between the hours indicated. If after the stop time the download has not been completed, the stop of the download is forced.

The variables downloaded for a specific device can be configured by selecting a device from the "Download" list.

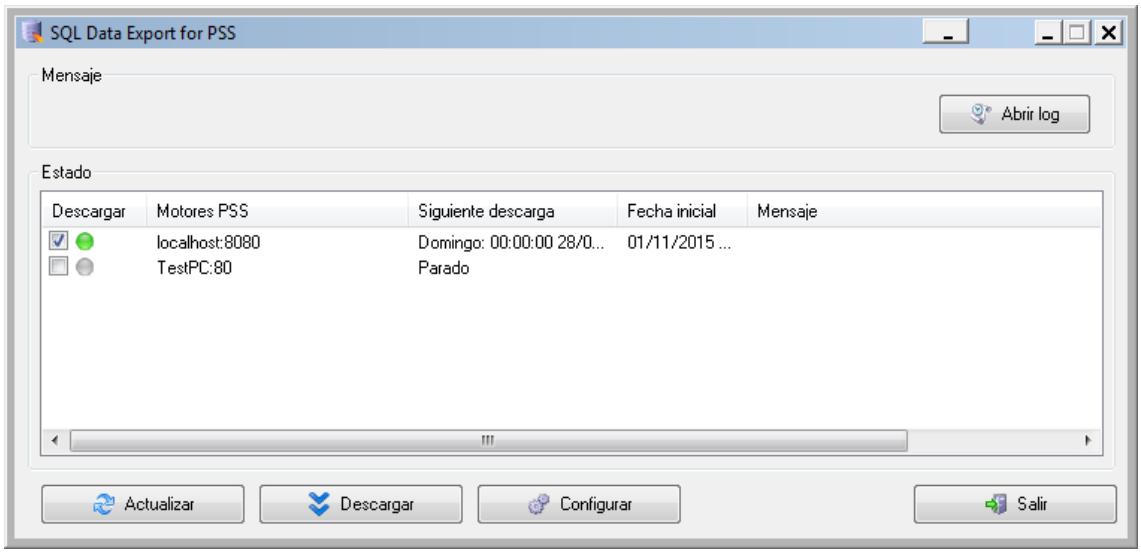


Variable Configuration

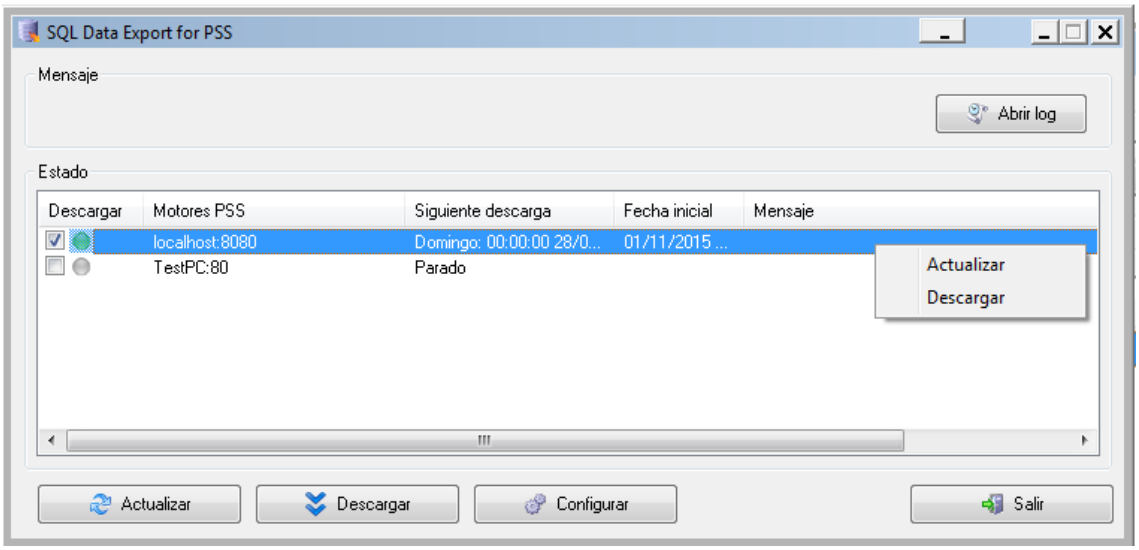
Important Note: Click on OK to temporarily store the setup after the variables that will be downloaded have been configured on the ***Variable setup*** screen (the setup can be cancelled or modified later on). Return to the ***main screen*** by clicking on OK on each screen. The setup will then be permanently saved until a new setup is configured. The changes on this screen will not be saved if you return to the ***variable configuration*** screen of this device directly before returning to the ***main screen***.

Note 1: The values already downloaded in the database will not be deleted never even though the device is moved to the no-download list or the device is deleted from the engine.

Note 2: Only the devices and variables of the PSS engine to which the application is connected will be displayed in the lists.



If there are engines in the list we can update their status or force the immediate download of a specific engine by selecting it and right clicking with the mouse.



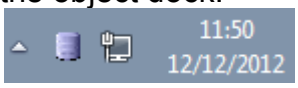
When the date of the next download arrives, the application will perform the download and the download icon will be shown with its text until the download has been completed, at which point the application will return to the pending status, awaiting the next download and displaying the next date. This is the case with each engine in the list.

***Note**: The downloads will only be performed if the user in not in the setup screens. In the event that any setup screen is displayed, the application will not perform any downloads until you return to the main screen or exit the graphic interface.*

***Note 1**: If the application has been unable to connect to the engine or the download dates have not been configured, the application will not perform any download from this engine.*

***Important note**: You must go to the configuration dialogue box if new devices have been added which are linked to other devices, e.g. a CVM96 linked to devices such as an R440, CIREOS or EDS,* in order to be able to add the variables that you want to download from said devices.

If the upper left-hand button of the application window is pressed, the software will be minimised to the object dock.



This icon has 3 statuses:

-  : all the engines are active, the application is awaiting the date of the next download.
-  : a engine is not communicating, the application has not been able to connect to this engine but will download the active engines.
-  : application downloading, the application is downloading the data from a engine to the database.

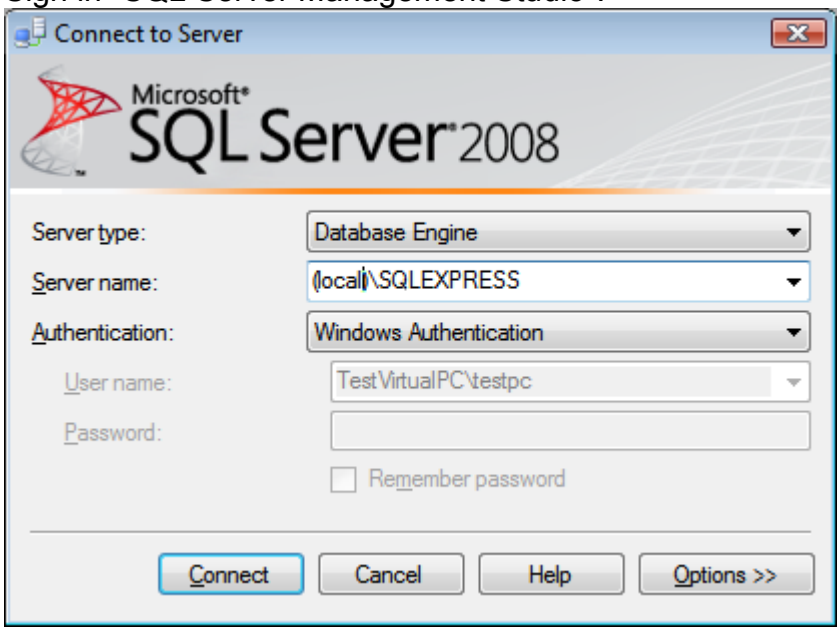
If you double click with the left button on the icon you will return to the main screen for the graphic interface.

3.- Appendices

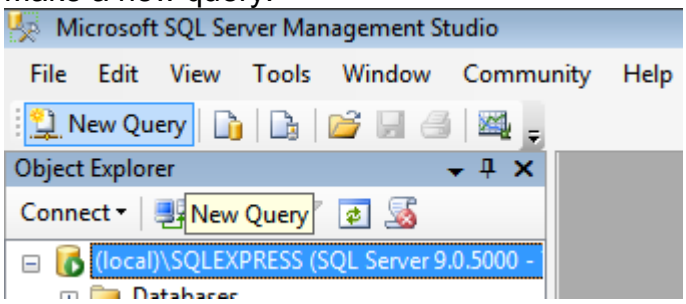
3.1.- Change the location of the database

Do the following steps to change the location of the database:

1. Uninstall "SQL Data Export for PSS".
2. Sign in "SQL Server Management Studio".

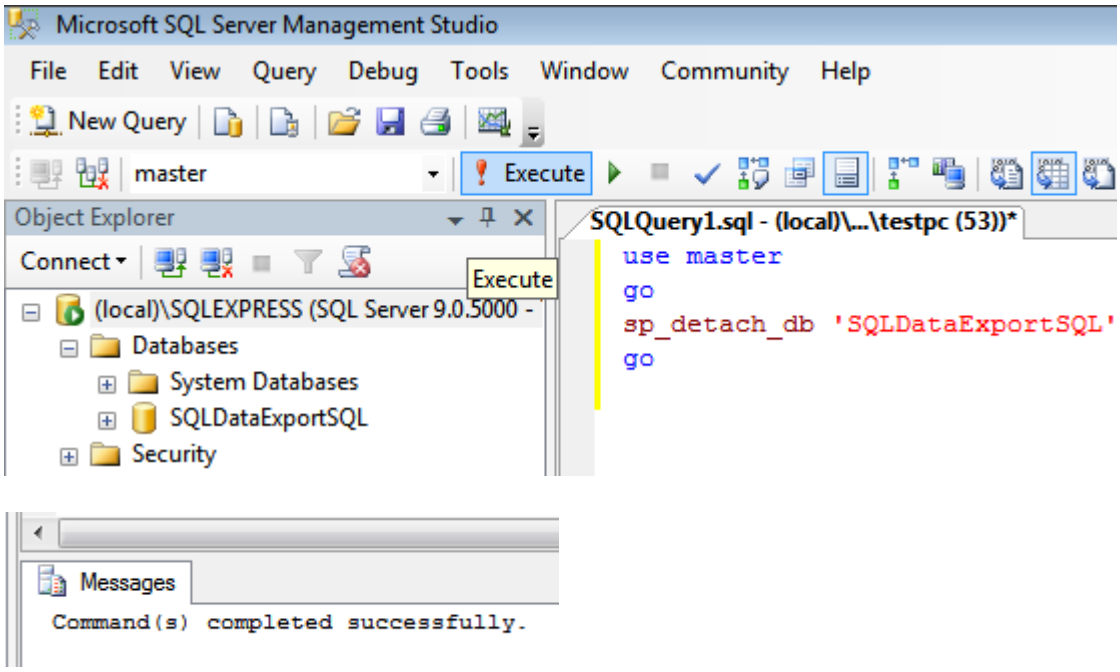


3. Make a new query:



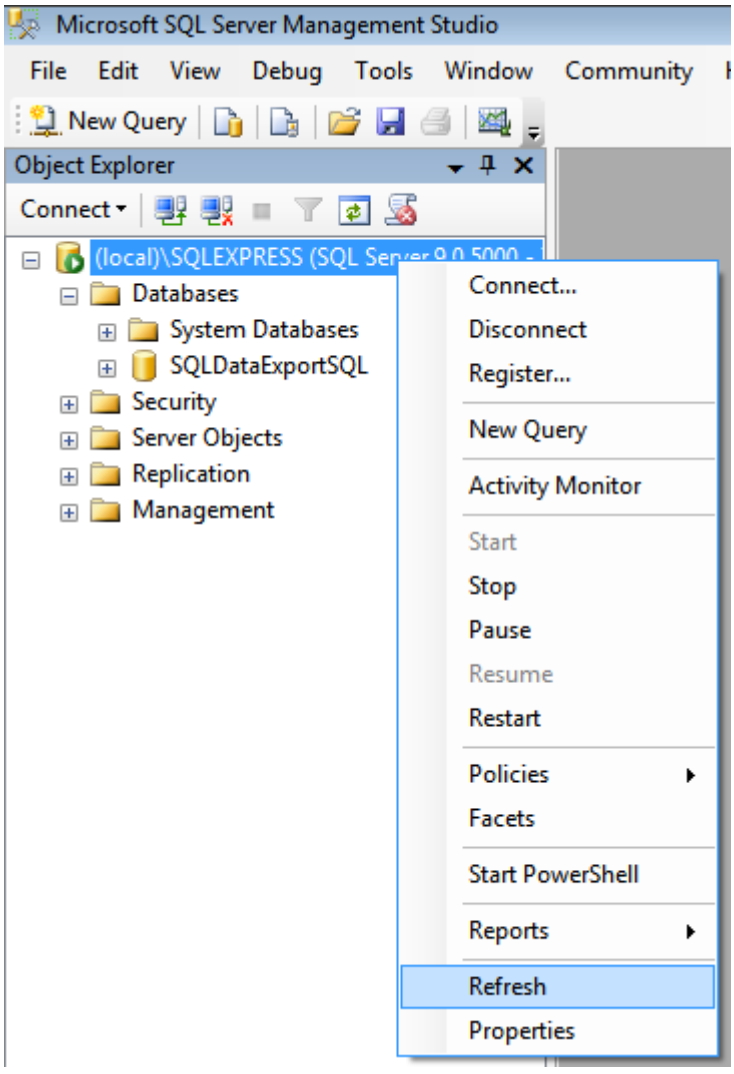
4. Run the following script:

```
use master
go
sp_detach_db 'SQLDataExportSQL'
go
```


Microsoft SQL Server Management Studio
File Edit View Query Debug Tools Window Community Help
New Query
master
Execute
Object Explorer
Connect
Execute
(local)\SQLEXPRESS (SQL Server 9.0.5000 -
Databases
System Databases
SQLDataExportSQL
Security
SQLQuery1.sql - (local)\...\testpc (53))*
use master
go
sp_detach_db 'SQLDataExportSQL'
go

Messages
Command(s) completed successfully.

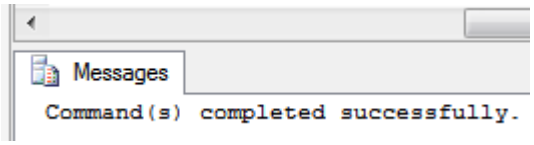
5. Refresh


Microsoft SQL Server Management Studio
File Edit View Debug Tools Window Community
New Query
Object Explorer
Connect
(local)\SQLEXPRESS (SQL Server 9.0.5000 -
Databases
System Databases
SQLDataExportSQL
Security
Server Objects
Replication
Management
Connect...
Disconnect
Register...
New Query
Activity Monitor
Start
Stop
Pause
Resume
Restart
Policies
Facets
Start PowerShell
Reports
Refresh
Properties

6. Move the files "SQLDataExportSQL.mdf" and "SQLDataExportSQL_log.LDF" to destination.

7. Make a new query:
8. Run the following script with new path where you have located the database, for example D:\.

```
use master
go
sp_attach_db
'SQLDataExportSQL','D:\SQLDataExportSQL.mdf','D:\SQLDataExportSQL_log.LDF'
go
```



9. Refresh
10. Install "SQL Data Export for PSS".

3.2.- Structure of the database

The database is basically comprised of two types of tables:

- **Tables used to save the download configuration**. Basically, there are 3 tables:
  - **Engines**: Saves the information of configured engines and indicates whether this information will be downloaded or not.
  - **Devices**: Saves the devices configured in each engine and indicates whether the data of the said devices will be downloaded or not.
  - **Variables**: Saves the variables of each device and indicates whether the variables will be downloaded or not.

- **Values table**. There is a values table for each of the devices from which data are downloaded. In addition, a device may have more than one values table, precisely, it will have a values table for each variable type (STD, WATT, SUC, CLW,…) the device has.

- **Value tables**. There are 5 value tables. The downloaded values will be saved to one of the 5 tables, depending on the type of variable. This separation is caused by the different needs derived from each type. Therefore, the following tables are used:
  - **std_wat_values Table**: for the STB and WATT types.
  - **eve_values Table**: for the EVE type.
  - **suc_values Table**: for the SUC type.
  - **clw_values Table**: for the CLW type (Unit shutdowns).
  - **ccl_values Table**: for the CCL type (electrical charging tables).

Database Layout: