

How to Use PIPS Access to/from SQL Database Utility Program

By PIPSUS Support Team
Dr. Chouikha
(achouikha@gmail.com)

1. Introduction

PIPS (Price Index Processor Software) data transfer utility program is developed for transferring PIPS data from Microsoft Access to SQL server or vice versa. It works with the database created by the Price Index Processor – Consumer Price Index Compiler, version 3.0.0 - DB 2 or above. **The utility program is designed to help the user to migrate or upgrade the database and moving data from one format to another.**

2. Background

PIPS is a database application which currently supports both Access and SQL/SQL Express databases. There are some distinct differences between Access and SQL server as backend. (1) Access, which is part of MS Office, users file server design and SQL uses client - server model; (2) SQL server is a more robust system and is able to handle larger volume data than Access. (3) SQL keeps the data on the server as the backend and the forms, reports on the frontend. As a result, PIPS with SQL Server works best in multiuser environment to keep all the records together in one place and in sync whereas the PIPS with Access database is typically portable and used in single (or less than 5) user(s) environment.

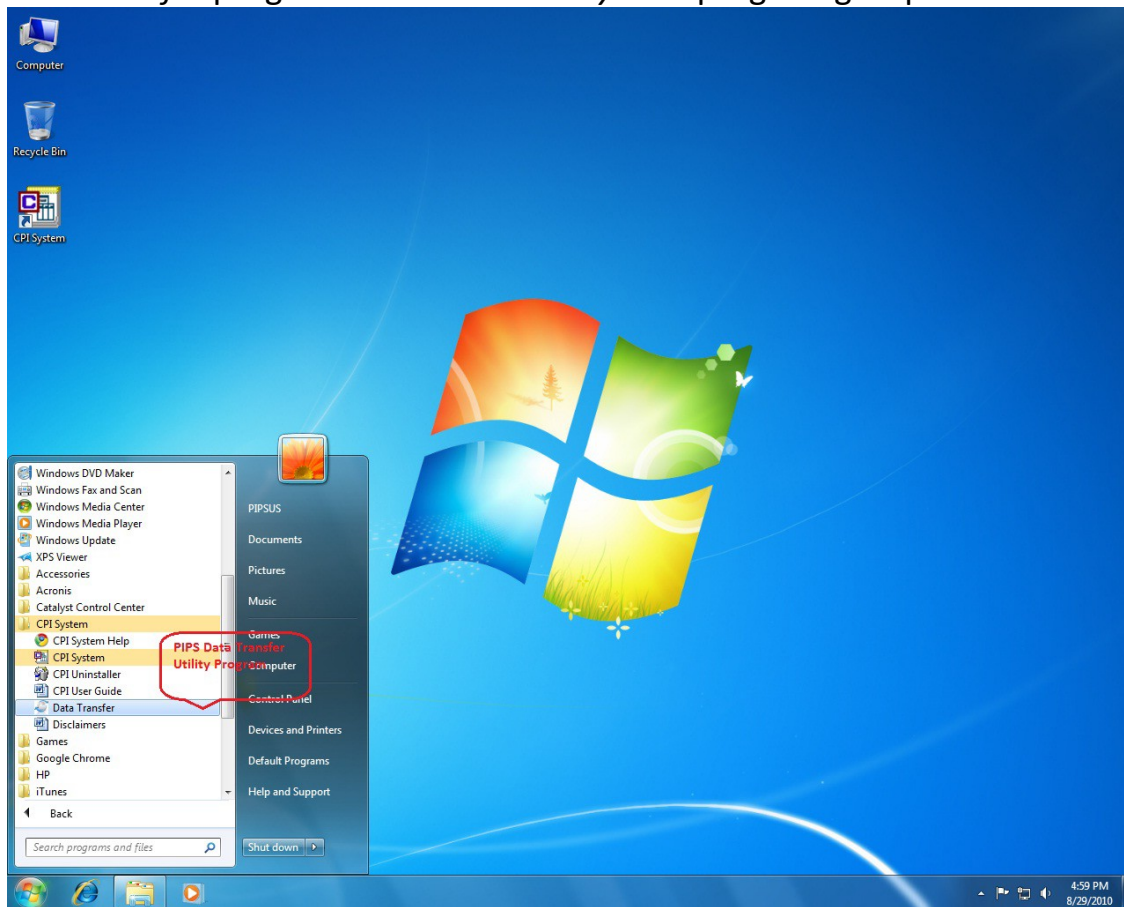
Because the way the relational database schema (i.e. tables, fields, relationships, views, indexes, procedures and functions, etc.) is designed in the PIPS application, there are some technical barriers need to overcome before the data can be successfully copied from one format to another. For example, the identity field with incremental numbers should

be carried over when being copied and predefined relationships among tables should be preserved to ensure the application will function in an identical way.

3. How PIPS DTUP works

When PIPS is installed, a shortcut of the “PIPS Data Transfer” icon will be added to the Desktop as well as in the “CPI System” program group, which is shown in following diagram

Data Transfer program is added to *CPI System* program group.

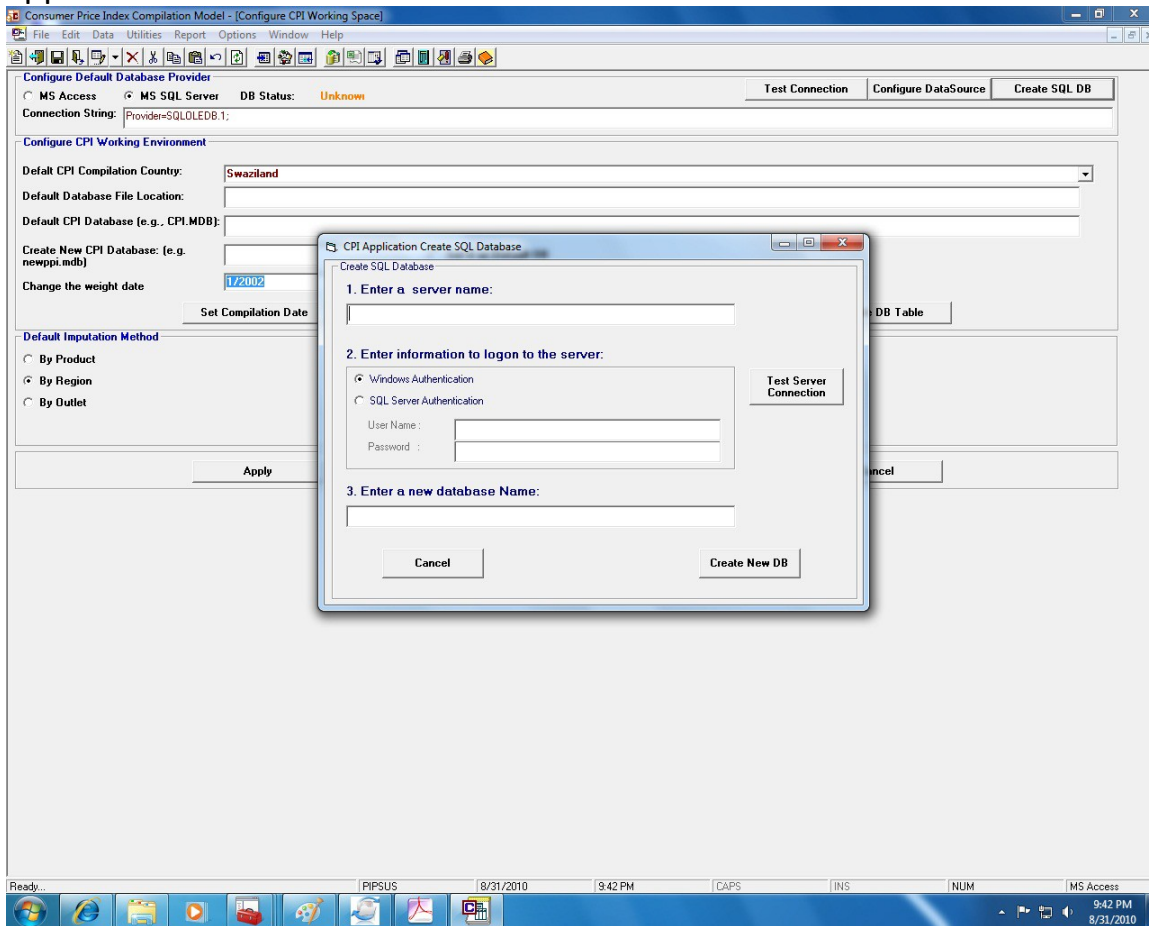


Before start the Data Transfer process, please make sure the PIPS database template is created. This can done using PIPS application, in the System Configuration module.

To create the PIPS database within SQL Server make sure that there is a local installation of SQL Server installed on your computer. Usually this instance of SQL Server will be named after the local machine. After installation of a local version of SQL Server 2005/2008/2012 with the SQL Server Management Tools open SQL Server management studio to view the list of databases, ***note***

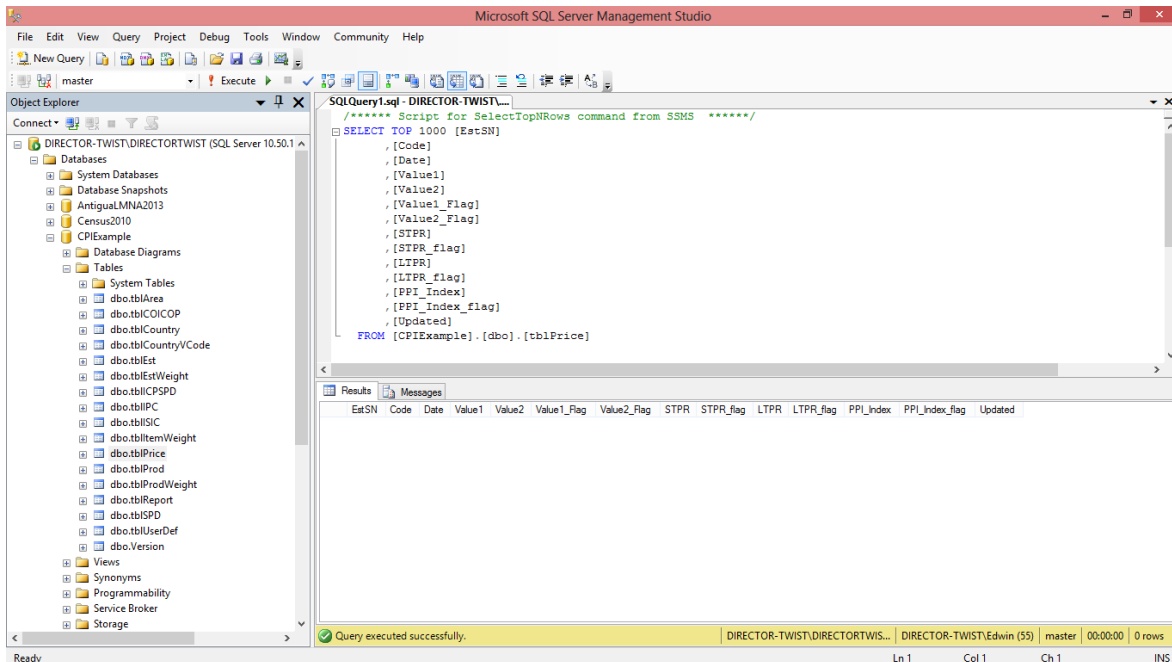
the path to the SQL Server Database. This is important since you will need this reference information to create the SQL Server Database from within PIPS. This list databases will not include any PIPS CPI database at this point since the conversion to SQL Server database has not yet been done.

Open PIPS and click on the System Configuration module and click on the MS SQL Server module, then click Create SQL DB and the following dialog appears.



At 1. Enter a server name, example <local machine name>\SQLEXPRESS then the appropriate authentication method at 2. and finally enter the name of the local SQL Server Database where you wish to transfer the information to from the Access Database. Click Create New DB and this will populate the SQL Server Database with the CPI Database specific for your local SQL Server. This is an empty SQL Server Database which you will specify when using the transfer utility to move the data from MS Access to MS SQL Server.

The following is an example view of the SQL Server Management Studio showing the CPIExample database created in the DIRECTOR-TWIST\DIRECTORTWIST local SQL Server using the System Configuration Module of PIPS before the transfer utility is activated to transfer the data from MS Access to SQL Server.



3.1 Technology Overview

There are several technologies available to achieve the objective of copying the database from one format to another. We can either push the data from Access or pull the data from SQL Server or vice versa.

Pushing the data - (1) Recordset to Recordset Method. Copy the data row by row and field by field from one recordset to the other. (2) Recordset to Insert query. Create an Insert statement for each row in the recordset. (3) Linked table insert Link to the SQL Server table and use an Insert statement to insert the data.

Pulling the data - (1) DTS package - Create a DTS package in SQL to pull the data, we can execute the DTS package either from the Access database or by calling a stored procedure on the SQL server which executes the DTS package. (2) Linked Server, we can create a linked server in SQL which

points at our Access DB, we can then call a stored procedure to insert the data from the linked server into your SQL table.

The method we are using in our utility software is by calling OPENROWSET function. This method is an alternative to accessing tables in a linked server and is a one-time, ad hoc method of connecting and accessing remote data using OLE DB. The OPENROWSET function can be referenced in the FROM clause of a query as though it is a table name. The OPENROWSET function can also be referenced as the target table of an INSERT, UPDATE, or DELETE statement, subject to the capabilities of the OLE DB provider. Although the query may return multiple result sets, OPENROWSET returns only the first one.

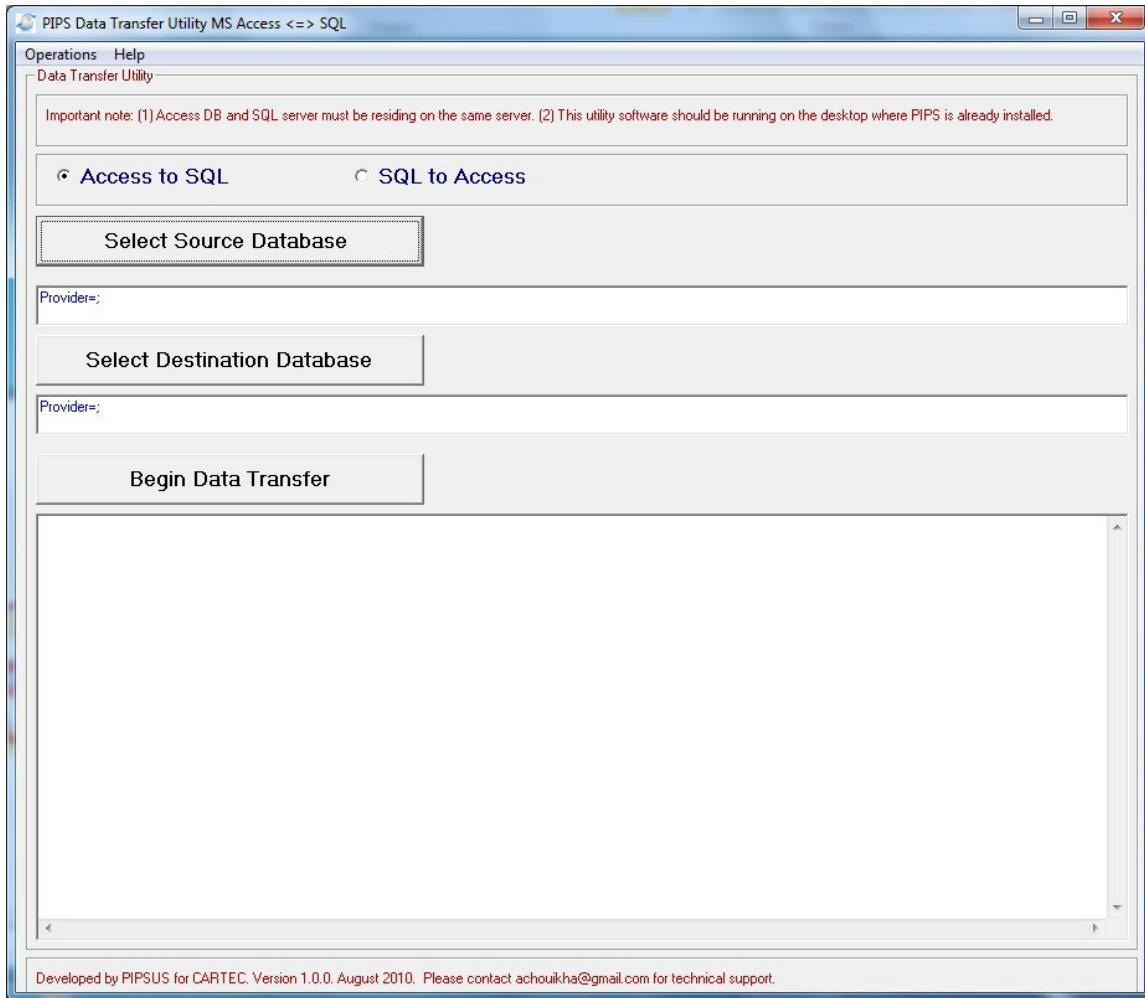
By using this approach, the Access DB that needs to be migrated and SQL server must be residing in the same physical server.

Apart from this requirement, PIPS application must be installed together with data transfer utility program.

Below is the sample SQL insert statement with an OPENROWSET function to an Access database.

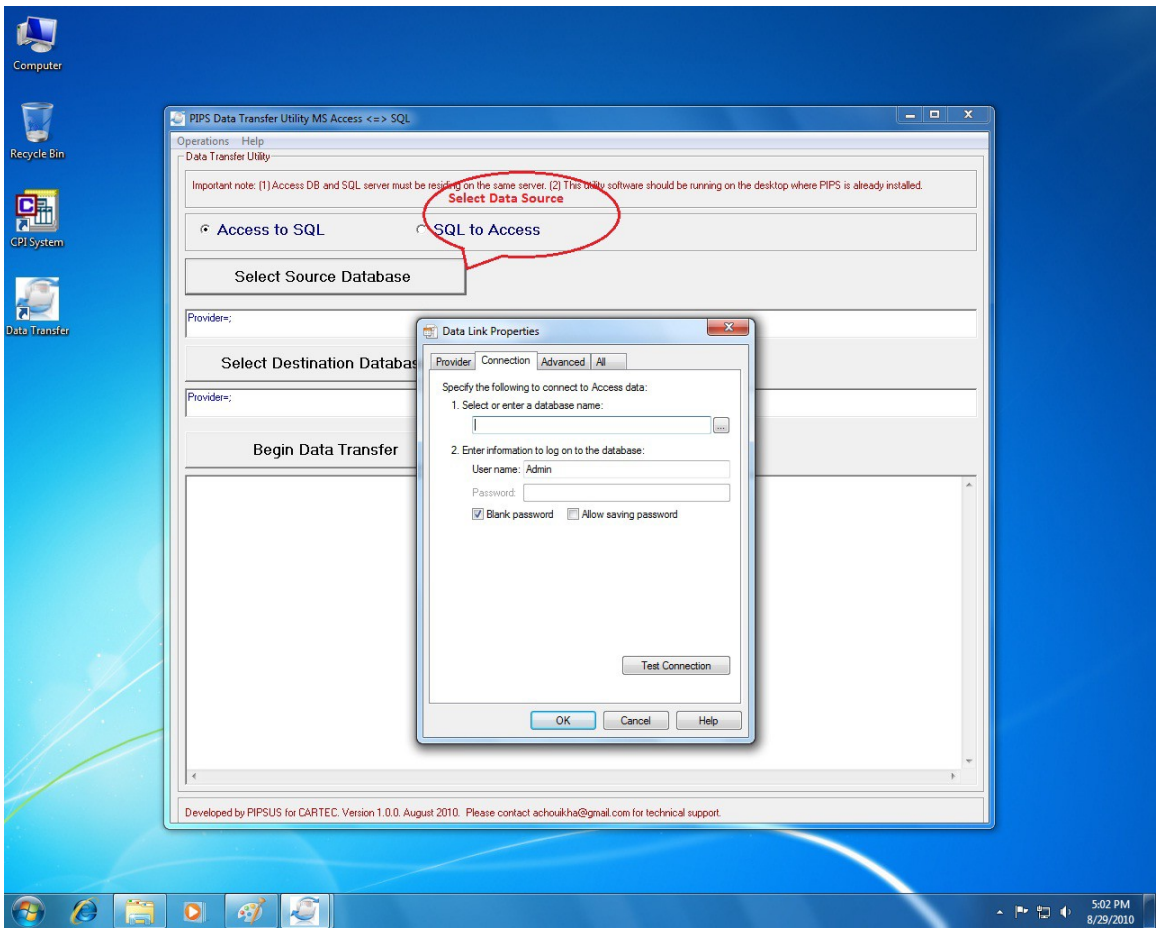
```
INSERT INTO
dbo.mytable (myfield)
SELECT
myfield
FROM OPENROWSET('Microsoft.Jet.OLEDB.4.0',
'c:\mypath\mydb.mdb';'admin';'mypwd', mytable)
GO
```

3.2 Double click the Data Transfer icon to start the program.

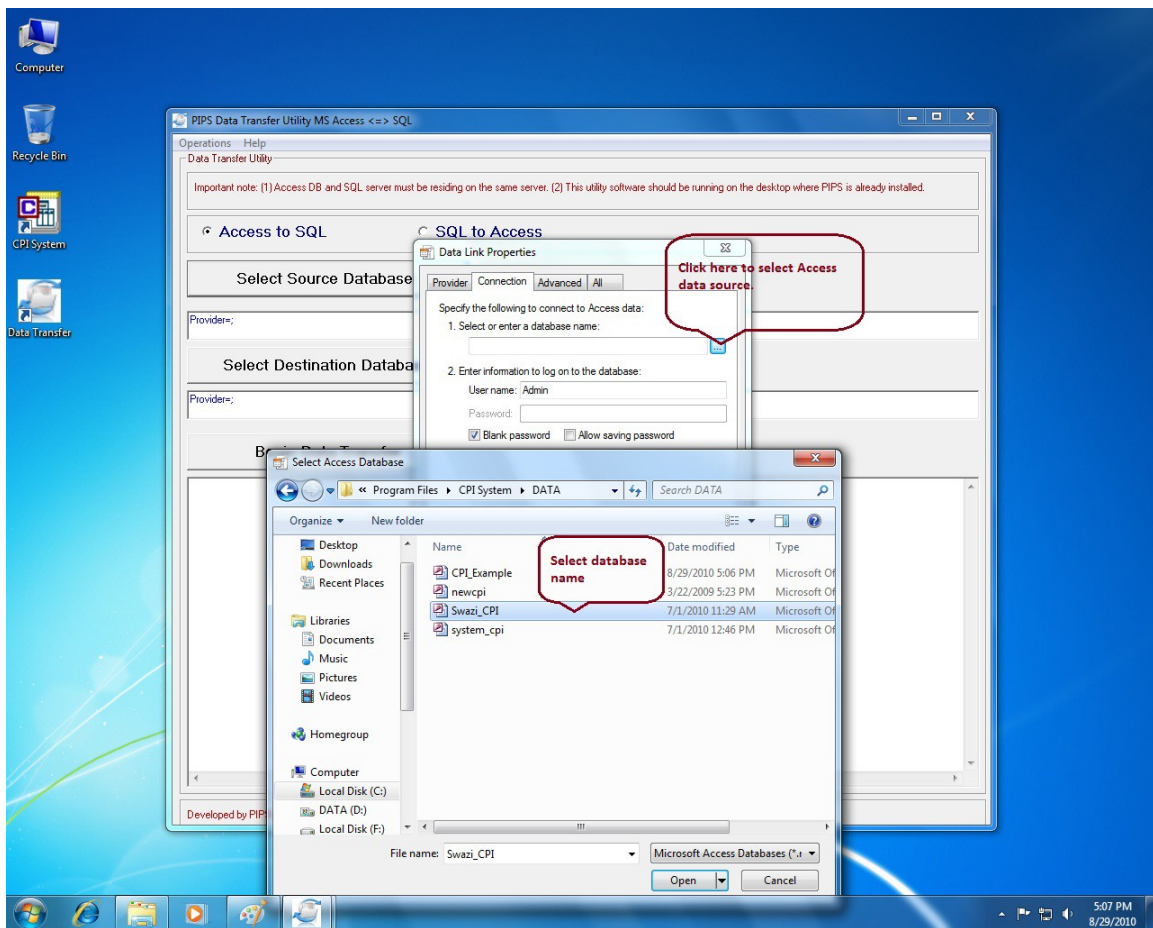


3.3 Select database transfer direction either from Access to SQL or SQL to Access. Then select Source Database.

Select Access data source

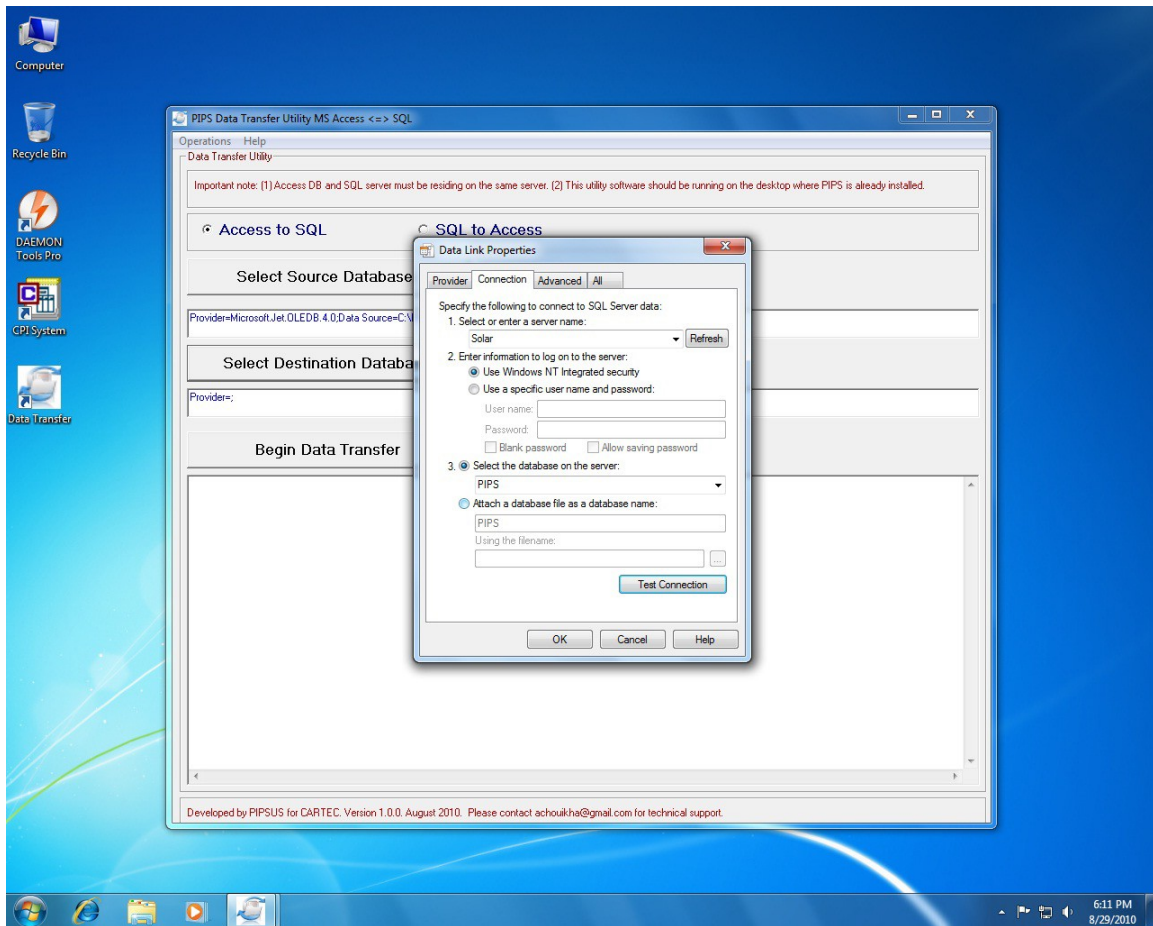


Select PIPS Access Database

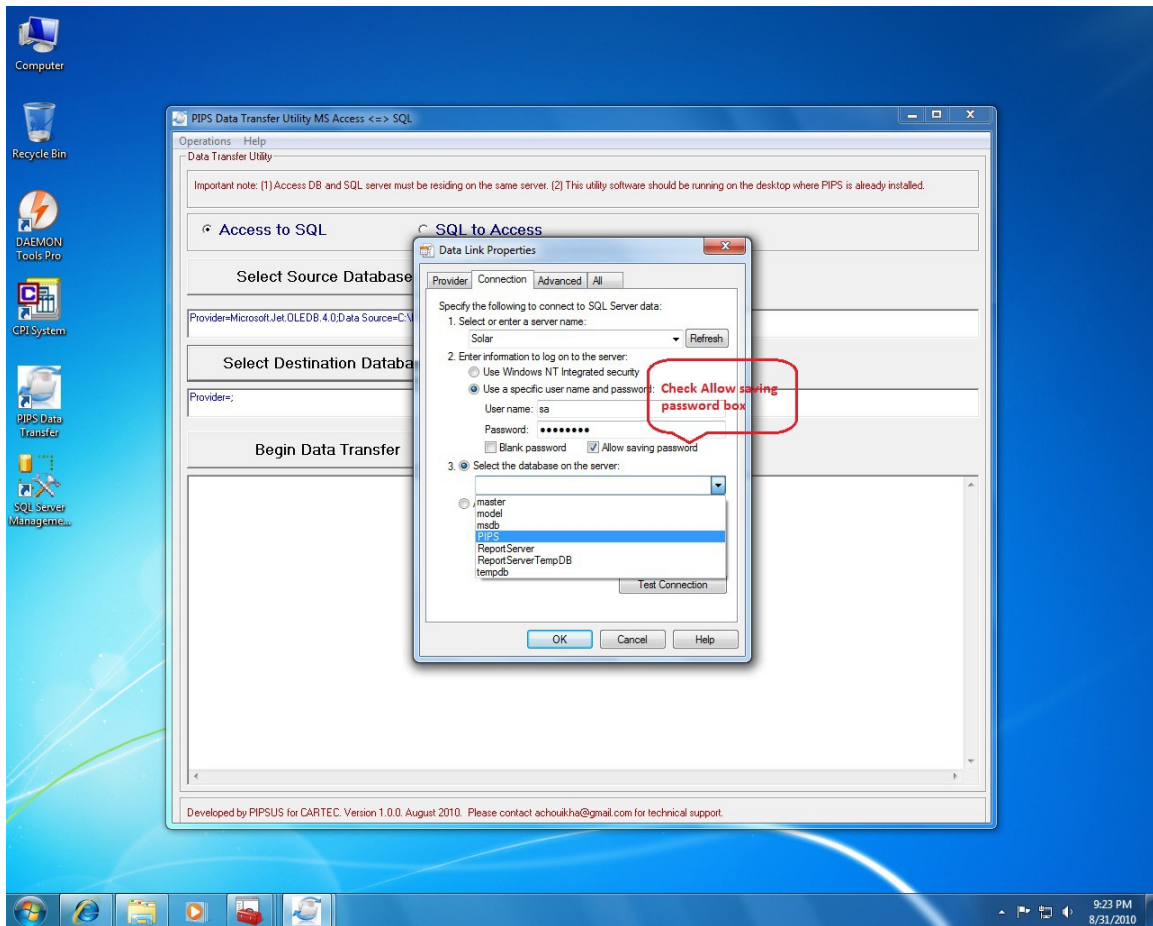


3.4 Select Destination SQL Data Source

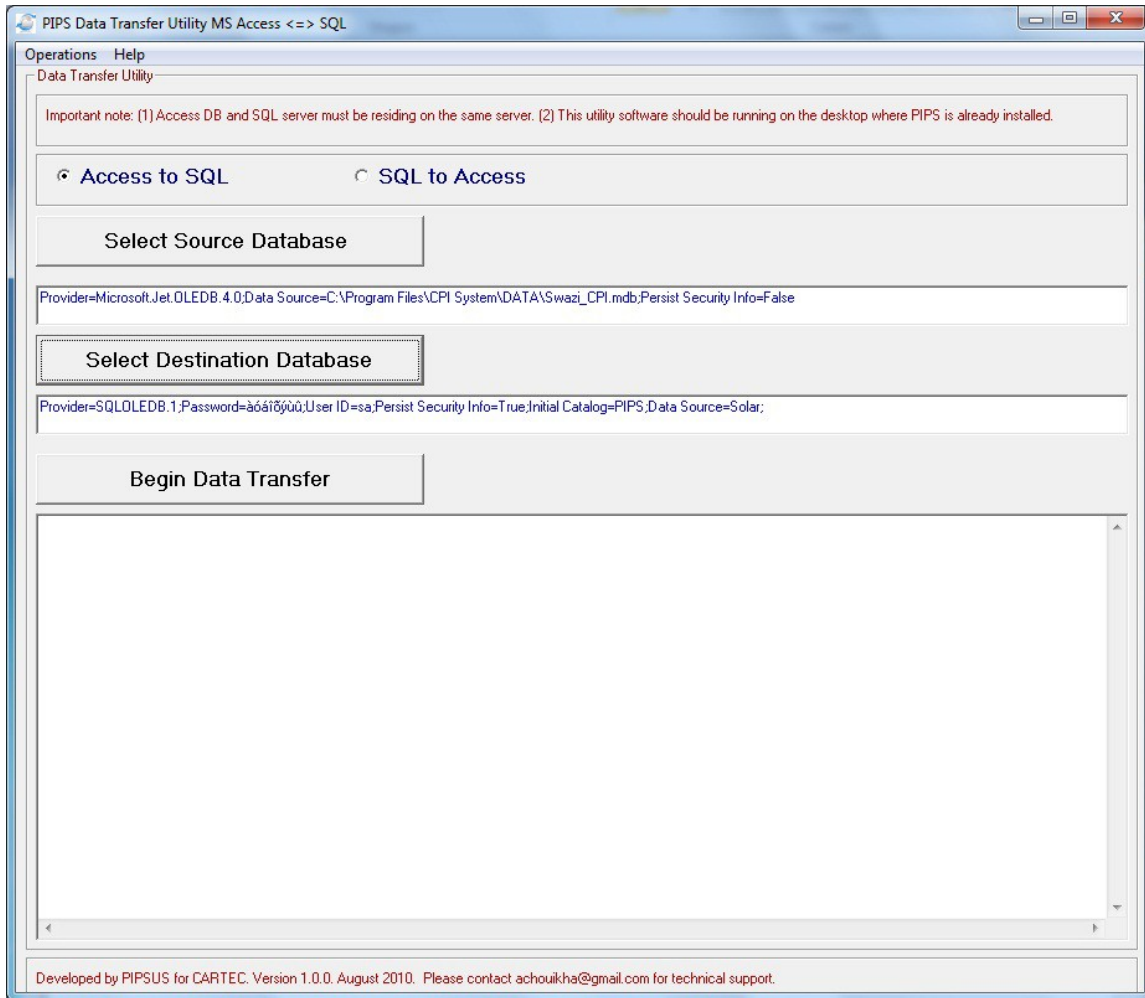
Please enter the correct credential information to access SQL server. The user must have sufficient rights to delete and insert the records in SQL Server. If you are encountering any issue here, you may need to seek assistance from your DBA.



3.5 Check “Allow saving password” box if you are using SQL specific user name and password

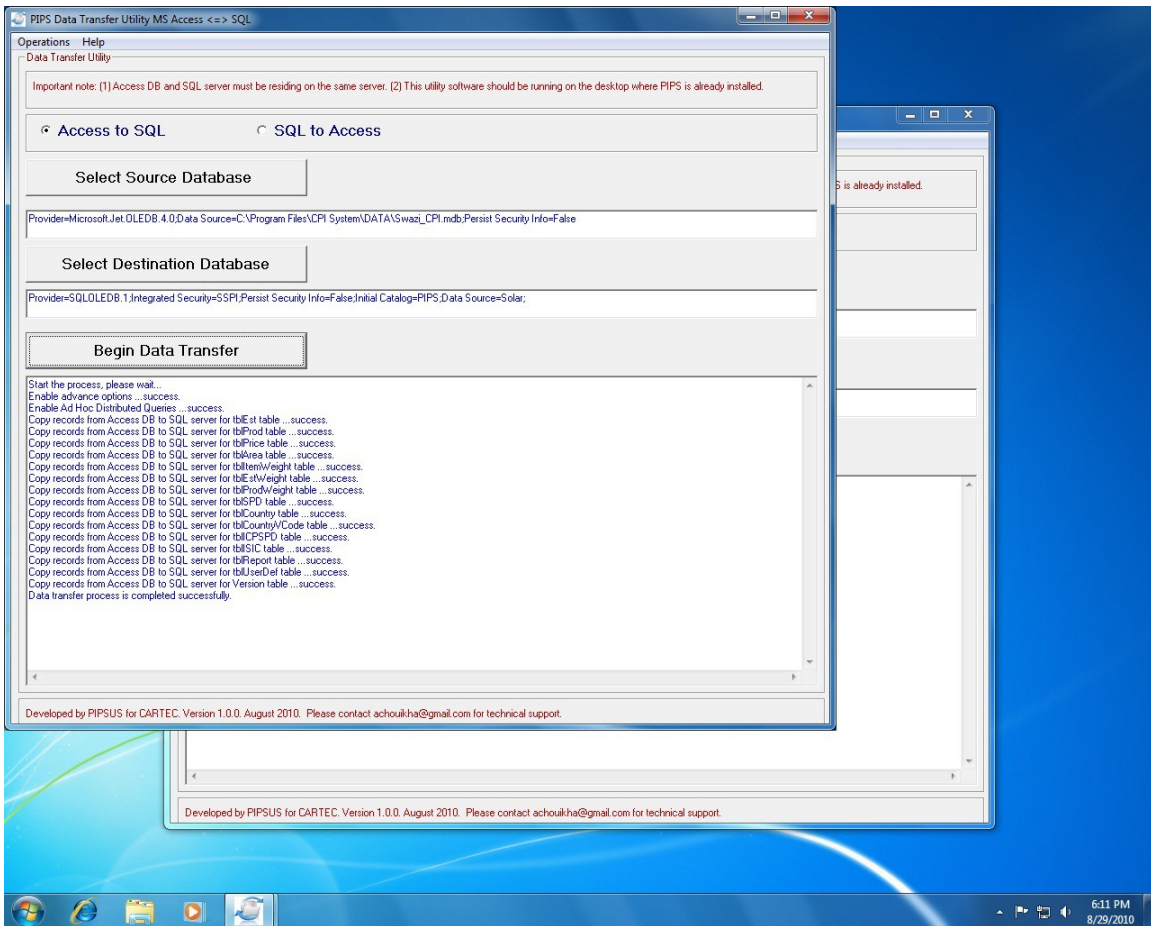


You must check the box of “Allow saving password” if a SQL password is entered. The password will be encrypted in the connection string.



3.6 Click Data Transfer Button

You should see the message if the data transfer is successful.



3.7 Click the Help – Readme to access this short documentation