

PBS SQL

Installation Guide

Passport Business Solutions™

V 12.05

Passport Business Solutions

PBS 12.05.0x SQL Edition

Installation Guide

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If you have any comments or suggestions about this guide, please send your feedback to:

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II. Introduction

Your systems and Passport Business Solutions software are a critical part of your successful business operation. Passport Software, Inc. continues to improve and enhance the PBS software to help make using the software more enjoyable and productive.

SQL makes all your data accessible with a wide variety of tools, many of which are probably already in use in your environment today. Tools such as Microsoft Access, Word, Excel allow you to easily access and use the data for custom reporting and applications. You can use Crystal Reports or hundreds of other programs designed to filter and slice your data any way required by your organization. Almost any programming language can access SQL, including Visual Basic.

PBS SQL currently relies on Microsoft SQL server like many other SQL-based products. This will allow you to integrate and communicate easily between PBS and other SQL server based applications. Instead of manually entering data in multiple locations, or importing and exporting, or Excel spreadsheets, small programs can allow these applications to talk to each other. This reduces data entry errors, improves efficiency, and allows for improved report content.

With PBS SQL V12.05 there is no database-in-place install. A large number of tables were changed for v12.05 and this prevents us from using the database-in-place install. You must use the export from the previous version and EZ Convert process for upgrading your data to v12.05.

A more recent version of this documentation may be available. Download the [1205_PBSQL_Install.pdf](#) and compare the date at the top of the second page with this version. Use the most recent.

III. Checklist for Installing PBS SQL

This is a checklist for setting up PBS with Microsoft SQL Server. This checklist is used for a PBS SQL install and a PBS SQL install with CashPoint.

Tip: After you click on a link for more information, to go back to the check list, select Alt+left arrow and the focus will go back to the previous location.

A. Prerequisites, Installing and Configuring SQL Server

□ Information Needed and Prerequisites

- What kind of network is being used: Domain, Workgroup or Homegroup?
- You must be logged onto the SQL Server as part of the administrator's group. Do you have a login and password? If the PBS programs and the database for PBS are on different servers, do you have logins and passwords for both systems? Are they both on the same domain? Are all user workstations logged in using the domain?
- Microsoft SQL must not be installed on the Domain Server. Install it on a separate server.
- If Microsoft SQL is already installed, do you have the required sa password? SQL Server 2014 with *Microsoft SQL Reporting Services* is now the recommended version. *Microsoft SQL Reporting Services* is included with the Microsoft SQL Server Advanced Edition. **It is much easier to install the Microsoft SQL Server Advanced Edition now than add the *Microsoft SQL Reporting Services* later.** You may also install PBS with SQL Server 2008 or SQL server 2012 with Advanced Tools. Advanced Tools are required for the new SQL reports and is also needed for Passport Query Builder.
- ***Microsoft SQL Reporting Services* is required for Passport's SQL Reports.**
- Are you licensed for Passport Query Builder? If yes, you must also have *Microsoft SQL Reporting Services* for this as well. If you are not licensed for Passport Query Builder, you may call your PBS provider to order.
- You must have the credentials and permission to restart the SQL server, change the fire wall, and restart the SQL service.
- You must have an **Acu4GL product code and key** for the PBS SQL installation. If you have not done this yet, please contact Passport first by emailing support@pass-port.com.
- If the server is being used for other applications, when can you make changes to the server without disturbing the use of the other applications?
- If you are not the system administrator, this person must be available when making system changes, especially when installing and configuring PBS SQL.
- Following the install of PBS, if an Oracle database is installed on the server add the following line to each cblconfi.* file: ORACL_DETACH 1
- The SQL database Collation must be set as **COLLATE SQL_Latin1_General_CP1_CI_AS** and to "Case-insensitive". Look under the database properties.

- Install SQL Server with or without an instance name. See [Setting up a new server with SQL Server Express and PBS SQL](#)

B. Configuring the SQL Server before the Install of PBS

For an example with screen shots see [Configuring the SQL Server - TCP/IP and Named Pipes Protocol](#)

1. SQL Protocols

On the SQL Server, select the *SQL Server Configuration Manager*.

- Expand *SQL Server Network Configuration*
- Click on the instance, Example: *Protocols for (Instance Name)*
- Enable* the *Named Pipes* and *TCP/IP* protocols. *Shared memory* does not have to be on.
- Close the *SQL Server Configuration Manager*

2. Restart the SQL service

On the SQL Server do the following:

- Locate *Computer* on the start menu, right click and select *Manage*. For 2012 server, on the start menu, select *Computer Management* and click it
- Select *Services* from *Configuration* or from *Services and Applications*
- Find the *SQL Server (Instance name)*, right click and select *Restart*
- Close it

C. Preparing for the PBS Installation

- Download the **Wininstall120501.exe**, **pbsinstallforsql120501.exe** and the **RW.LIC** from the [PBS FMS site](#). On the SQL Server, create a folder for PBS 12.05. Copy in **Wininstall120501.exe**, **Pbsinstallforsql120501.exe** and the **RW.LIC** SQL license. You should also download and note the file names of the latest updates and hot fixes. See [Preparing for the Installation](#).
- Inputting Product Codes and Keys is a REQUIREMENT to start the install. Assuming you pre-ordered these codes and keys, download the Product Code and Key for the Acu4GL. They will be uploaded to the FMS site in the Client Files folder. Look for a folder that matches your client's name. It must be a version 10.0 product code and key.

D. Starting the Installation

Details about these steps are found in the section called [PBS SQL Install with New Database](#).

- Note: If you want to use the same instance as before you can export your existing data first, backup your PBS databases, remove these databases and then start the install. The install will create the company 00 database and EZ Convert will create databases for any other companies. **IMPORTANT: Only use the same instance as before if you have Advanced Tools installed with the instance. If not, install a new instance.** Advanced Tools are required for the new SQL reports and is also needed for Passport Query Builder.
- Run **Wininstall120501.exe**.
- Run **Pbsinstallforsql120501.exe**.

- ❑ If you are licensed for Passport Query Builder, several screens will display that require responses. After Passport Query Builder is finished installing, the program returns back to the main install to complete.
- ❑ If you do not have Native client 11.0 installed on the server or any workstation that accesses PBS SQL, you must install it. To find out if you need it, see [Native Client 11](#). You will find a 32 bit and 64 bit install of Native Client 11.0 in the PBS *Native_Client11.0* folder.
- ❑ Install the script:
 1. In the top-level PBS folder find the SQL script called **ms_inst.sql**.
 2. Double clicking this file will open *SQL Server Management Studio*. Log in using Windows authentication. Verify that you opened the correct server and instance.
 3. Press the **!Execute** button on the tool bar (or select <F5>). This will create a database called *pbsmaster* and two tables. Select <F5> again to refresh and you will see pbsmaster.
 4. Close *SQL Server Management Studio*.
- ❑ If licensed, configure Passport Query Builder. See the [PBS SQL Reports Configuration Guide](#). These steps can be done later. Configure SQL Reports. Also, see the [PBS SQL Reports Configuration Guide](#). These steps can be done later.
- ❑ Export data from the old PBS system:
 1. This step can be run earlier and may take hours. After running the exports users may no longer enter new data in the old system.
 2. Export your data from the old PBS system. The utilities for exporting include **EXFUTL.BAT** and **CTLUTIL.BAT**. If you have never read the EZ Convert instructions or you have manufacturing data, see the EZ Convert documentation (PBS_EZ_Convert.pdf). There may be special circumstances that you must comply with.
 3. Later you will copy the exported files to the new PBS folder into a sub folder called EZEXP after installing PBS v12.05.
 4. If you are licensed for the Affordable Care Act, export that data using **ACAUTIL.BAT** for all companies.
- ❑ In the new PBS folder run **PBSINSTALL.BAT** to install the software and to initialize the database and supporting data files. Select Option **2** for the *SQL installation*.
- ❑ Select either *First Time Install of PBS MSSQL* or *Upgrade from all prior versions of PBS to 12.05 MSSQL using Ezconvert*. Note: Both will get the same results.
- ❑ From the *Available Server Instances* field select the instance. If not part of the list, enter the name of the server plus the named instance where PBS is intended to be installed. (servername\instance). If there is no instance enter the server name only.
- ❑ Click on OK and the *PBS Add Companies and SQL databases* screen displays as seen in the window title bar.

Note: If the *PBS Add Companies and SQL Databases* screen does not display it is not finding the database because you do not have administrator rights on this server. You must modify your login to have administrator rights, delete pbsmaster and go back to the [Preparing for the PBS Installation](#) step in a new folder.

If the install fails, it could be due to a missing MSVCR100.dll program. After the initial install, copy this file from the Microsoft.VC100.CRT folder to the top-level PBS folder and run the install again.

E. Generating the PBS Database(s)

Using the *PBS Add Companies and SQL Databases* screen you create the databases for one or multiple companies. No tables are generated in these steps.

1. One company

- For one company (00), select the *New* button
Enter the Company ID, Company Name and use the <TAB> key to move to the *Database Name* field.
Select the *Save* button.
Select the *Create Database <F7>* button. The message *Database is active* displays.

Details about these steps are found in the section also called [One Company](#).

2. Multiple Companies

- For Multiple companies, select the *Restore .exp* button to restore the MLTCMP.EXP file. There are a couple of additional questions with a result that creates databases for each company. They display in the list box. The databases are activated during the restore.
Details about these steps are found in the section also called [Multiple Companies](#).

3. Exit

- Click on *Exit* and the *PBS Installation* screen displays next.

F. Finishing the Install

Details about these steps are found in the section also called [Finishing the Install](#).

- The *PBS Installation* screen is used to install the programs, paths, menus and generate tables for company 00. It has preselected the *Click check box if this is a SQL install* question and indicates that the database is pbsdata00, for company 00. Company 00 is required for both single company installs and multi company installs.
- Find the RW.LIC license. If the license has been copied to the top-level PBS folder as instructed earlier, the program finds it automatically. If not, browse to the license and hit **Enter**.
- Select the *Continue with installation* button.
- Next the installation program installs the PBS programs, establishes the paths and menus for the licensed applications and initialize tables and files for Company 00.
After the process completes, open *Microsoft SQL Server Management Studio* to verify that the **pbsdata00** tables were created. Tables are created for companies other than 00 when you run PBS EZ Convert. You may also view the PBSINSTALL.LOG.
- Install the latest updates and hot fixes which were downloaded earlier.
- If you have an Affordable Care Act license, copy it from the bin folder of the previous PBS install to the new PBS v12.05 bin folder. If you just acquired an updated license you must download it from the FMS site and place it in the bin folder.

G. EZ Convert

If needed, see the [PBS EZ Convert.pdf](#) document for details.

Important note: If PBS is installed on an application server that is a separate server than the SQL database server, you must run EZ Convert on the SQL database server using a mapped drive to the application server.

If you are already familiar with EZ Convert these are the general steps you may run:

- Use the extended utilities and the control file utilities to export the data for all companies from the previous version. Copy all the exports from the old version, for all companies, to the new version EZEXP folder.
- Run EZ convert – **EZCONVERT.BAT**. This step can take less than an hour or up to several hours. It depends on the number of modules, volume of history, server performance, number of companies, and other factors.
- Verify that the data is converted by logging into each company and running open item and master data reports. View the EZCONV01.LOG to verify that all files were converted.
- If you have Affordable Care Act data from a previous release, copy the exported files from the previous system to the top-level PBS folder. Run ACAUTIL to restore it for all appropriate companies.

H. Auto Close

- Starting with PBS v12.05 the Auto Close setting is set to false. The steps for you to turn Auto Close off (to false) are no longer needed.

I. Creating an Inbound Firewall Rule

When using Windows Firewall you must go through these steps logged into the SQL Server as part of the administrator group. For screen shots and more information see [Creating an Inbound Firewall Rule](#).

- Turn off Windows Firewall. From the *Control panel*, select *Windows Firewall*. Select *Turn Windows firewall on or off*. Turn off all three. Close Windows Firewall.
- Create an Inbound Rule:
 1. Go to *Start* and select *Run*. Type “WF.msc”. Select OK.
 2. Select *Inbound Rules*. Click on *New Rule*. Select *Program*. Click on *Next*.
 3. Select *This program path*. Click *Browse*, and navigate to the instance of SQL Server that you want to access through the firewall and then click *Open*. By default, SQL Server is at ‘C:\Program Files\Microsoft SQL Server\MSSQL10_50.PBSSQL1204\MSSQL\Binn\sqlservr.exe. If you don’t see the full path it is likely you do not have the correct administrative credentials. Click *Next*.
 4. Select *Allow the connection* and click *Next*.
 5. In the *Profile* dialog box select any profiles that describe the computer connection environment when you want to connect to the Database Engine and click *Next*.
 6. In the *Name* dialog box, type a name and description for this rule and click *Finish*.
 7. Your new Rule will appear in the list of Inbound Rules. Close Windows Firewall.

Testing the Connection

- Verify that the person logging into the workstation has administrator rights on the workstation. The password for logging onto the workstation must match the password to log onto the server. The user must have full rights to the mapped drive where PBS is installed.
- Test the connection from a mapped network drive on a user's computer.
- On the SQL Server turn on Windows Firewall.
- Install the start menu access on each user's computer and test the connection on each by having the user log into PBS using their login to the computer. See [Connecting Workstations to PBS SQL](#)

J. Install and Configure CashPoint

- If you have the CashPoint installation executable it is now time to install and configure it. See the CashPoint-CP_interface.pdf document which is available from the FMS site. If upgrading from v12.03 and CashPoint is already installed, there are upgrade instructions later in this document.

K. Alter the Point of Sale Menu

This only applies if you have Point of Sale installed on your system.

The Point of Sale menu has two programs should be different.

The menu line is installed as:

PS2LOCALS R Ship-to addresses PS

It should be this:

PS2SHIPLS R Ship-to addresses PS

This menu line is installed as this:

PS2LOCAMN R Ship-to addresses PS

It should be this:

PS2SHIPMN R Ship-to addresses PS

To fix the menus do the following:

1. In the top-level PBS make a backup of SQMENU.DAT
2. Make a backup of RWMENU\MENUFILE.DAT
3. Make a backup of RWMENU\MENUFILE.vix
4. Delete the original files or MENUFILE.DAT and MENUFILE.vix.
5. Open SQMENU.DAT with a text editor.
6. Find the first line PS2LOCALS R Ship-to addresses PS
7. Modify the line to be PS2SHIPLS R Ship-to addresses PS
8. Find the next line of PS2LOCAMN R Ship-to addresses PS
9. Change it to be PS2SHIPMN R Ship-to addresses PS
10. Save SQMENU.DAT
11. Start PBS and the program will rebuild the menu.
12. If anything goes wrong restore the original SQMENU.DAT and start over.

IV. Changes for V12.05

There are many enhancements in v12.05. There are changes to many tables and files. Also, some new tables and files were added. The [EZ Convert doc](#) has a list of the changed and new files and tables. Of particular note are the following:

A. Changes to Vendors, Purchasing Addresses, Contacts and More

There are changes to many files and programs in v12.05 as they related to vendors, vendor contacts and purchasing addresses.

Your vendor contacts may be renumbered when running EZ Convert.

To understand what will be done and what to expect following the install the conversion to v12.05, in the [EZ Convert doc](#), see these sections:

- V12.05 A/P Vendor Contacts Conversion
- V12.05 A/P Vendor Name and Address Expansion
- V12.05 Purchasing and Vendor Address Conversion
- Purchase Order and Product Purchasing Forms

B. Employee Changes

The name and address fields for employees were expanded. This affects the printing of forms, especially checks. To understand what will be done and what to expect following the install the conversion to v12.05, in the [EZ Convert doc](#), see the *V12.05 Payroll Name and Address Expansion* section.

C. Enhancements in v12.05

Download the [v12.05 list of enhancements](#). In this document you can read about all the new enhancements in v12.05. It will help you prepare for the training of your users.

V. Setting up a server with SQL Server Express and PBS SQL

If you have an existing SQL installation that you want to use you may skip this step and go to the [Installing PBS SQL](#) section. If you have not done so, see the [Prerequisites, Installing and Configuring SQL Server](#) section. **PBS 12.05 does require SQL Server with Advanced Tools. If you do not have Advanced Tools installed with your current instance you must install a new instance.** Advanced Tools are required for the new SQL reports and is also needed for Passport Query Builder.

For PBS 12.05 we are supporting SQL Server 2008, SQL Server 2012 and SQL Server 2014 on Windows Server 2008 and Windows Server 2012. We tested the PBS install successfully on the following builds:

SQL Version	Build	Windows Server Version
SQL Server 2014	12.0.2269	2008, 2012
SQL Server 2012 SP2	11.00.5058	2008, 2012
SQL Server 2012	11.00.2100.60	2008, 2012
SQL Server 2008 R2	10.50.1600.1	2008, 2012
SQL Server 2008 R2 SP1	10.50.2500	2012
SQL Server 2008 R2 SP2	10.50.4000	2012
SQL Server 2008 SP1	10.00.2531	2012
SQL Server 2008 SP2	10.00.4000	2012
SQL Server 2008 SP3	10.00.5500	2012

Do not install SQL Server on the same system as your Domain Server.

When you download Microsoft SQL Server, if you are using Passport Query Builder you should get the build with Advanced Tools. The build with Advanced Tools is recommended as you may want to add Passport Query Builder to your PBS system later and it is much more difficult to add Advanced Tools later than installing it in the beginning. Advanced Tools are also required for the new SQL reports. On the web download page below you can see the 32 bit and 64 bit versions Microsoft SQL Express with Advanced Tools:

Choose the download you want

<input type="checkbox"/> File Name	Size
<input type="checkbox"/> Express 32BIT WoW64\SQLEXPR32_x86_ENU.exe	149.9 MB
<input type="checkbox"/> Express 32BIT\SQLEXPR_x86_ENU.exe	168.4 MB
<input type="checkbox"/> Express 64BIT\SQLEXPR_x64_ENU.exe	196.7 MB
<input type="checkbox"/> ExpressAdv 32BIT\SQLEXPRADV_x86_ENU.exe	1.1 GB
<input checked="" type="checkbox"/> ExpressAdv 64BIT\SQLEXPRADV_x64_ENU.exe	1.1 GB
<input type="checkbox"/> ExpressAndTools 32BIT\SQLEXPRWT_x86_ENU.exe	840.8 MB

Download the install.

A. Installation Example

In order to install Microsoft SQL you must be an administrator on the server or a user with administrator rights.

This is a default installation of SQL Server Express. It will be important that we note a few items during the install for use later on while we configure PBS/SQL.

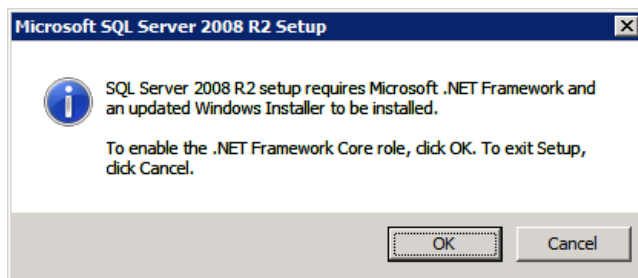
B. Installing Microsoft SQL Server Express 2008R2

In order to install Microsoft SQL you must be an administrator on the server or a user with administrator rights.

This is a default installation of SQL Server Express. It will be important that we note a few items during the install for use later on while we configure PBS/SQL.

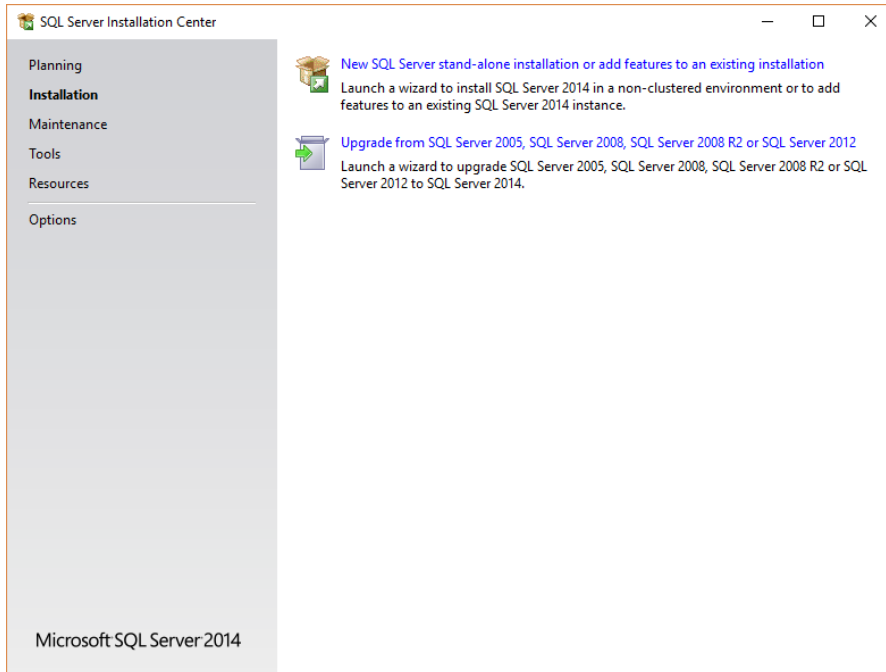
1. Prerequisites

SQL Server Express requires the .Net Framework and the Windows Installer to be at a certain level. If they are not you will get a message similar to this:



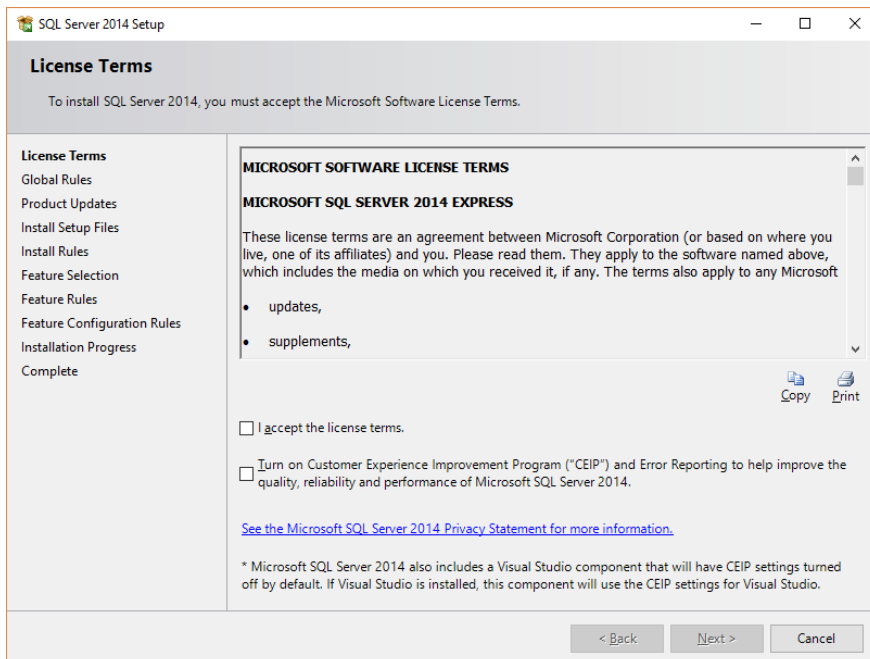
2. Microsoft SQL Installation Steps

SQL Server Installation Center. After clicking OK the required packages will be enabled and you will be able to restart the installation. Once you restart the installation you will be presented with the following page:



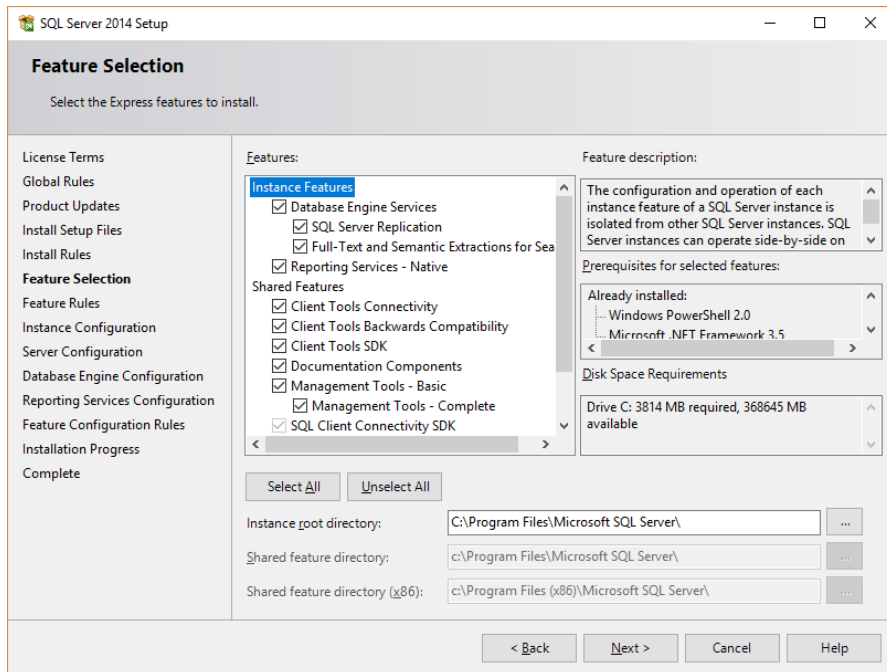
We are installing a new instance of SQL Server so we will select the top item in the body of the page “New Installation or add features to an existing installation.”

License Terms. You will be asked to accept the terms of the MS license agreement:



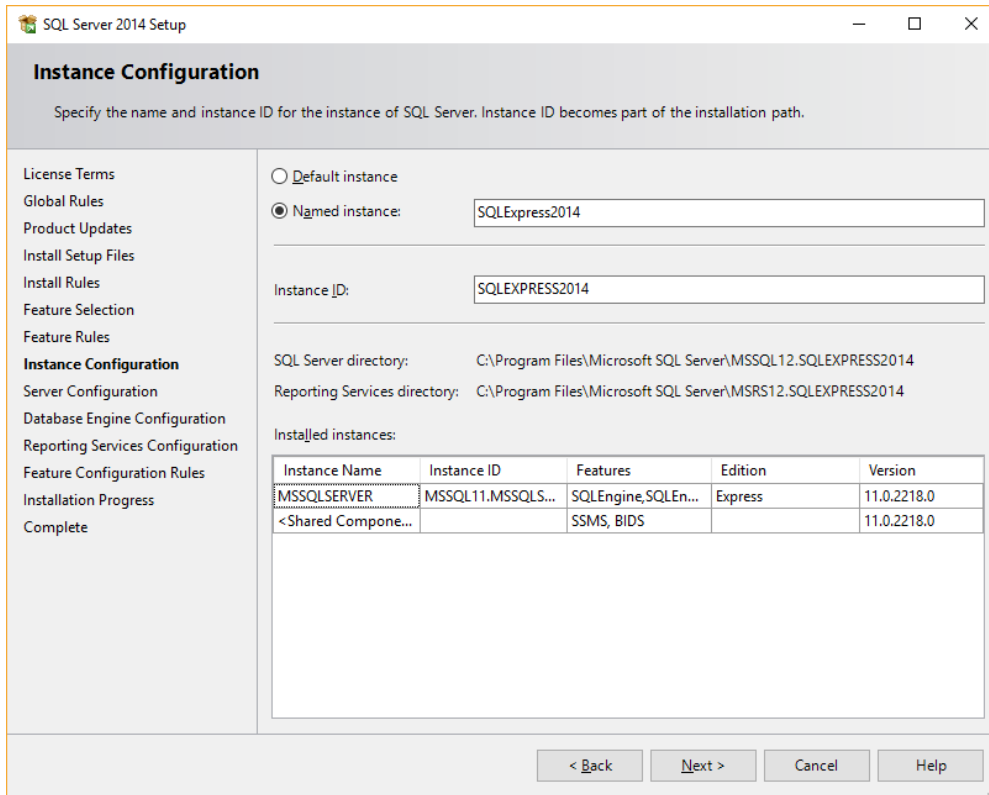
The second check box is optional. In our example we left it unchecked.

Feature Selection. The install routine will install some basic items for the installation and check the Setup Support Rules. If all of those are satisfied you will be presented with a screen to select Features:

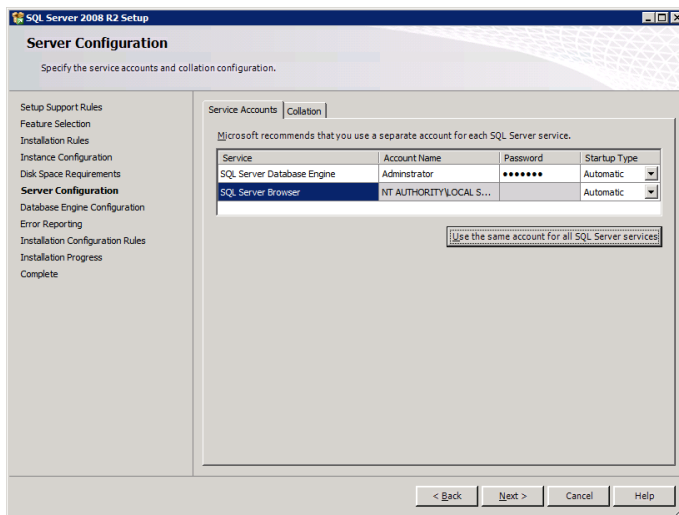


As we are doing a default install we will leave all of the boxes checked as it was presented to us. Reporting Services is required for Passport Query Builder. We are also letting it take the default directory, but you can of course change this if needed.

Instance Configuration. The next screen presented is the Instance Configuration and is the first item that we need to pay specific attention to. The instance name specified here will be used later when we configure PBS/SQL. In this case the install has pre-selected a Named Instance and has chosen the value **SQLExpress** which will work fine for our test installation. PBSSQL is fine when installing PBS. If you were planning on having more than one instances of SQL Server you might want something more unique, but the default will work just fine here:



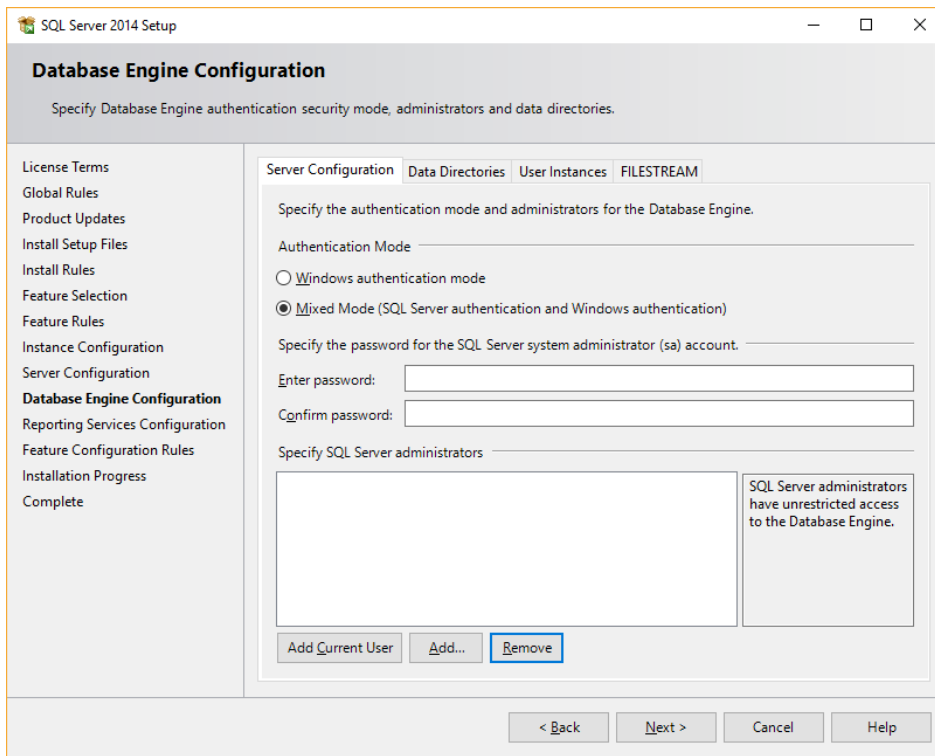
Server Configuration gives you the opportunity to identify accounts used to manage the services required for SQL Server. Microsoft recommends that you set up a specific account for each of these. For our demonstration we are going to use Administrator. This should not be done for a production environment as using the default administrator account is a poor practice in general. I am also having the service for SQL Server Browser start automatically so that the server can be easily identified by network resources; this is not a requirement for all deployments but makes it easier to set up items like Data Sources, etc.



Database Engine Configuration allows you to decide how you are going to handle authentication to the database on the *Server Configuration* tab. There are advantages and disadvantages to the authentication modes – see [http://msdn.microsoft.com/en-us/library/ms144284\(v=sql.110\).aspx](http://msdn.microsoft.com/en-us/library/ms144284(v=sql.110).aspx)

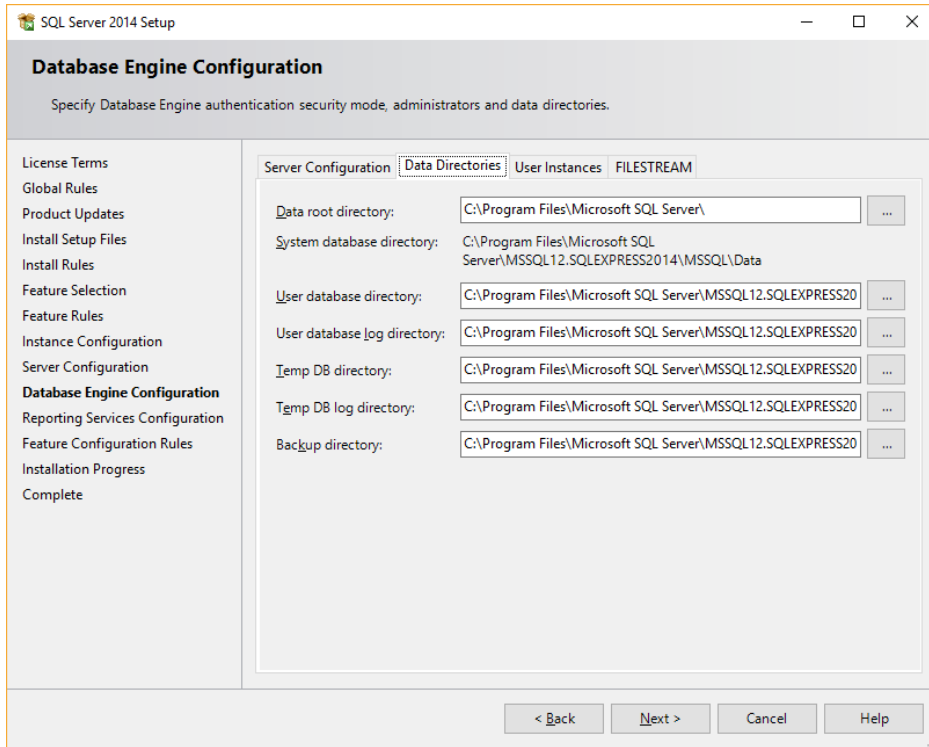
You may choose Windows authentication and set up other users later.

Mixed mode provides a separate SQL Administration (sa) login. If you select Mixed Mode you must enter the sa login here.

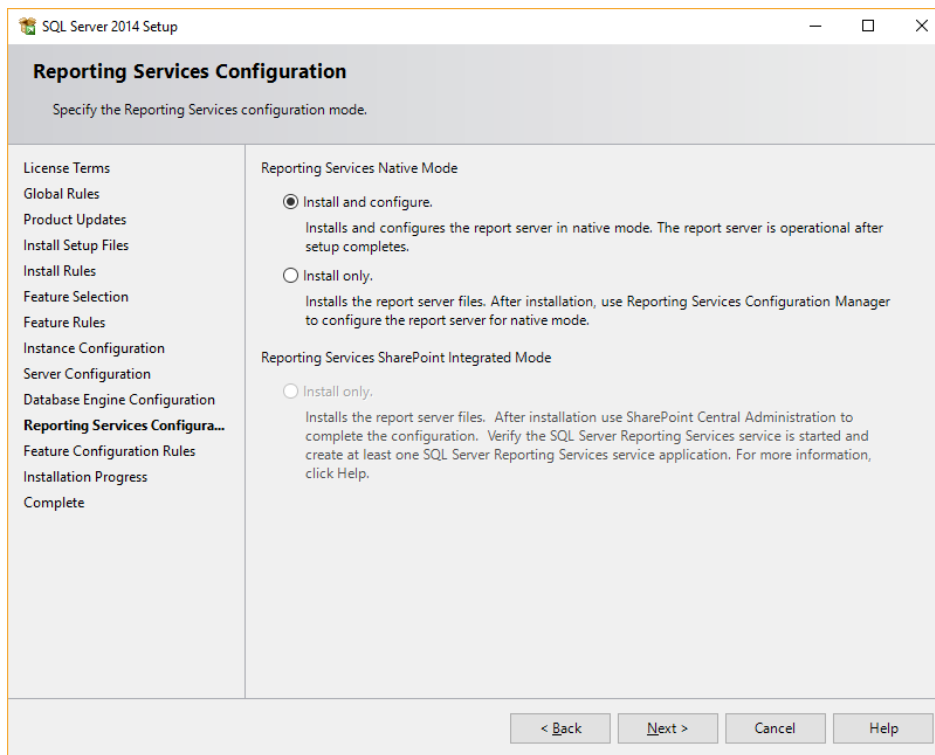


Alternative: It is possible to use *SQL authentication mode* and enter a single user login in the cblconfi that has access to the databases required to run PBS. The downside of this is that the SQL user id and password are available for viewing by editing the cblconfi file which is just a simple text document.

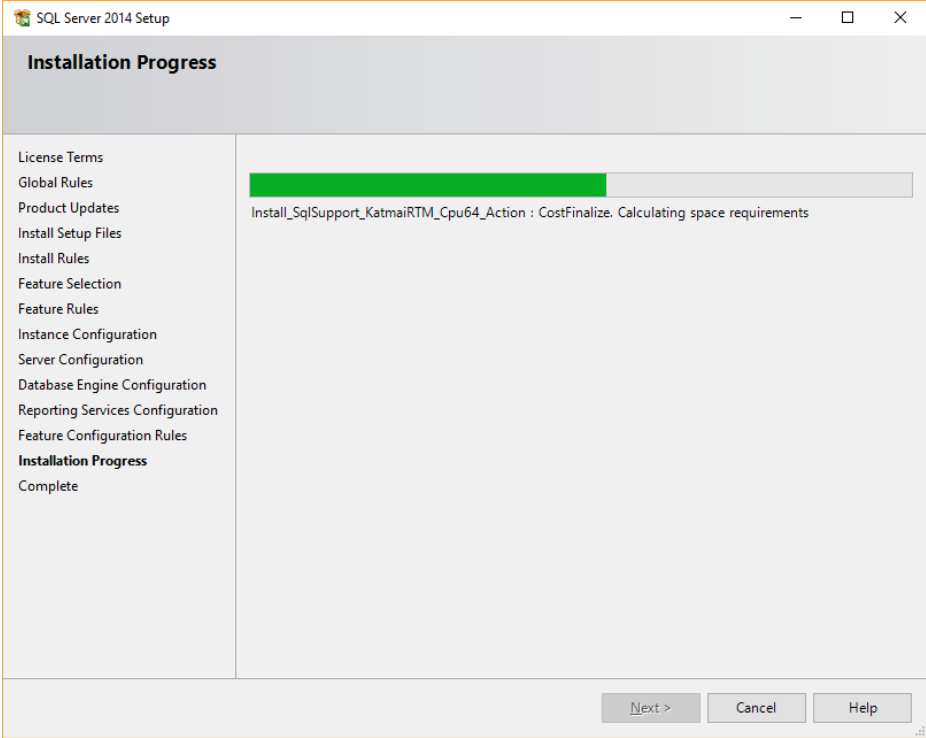
On the *Data Directories* tab you can define locations for the data. If you have a separate logical or physical drive set up to facilitate easier offsite backups, this is your chance to separate the data files from the installation of SQL Server. For this example we only have a single drive defined on this machine so I will leave the defaults:



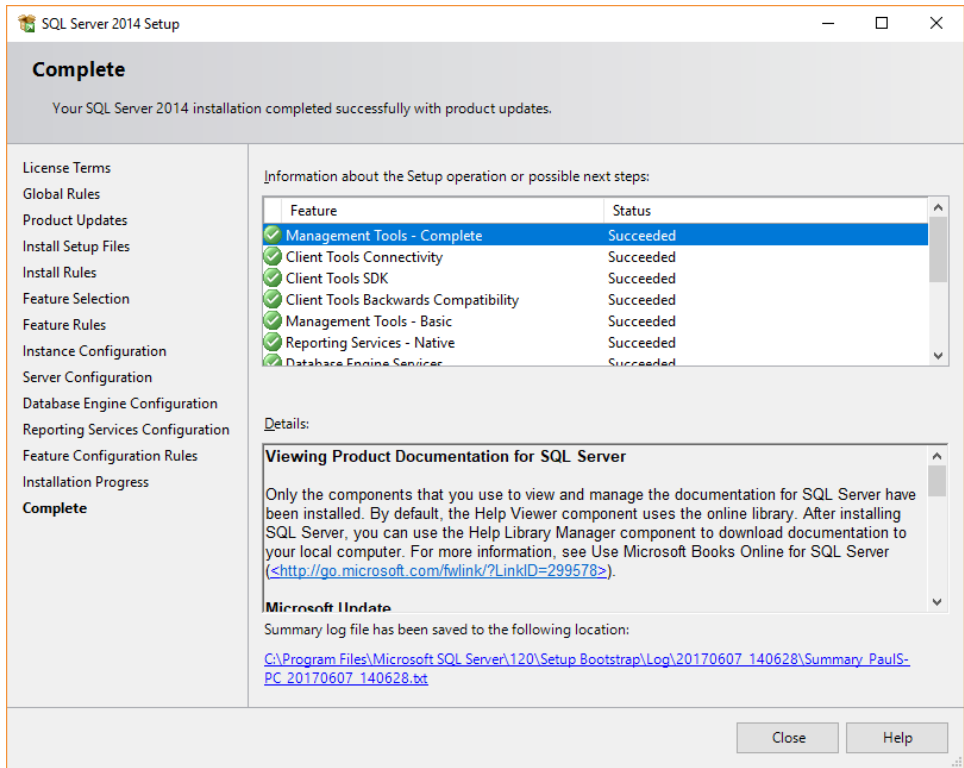
Reporting Services Configuration - Use the *Install and configure* option. The *Install only* is not recommended because you will have to manually install and configure SQL Server Reporting Services later. The manual install and configuration has many steps.



Installation Progress - This is an indicator that something is happening. When it completes you should have a clean install that is ready for a PBS installation.

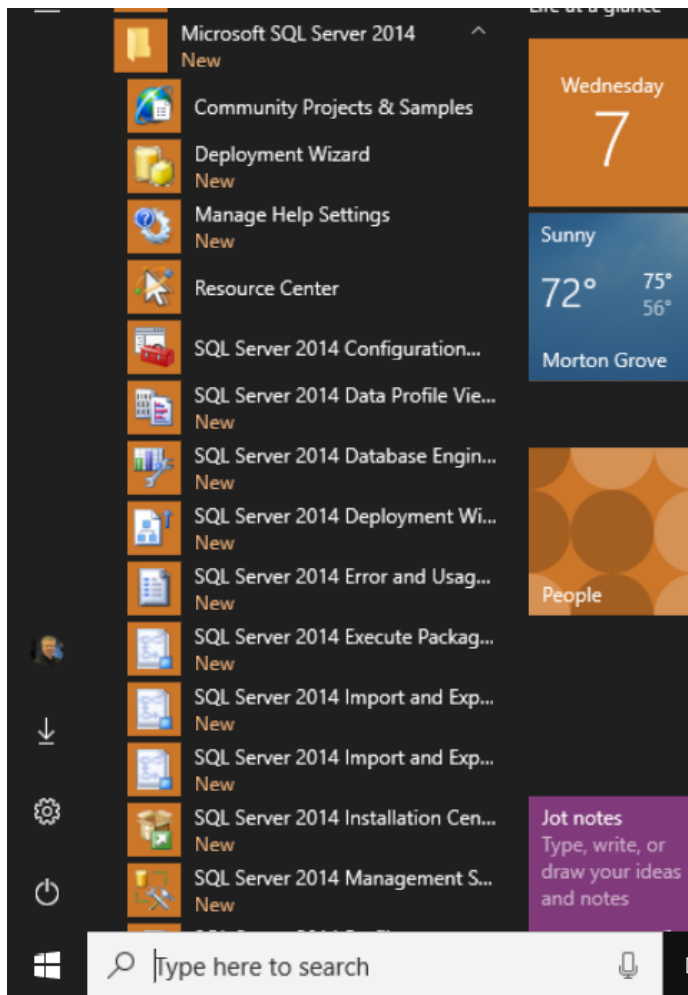


When you see this *Complete* screen you are finished. Looking at the Summary Log or Supplemental Information is optional and may not be necessary.

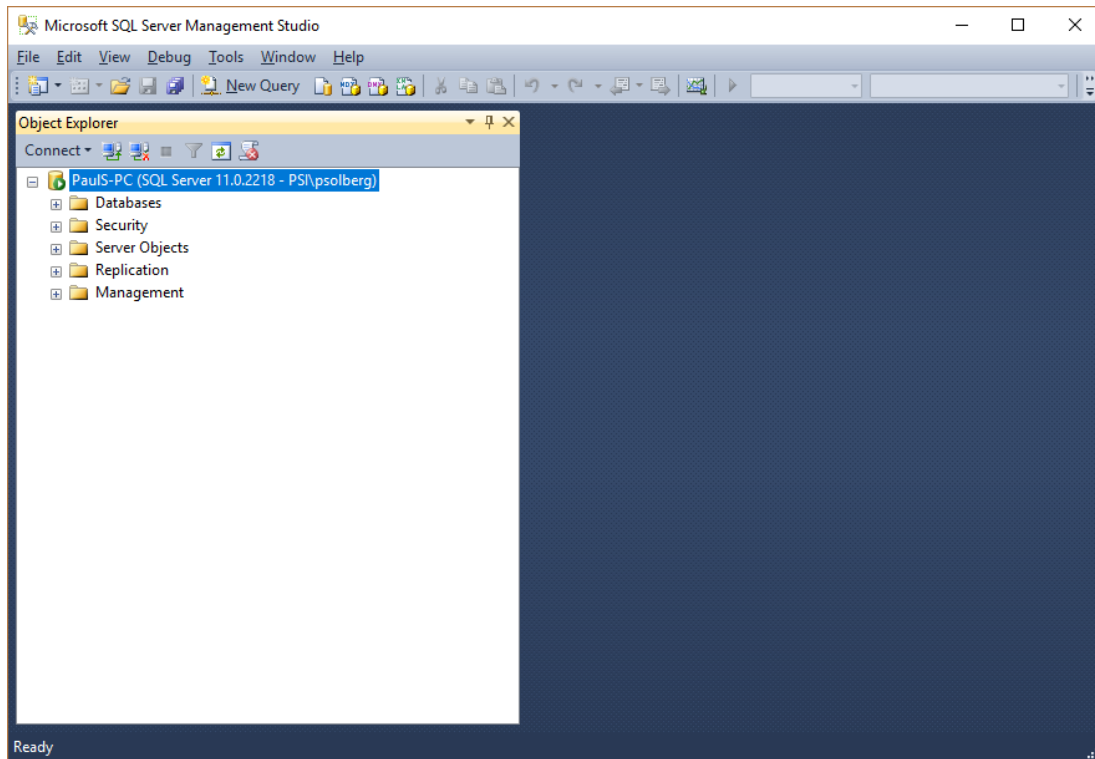


3. Accessing Microsoft SQL Server 2008 R2

When you are done you will have two new main menus in your program selection.



We are now going to open *SQL Server Management Studio*. It will select the default instance and login without credentials. In the left hand column we will see the instance and, as you can see, it is running. The Server name and instance are two values required for the PBS SQL install to find the database server.



You can close SQL Server Management Studio and proceed with either installing PBS SQL or configuring Passport Query Builder.

VI. PBS SQL Configuration and Installation Steps

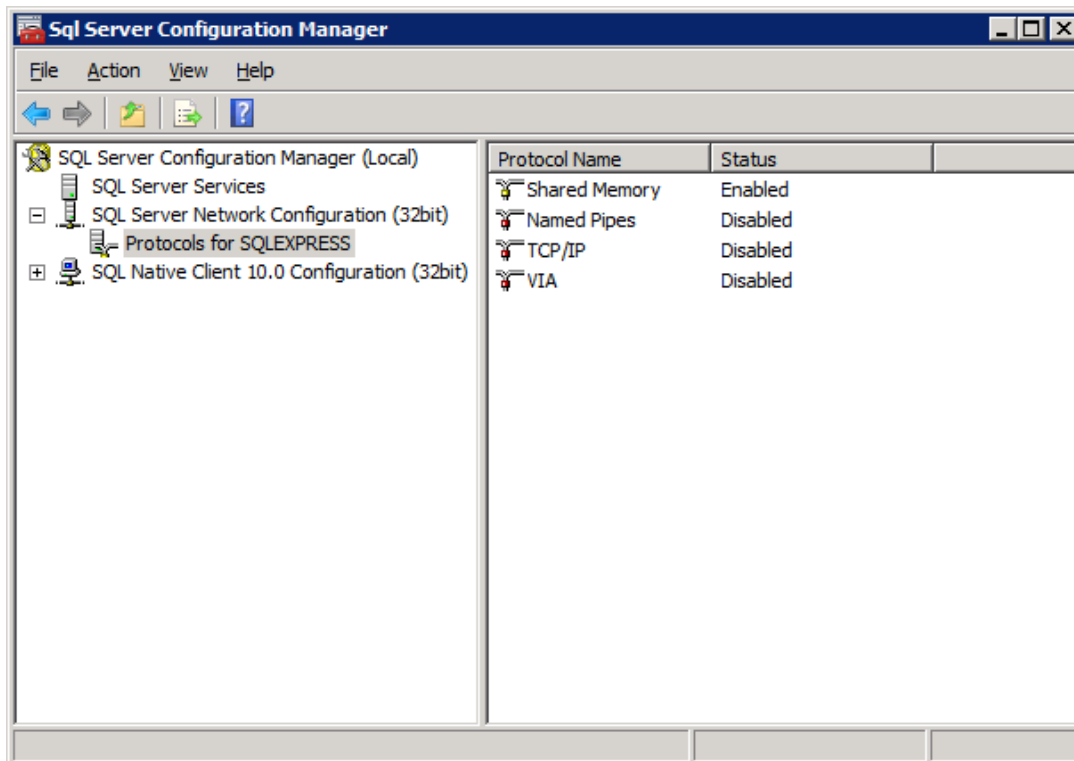
This is a basic PBS install procedure that assumes you do have SQL server installed. To verify any existing SQL installations open a command prompt and type “sqlcmd -L”. A list of existing databases display. If the instance that you are using does not display in the list a problem exists with the services.

PBS v12.05 requires MS SQL with Advanced Tools. If you do not have Advanced Tools installed you must re-install SQL Server. Advanced Tools are required for the SQL reports and must also be installed in order to use Passport Query Builder.

A. Configuring the SQL Server - TCP/IP and Named Pipes Protocol

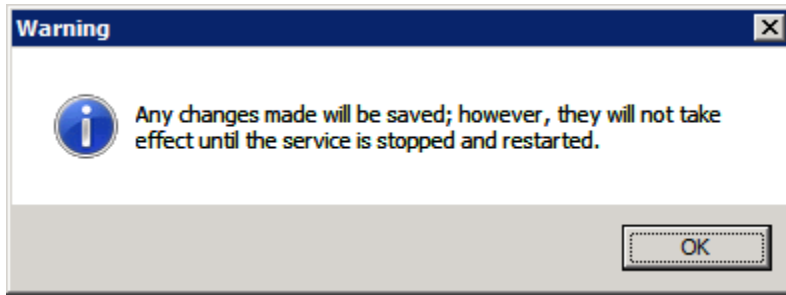
You will need to configure SQL Server to use the TCP/IP and Named Pipes protocols.

This is done using the *SQL Server Configuration Manager* which is accessible through the SQL server start menu. Select *Microsoft Server SQL Server (Version)*. Select *Configuration Tools* and then *SQL Server Configuration Manager*:

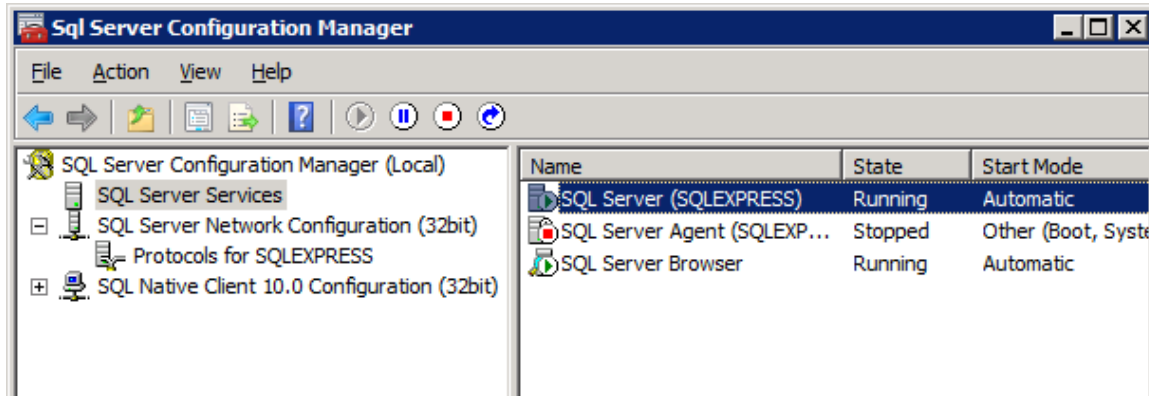


- Expand *SQL Server Network Configuration*
- Click on the instance, Example: *Protocols for (Instance Name)*
- Enable the *Named Pipes* and *TCP/IP* protocols by right clicking on each and select *Enable*. *Shared Memory* does not have to be enabled. 2008 SQL Server has a *VIA* protocol. Do not enable this. 2012 does not have the *VIA protocol*.
- Close the *SQL Server Configuration Manager*

You will be prompted with a message to restart the SQL Server service:



This may also be done using the SQL Server Configuration Manager:



Right click SQL Server Services, and select Restart from the menu.

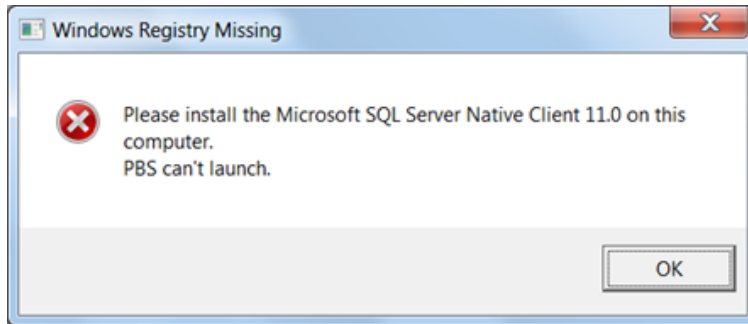
B. Installing PBS SQL

You must be logged into the Server as a member of the Administrator's group. In SQL Server Management Studio you must have set up the same user for which you logged into the server. If you are using a domain the administrator / user must be part of the domain group.

a) Native Client 11

Native Client 11 must be installed on the Server and *every workstation* that accesses PBS SQL. If you have Microsoft SQL Server 2012, it will already be installed. If you have Microsoft Server 2008 it may not be installed. You check this by going to the *ODBC Data Source Administrator (32-bit) or (64-bit)* (accessed from *Administrative Tools*) and check the *Drivers* tab. If it is not installed you must install it. In the steps below there is a point where you will be instructed to install it. You may install the workstations after PBS is installed. You will find the Native Client 11 installations in the Native_Client11.0 folder found under the top-level PBS folder.

When attempting to run PBS and Native Client 11 is not installed, you will see a message like this:



b) Acu4GL Product Code and Key

Pre-order the Acu4gl code and key before you start the installation of PBS SQL. You must contact Passport for this by emailing support@pass-port.com.

c) SQL Server different than PBS Application Server

If the SQL Server is on a different server than the installed PBS application programs and SQL is not installed on the application server, do one of the following:

- After the install, run the scripts in the ESQL_sp_scripts found in the top-level PBS folder. There is one script per company.
- This is the easiest option. During the install, if the install is launched from SQL Server using a mapped drive to the application server the scripts will install as is.

2. PBS 12.02 SQL through PBS 12.04 Upgrade

You have the *New Database installation* method available when upgrading data from a previous system.

Due to the large amount of table changes, the *Database In-place* install is not available when upgrading to v12.05.

Installation with New Database

When upgrading from PBS SQL version 12.01 through 12.04 do NOT install PBS 12.05 in the same instance as the older version.

You have two options when upgrading from an older version of PBS SQL. Choose one of the following:

- Create a new SQL instance so that you can install PBS 12.05 in that instance.
- Export your data from the older version. Backup the older version database. Delete the older version database and now you are ready to install PBS 12.05. **PBS v12.05 requires that you have SQL Server with Advanced tools. If you do not have Advanced tools you must install a new instance.** Advanced Tools are required for the new SQL reports and must also be installed for Passport Query Builder.

Note: You must retain the folder where the old system is installed. The EZ Convert program will copy essential files from the old system to the new system.

The PBS SQL install process is done in several independent steps. Many of the steps are covered in this document. Other steps are covered in detail in the EZ Convert documentation. This is a brief synopsis:

- Export the data from 12.04 or earlier version using the Extended file utilities and Control file utilities. If you have an Affordable Care Act license, export that data using ACAUTIL.
- Install PBS 12.05 SQL.
- Restore the data into 12.05 using EZ Convert (EZCONVERT.BAT). Restore the ACA data using ACAUTIL.BAT.

The following section goes into the details on installing PBS SQL.

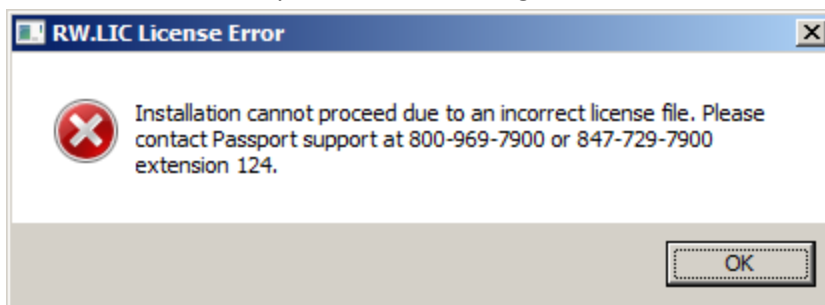
C. Preparing for the Installation

This is an *Installation with New Database*. This install is used for:

- Upgrading from any previous PBS SQL system
 - Upgrading from any previous PBS vision system
 - Installing a new PBS SQL system with no data upgrade.
- Create a folder for installing PBS, but do not place this in the Program Files directory for Windows 7, Windows 8, Windows 10, Windows Server 2008, Windows Server 2012 or Windows Server 2016. We recommend a folder called PBSSQL1205 at the root level of a drive or network share:
C:\PBSSQL1205

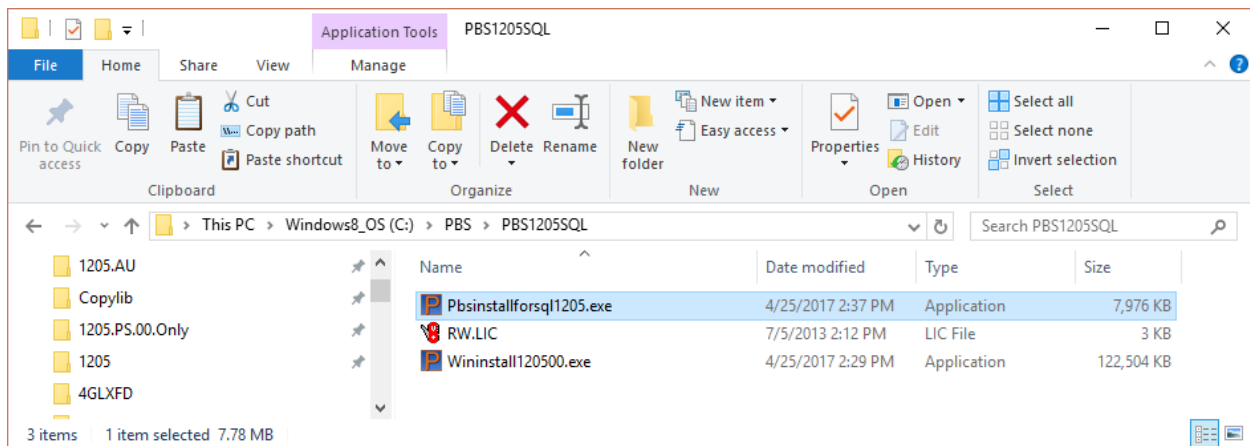
- Copy your RW.LIC to the directory created in the previous step. If the license file has a name like *RW – XYZ Company – ABC Associates-EXP12-31-18.LIC*, you MUST RENAME it to *RW.LIC* before you run the install.

You are required to have a RW.LIC file for the version 12.05 installation that has a Passport Update Program (PUP) date of 06/01/17 or later. If you attempt an install with a license that has a PUP date of 05/31/17 or earlier, you will see a message like this:



If you get this message, contact Passport support reception for details.

- Copy **Wininstall120501.exe** and **Pbsinstallforsql120501.exe** to the directory you created above. These are self-extracting zip files that contain our basic install and some additional components required for SQL server integration. After downloading the folder should look something like this:



- An entry of an Acu4gl product code and key is required for the PBSSQL 12.05 installation. Download the product code and key for Acu4gl on the FMS site. They will be located in the Client Files folder in a sub folder with a name of matching the company. It must be a version 10.0 product code and key.

D. New or Data Upgrade using New Database Install

If you have not done so, be sure to also read the [Configuring the SQL Server - TCP/IP and Named Pipes Protocol](#) and [Installing PBS SQL](#) sections.

The first section is *Starting the New Database Installation*. The next section you must follow is either *Installing Multiple Companies* or *Installing One Company*.

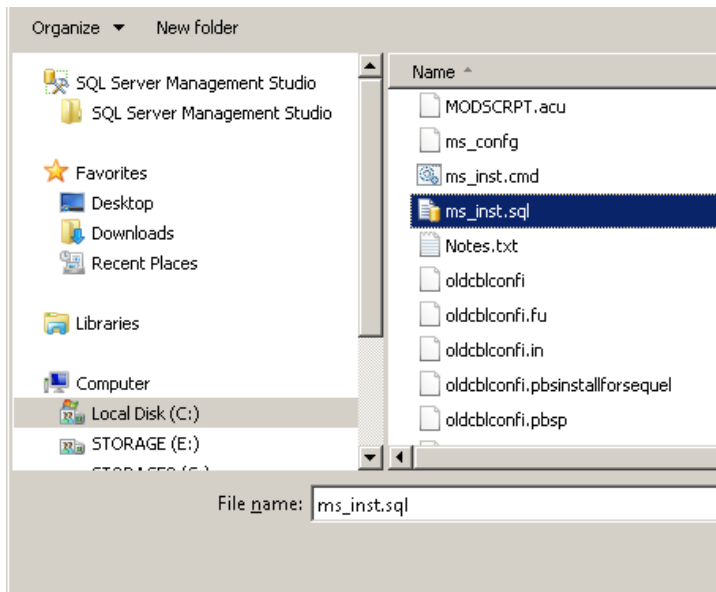
- Installing Multiple Companies – This means the installation installs company 00 with the tables and the databases are generated for the other companies from the multi-company export from the old version. Later you run EZ Convert to install the tables for other companies as it converts the data
- Installing One Company – You run the install to produce the tables for company 00. When EZ Convert is run to convert data from a vision system, the tables are already in place

1. Starting the New Database Installation

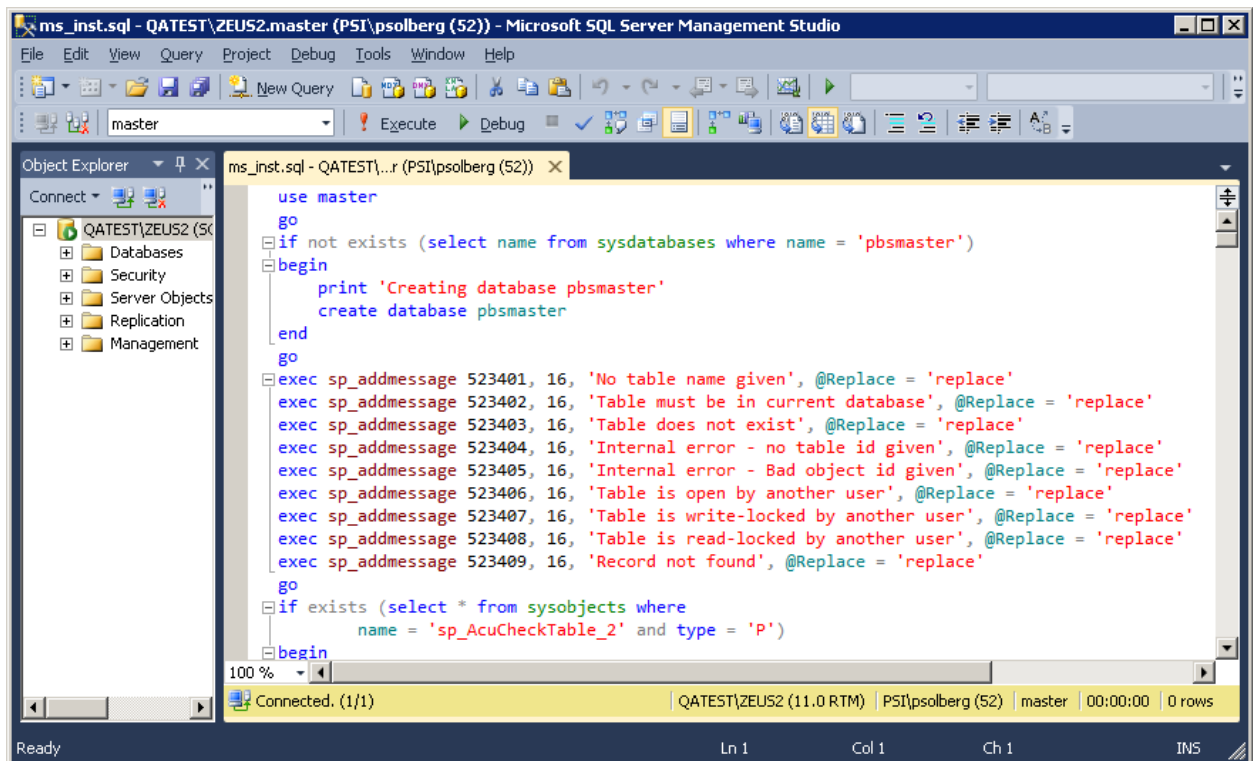
When you are finished with the install, you may use the EZ Convert utility to convert your data.

- Verify that the RW.LIC, **Wininstall120501.exe** and **Pbsinstallforsql120501.exe** are in a new folder “PBS1205SQL” and that you have a new instance for installing v12.05.
- Run **Wininstall120501.exe**.
- Run **Pbsinstallforsql120501.exe**.
- Verify that Native Client 11 is installed on your server. For verification instructions see [Native Client 11](#). If not installed, go to the PBS Native_Client11.0 folder and select either the 32 bit or 64 bit version and install it before you continue.
- On the computer where PBS will be installed, run *Microsoft SQL Server Management Studio*. Login using **Windows Authentication**. Verify that you have opened and selected the correct server and instance.

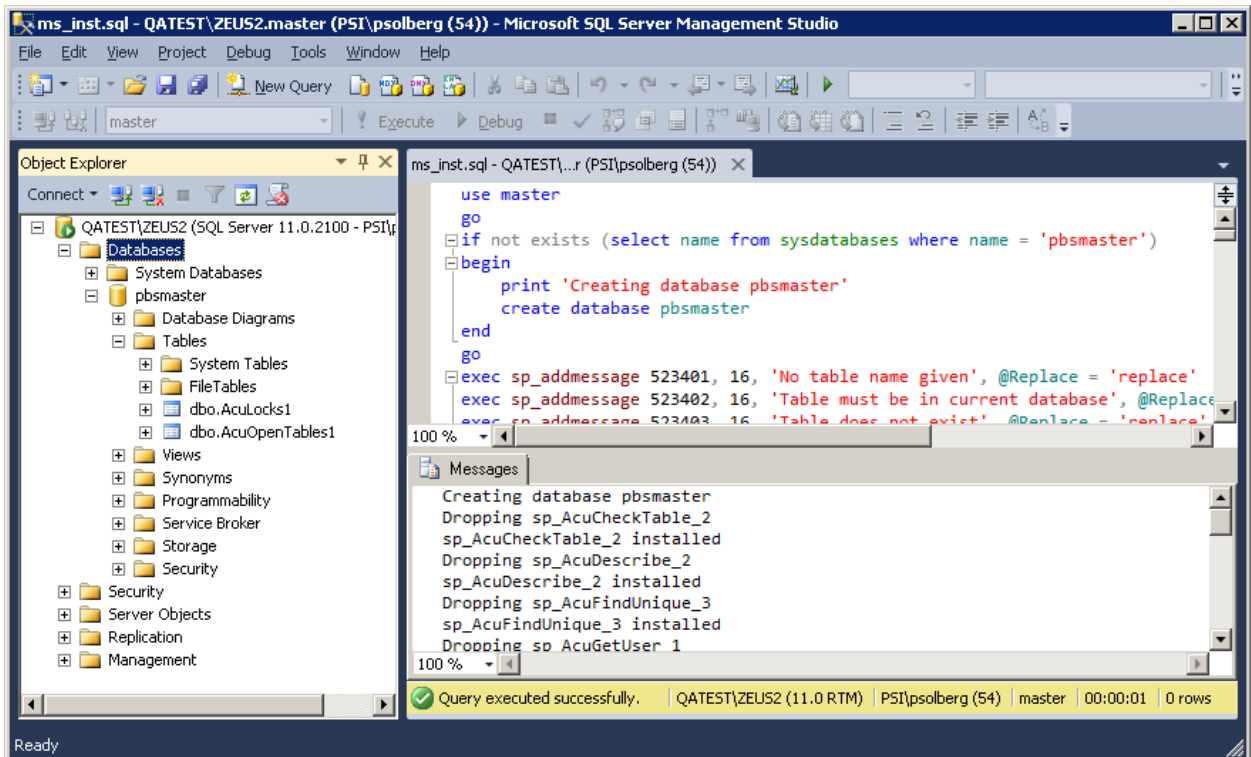
- ❑ Select File -> Open. Find the SQL script called **ms_inst.sql**. It is in the PBSSQL1205 folder. It looks like this:



- ❑ Select the Open button and it should look like this:



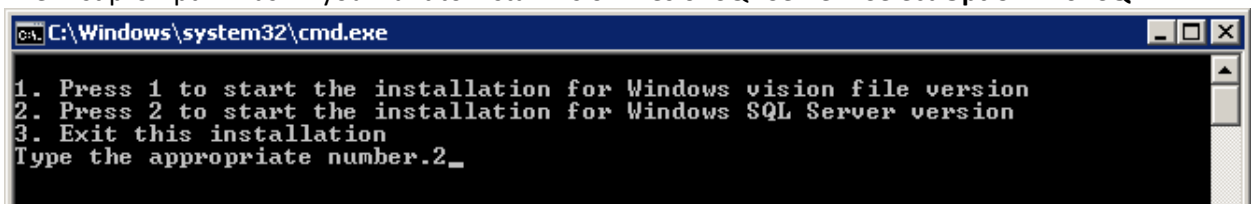
- ❑ Press the **Execute** button on the tool bar. This will create a database called **pbsmaster** and two tables similar to this:



You may have to refresh the database using F5 to see the new tables.

You may close Microsoft SQL Server Management Studio.

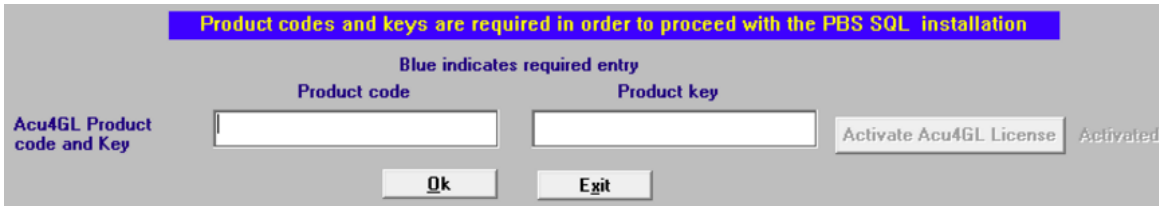
- You may want to do this step earlier as it can take hours to complete. When converting data from a previous system, users should no longer be allowed to enter new data in that system. You will need to export files from the old system. For exporting from the old system use the exfutl and ctlutil batches. See the EZ Convert documentation ([EZ Convert](#)) for detailed instructions on how to export PBS files and how to convert manufacturing data. Following the v12.05 install, copy the exported files to the PBSSQL1205 folder in a sub folder called EZEXP. If needed, use acutil to export Affordable Care Act data. Following the v12.05 install, copy the ACA data to the v12.05 top-level folder.
- Run **PBSINSTALL.BAT** to install the software, initialize the database tables and supporting data files.
- The first prompt will ask if you want to install Vision files or SQL Server. Select **Option 2** for **SQL**.



Select Enter and the following screen displays:



- You will be asked to select the type of install. Select *First Time Install of PBS SQL, or Upgrade from prior PBS Version*.
- Use the *Available Server Instances* field to select the instance from the list. The program lists the locally configured server computers, and the names of the server computers and instances broadcasting on the network.
If the instance is not part of the list you must enter it manually in the *SQL server name "named instance"* field. Enter the name of the server plus the named instance. For example, we will enter SQL-Trial\SQLExpress to match the instance we created while installing SQL Server earlier in this document.
The entry in this field will automatically create the appropriate server and instance information in the configuration (cblconfi.*) files for running PBS.
- Next, at the bottom of the screen, you enter the product code and key here:



Note

The activation has changed for the V12.05 install. The AcuSQL product code and key activation is no longer required as the install has been updated with the version 10 runtime. The version 10 runtime supports the Windows 10 operating system.

Locate the product code and key in the pdf file that was previously downloaded. Enter each license one at a time by doing the following:

- Copy and paste the Acu4GL *code* and *key* using right click to select copy, or Ctrl+c, from the PDF file and use Ctrl+v to paste to this screen.
- After entering (or copying) the Acu4GL code and key, select the *Tab* key to go to the *Activate Acu4GL License* button.

After the license is activated, the Activated green lettering displays like this:



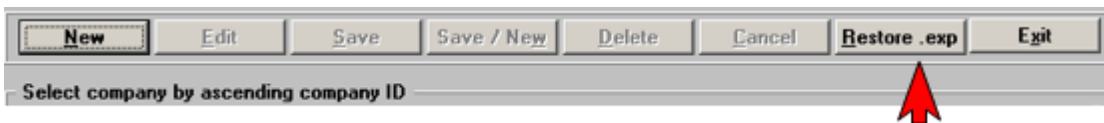
To continue, click the Ok button.

If you are upgrading data for one company (company 00) from a Vision system with no multi-company file, skip to [Installing One Company](#). If you are upgrading data for multiple companies continue below.

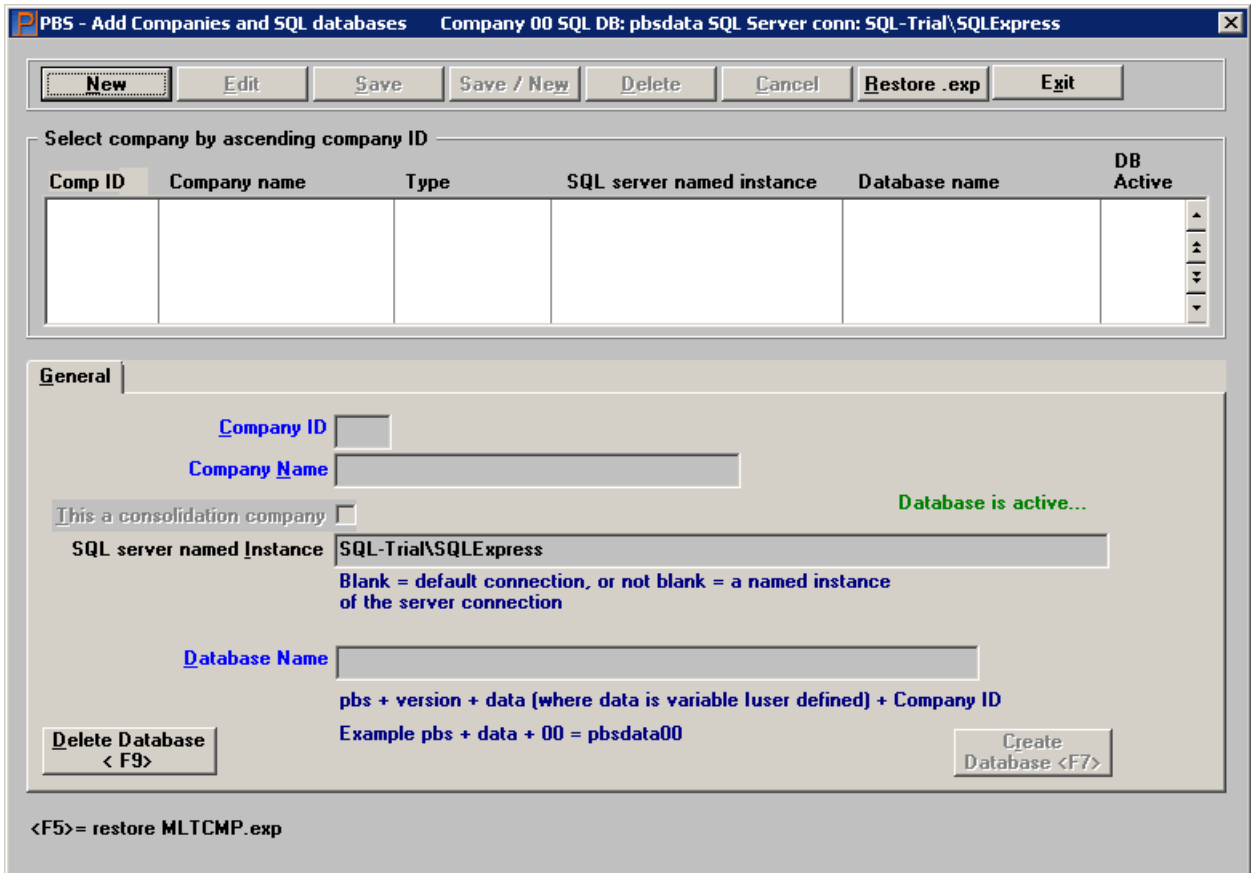
2. Installing Multiple Companies

This documentation provides the initial install of multiple companies using data from the previous version of PBS. If you want to add a new additional company with no previous data, following the SQL install see the *Defining Multiple Companies* chapter from the PBS Administration documentation.

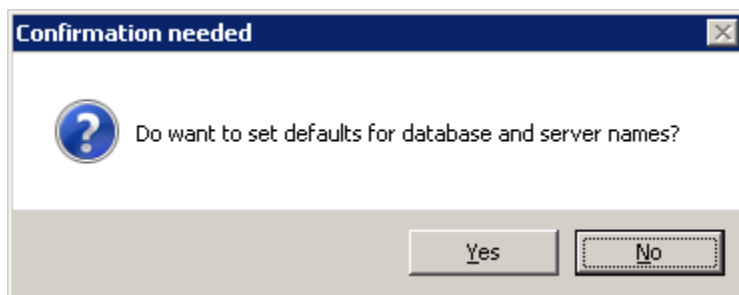
- The *Add Companies and SQL Databases* screen displays. Next you initialize a database for each company. We are upgrading data from a PBS system with multiple companies so we will use the Restore Export function to process the old version Multi Company export file (MLTCMP.EXP) that was copied into the EZEXP folder. Select the button labeled Restore .exp as seen here.



Note: If the screen below does not display, it means that you do not have full rights to install the databases. You must modify your login to have administrator rights, delete pbsmaster and go back to the [Preparing for the PBS Installation](#) step in a new folder.



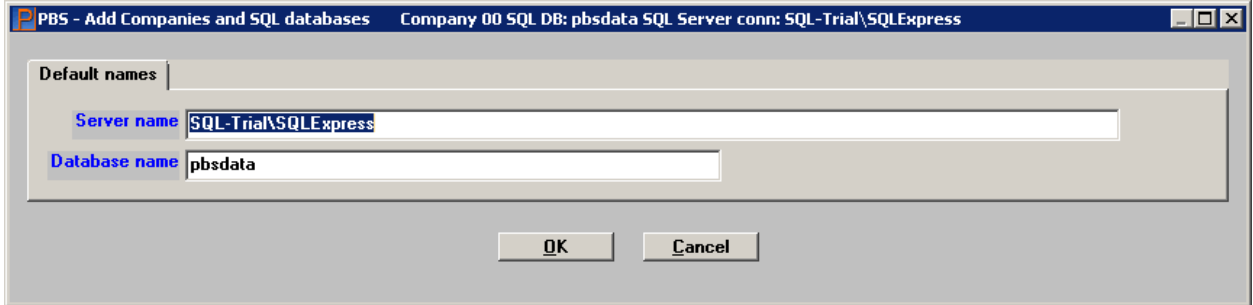
- You will be asked “Do you want to set defaults for the database and server names?”. Select Yes.



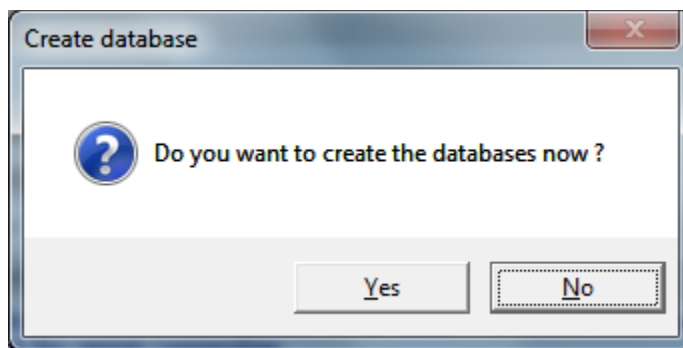
- You are prompted for those default values. Select the values displayed. The Instance shown is the one entered when we started the install and *pbsdata* is the root default for each company’s database. Each company id is appended to this value for creating each database name. So company 00 will have a database called *pbsdata00*, the company 01 database is *pbsdata01* and so on.

We highly recommend that you use the default database name, but if you change the name from *pbsdata* to something different, DO NOT START THE DATABASE NAME WITH A NUMERIC VALUE and DO NOT PUT SPACES IN THE NAME. Do NOT enter a dash or any other non-alphabetic character in the name either.

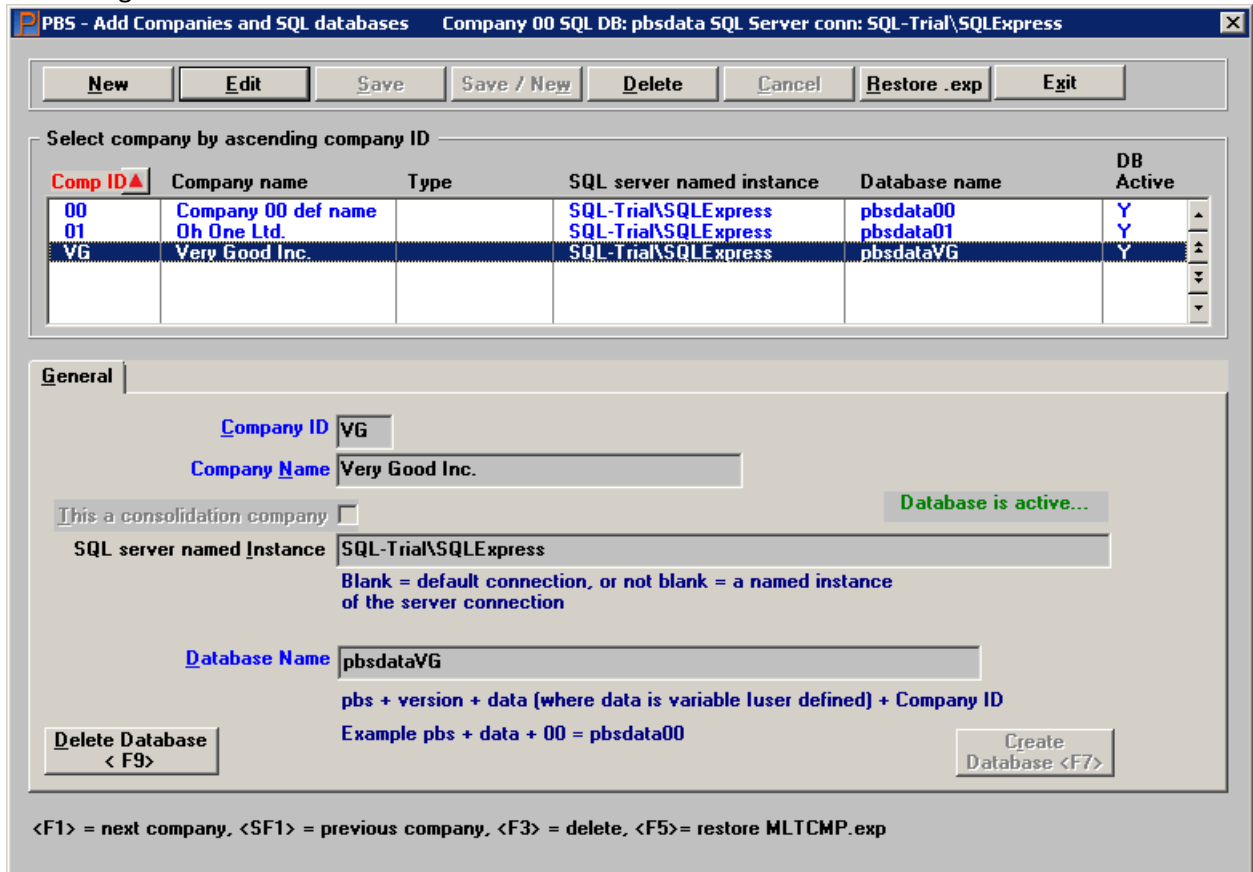
If you are using CashPoint you must use the default database name of pbsdata00. Select OK.



- You will be asked if you want to create the databases. Select Yes



- Entries are made into the new multi company table and the databases are created. In the example there was no entry for Company 00 from the exported MLTCMP file, so the system created one automatically. The System requires company 00 to act as a base for certain functions. The result is something like this:



Click on Exit to display the install program.

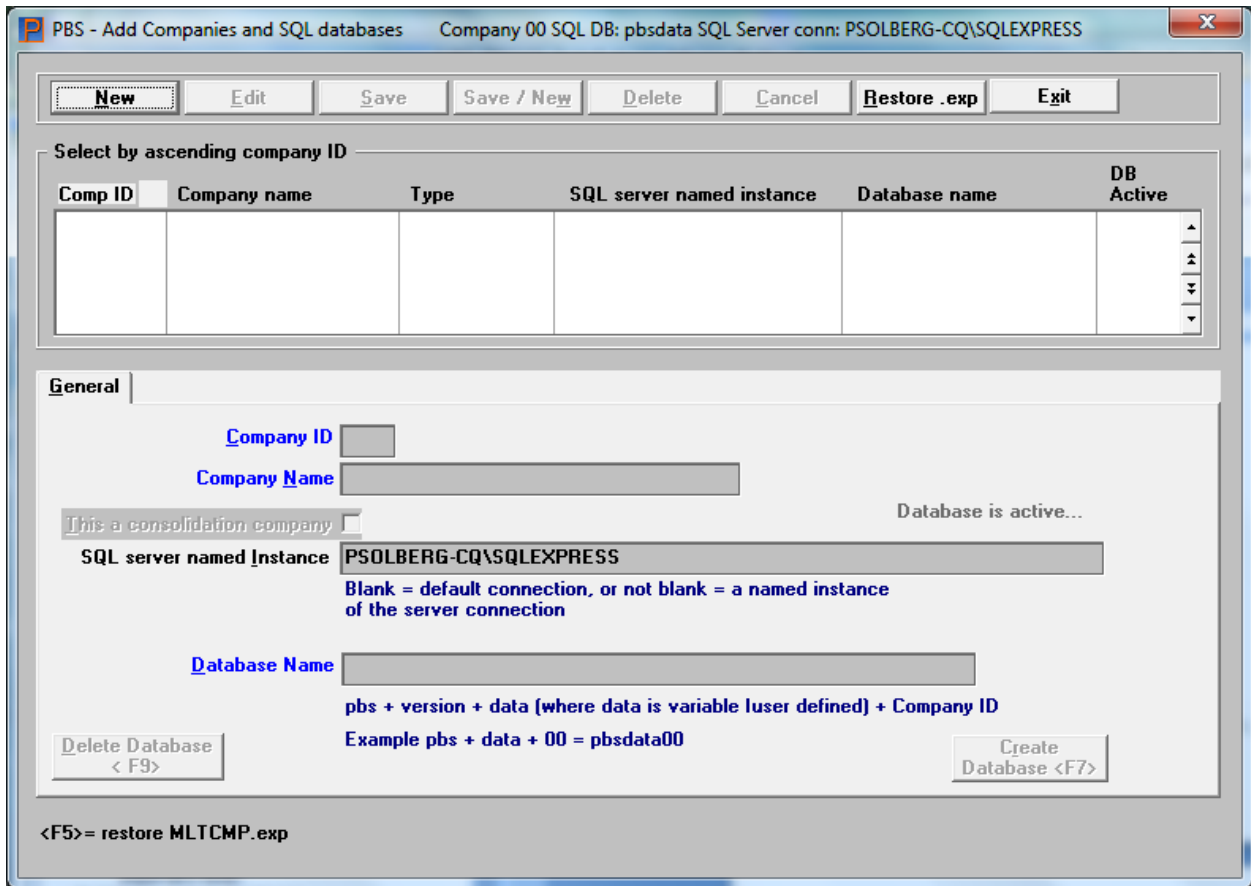
Skip to the section called [Finishing the Install](#).

3. Installing One Company

The *Add Companies and SQL Databases* screen displays next.

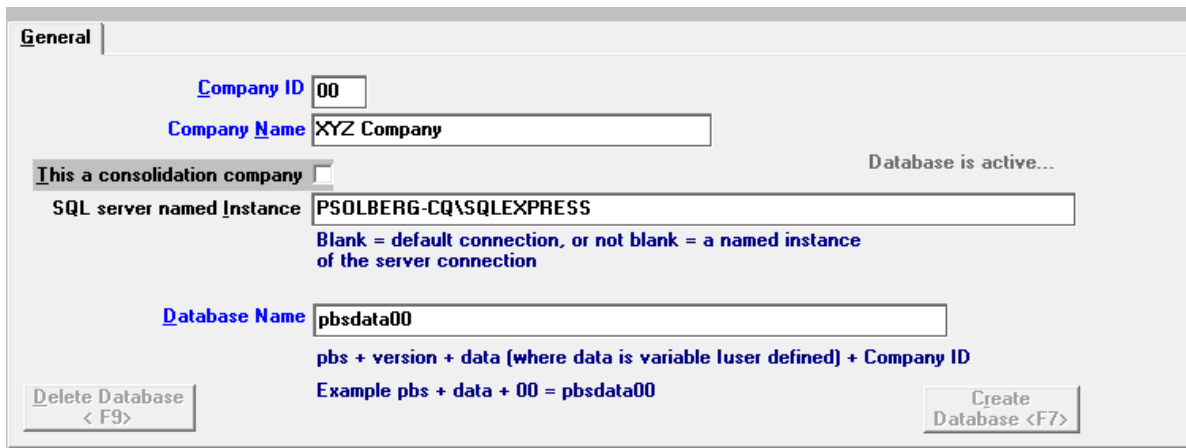
Note: If the screen below does not display, it means that you do not have full rights to install the databases. You must modify your server login to have administrator rights, delete pbsmaster and go back to the [Preparing for the PBS Installation](#) step in a new folder.

Select the New button on the *Add Companies and SQL databases* screen below:



Enter the *Company ID*, *Company Name* and use the <TAB> key to move to the *Database Name* field.

When finished the General tab looks something like this:



Select the *Save* button.

Select the *Create Database <F7>* button.



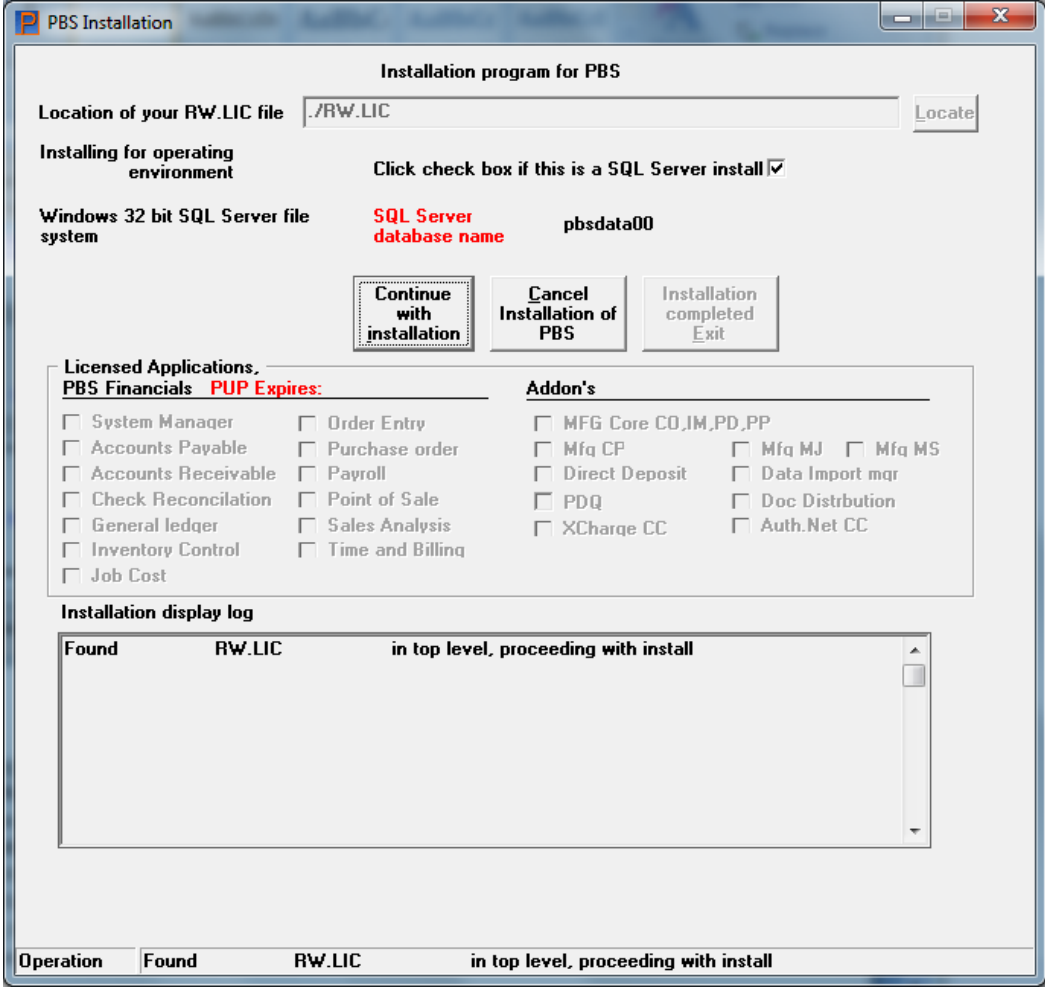
Database is active...

The message *Database is active* displays.

Click on *Exit* and continue with the Finishing the Install section.

4. Finishing the Install

- The *PBS Installation* screen displays next. This program installs the programs, paths, menus and tables for company 00. The program has preselected the *Click check box if this is a SQL install* question and indicates that the database is pbsdata00, for company 00, as company 00 is required for both single company installs and multi company installs:



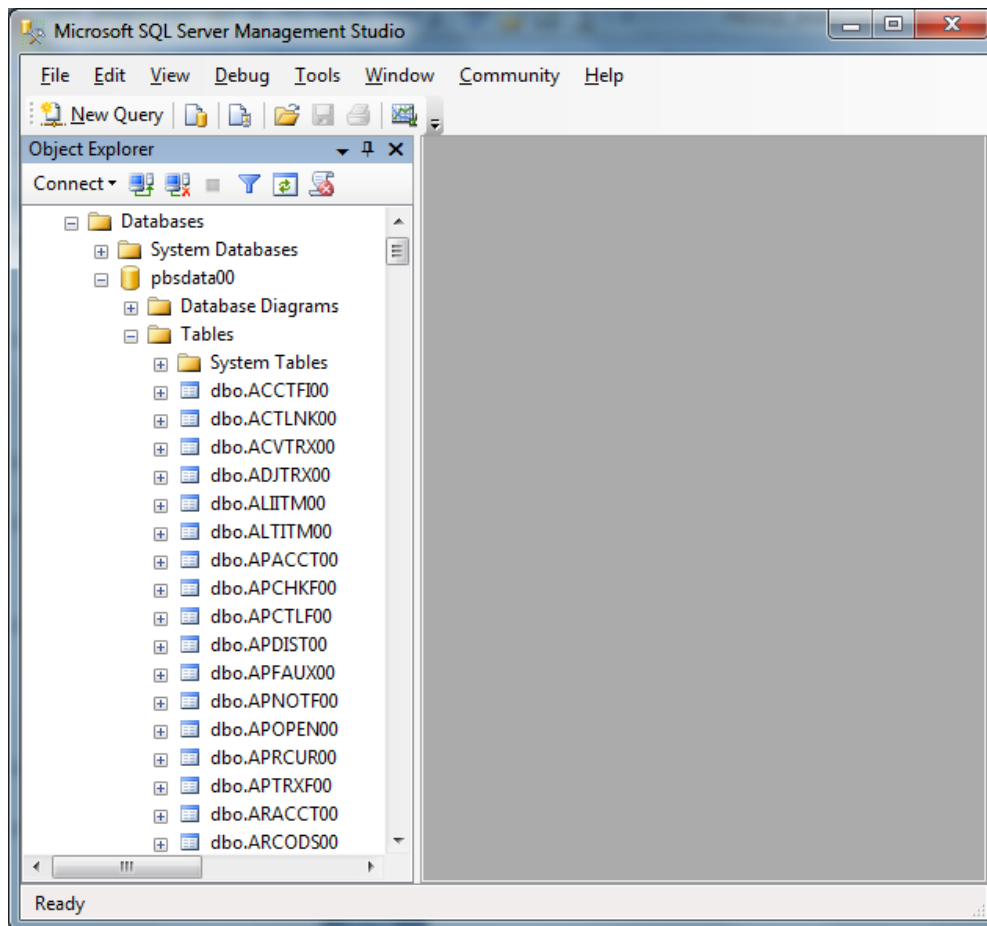
- After entering the location or browsing to the license (if not already found), hit **enter** and select the *Continue with installation* button:



- After selecting *Continue with installation* the install program installs the PBS programs, establishes the paths and menus for the licensed applications and initialize tables and files for Company 00.
- If you are licensed for Passport Query Builder you may want to see the [Passport Query Builder Install Screens](#). After Passport Query Builder is installed, you will be returned back to the install program after Passport Query Builder is installed.

When the installation process is completed, you can open *Microsoft SQL Server Management Studio* to verify that the **pbsdata00** tables are created.

Tables were NOT generated for any companies other than 00 as those are created when you run PBS EZ Convert.



Select *Finish* to return to the PBS Install screen.

5. Passport Query Builder Configuration and User Documentation

Do not do this step unless you are licensed for Passport Query Builder.

After completing the PBS SQL install with Passport Query Builder included in the license, see the [PBS SQL Reports Configuration Guide](#) for instructions.

Also, for the Passport Query Builder user documentation, see the [Query Builder User document](#).

6. SQL Reports Configuration

If you are licensed for Passport Query Builder configure that first.

There is a new option for some reports that allows you to view the report data in a more graphical flexible SQL report format. When selected, the program launches Internet Explorer and the data is displayed there.

The configuration for Passport Data Query and SQL Reports are very similar. The steps are covered in the [PBS SQL Reports Configuration Guide](#).

7. Install the latest updates and hot fixes

Very important: Only install an update or hot fix that is intended for the version of PBS that you are currently running. Updates and hot fixes may be downloaded from the [Passport FMS site](#).

8. Run EZ Convert, Training and v12.05 Setup

EZ convert moves and converts your data from your RealWorld, RW32 or PBS version to PBS v12.05. For conversion instructions, download [PBS EZ Convert.pdf](#). Inside this document there is important information about the changes to the fields (columns) for Vendors, Vendor Contacts and Purchasing addresses and how this affects the printing of forms. You may need to change your forms design for A/P checks and purchase orders. There are changes to payroll Employees that also affect check printing.

Also, use this link to download the [v12.05 list of enhancements](#). This will help you train your users on the new features for v12.05. You can use this list to determine the setups needed for the new features.

9. Auto Close

Starting with PBS 12.05 the Auto Close setting is set to false. The steps for you to turn it off to false are no longer required.

- See [Other Procedures and Documentation](#) for other post installation steps.
- Also see [Connecting Workstations to PBS SQL](#)

10. Affordable Care Act License

If you have an Affordable Care Act license(s) in the previous version of PBS, copy it from the bin folder of that version to the bin folder of v12.05.

11. Report Number

The report number was expanded for PBS 12.03. If your previous system was v12.02 or earlier, following the running of EZ convert the report number starts at 100000.

12. Check Reconciliation Checkbook

This feature was new for v12.04. This pertains to running EZ convert on the Checkbook (CKBOOK).

Due to the new way Accounts payable void checks are used in Check Reconciliation, the conversion adds a reconciled date to void check transactions. EZ Convert forces the reconciliation date to match the original date of the void. This eliminates the need to manually reconcile all the old void checks after the conversion. It is possible that recent voids should be part of a current reconciliation. If that is the case you may use Load checkbook to remove the reconciliation date and use Reconcile bank statements to reconcile them with the current statement date.

13. Job Cost Change Master

If you have Job cost and you are upgrading from v12.02 or earlier you must initialize the change master table after the upgrade.

14. CashPoint Upgrade

The 12.05 install for CashPoint will be available soon.

If you have CashPoint installed for PBS 12.03 and 12.04 there are some steps you will need to do. **The following instructions are not up-to-date for a v12.05 install. Please do not install v12.05 with a system that has CashPoint. The instructions will be updated when they become available.**

a) *New SQL Install of PBS 12.05*

You may export PBS data and use EZ Convert to move data into a new system.

Go to *Setup > System > Acct Infg.* On the *General Ledger* and *Accounts Payable* tabs alter the following fields to the updated location of 12.05:

Output file path and name

Command to run

You must copy the [CPIMPPBS.exe](#) program from top-level PBS 12.03 to top-level PBS 12.05. Be sure to set the permission so that all appropriate users can access this program.

Also, if you decide to move PBS to a new database or new server/database, you must alter the PBS Control server and login information. After that, you must re-install the *CP-PBS-Implementation.sql* script into the NCR Counterpoint database.

If needed, you may also change databases. See [Changing Databases](#)

b) *Install Updated Script*

An updated script has been provided. This script can be run on PBS 12.03 or 12.05. Once installed it provides faster exporting of data and other fixes. Install this script into the NCR Counterpoint database.

Keep in mind that once this new script is installed, the server settings in the **PBS Control MUST be accurate**. The older version of the PBS Control scripting did not always require this. These settings include: PBS DB Server, PBS DB Instance, PBS DB Name, PBS DB Owner, PBS Server Alias, Linked Server Local Login ID, Linked Server Remote Login ID and Linked Server Remote Password. If PBS and NCR Counterpoint are on the same instance, leave the following fields **blank**: Server Alias, Linked Server Local Login ID, Linked Server Remote Login ID and Linked Server Remote Password.

Download the *CP-PBS-Implementation_v1.3.zip* file from the FMS and extract it. It is located in the Win folder for 12.05. Open it into the SQL Server Management Studio NCR Counterpoint database and Execute it. After running it a message like this displays:

```
Messages
(1 row(s) affected)
Configuration option 'show advanced options' changed from 1 to 1. Run the RECONFIGURE statement to install.
Configuration option 'Ole Automation Procedures' changed from 1 to 1. Run the RECONFIGURE statement to install.
(1 row(s) affected)
```

If any linked server errors display it is most likely that the PBS Control does not have the proper server settings as covered in the CashPoint install doc.

c) Secure Pay

If you are using Secure Pay you cannot process credit card information during *Settlement*. You must process credit card information during *Ticket Posting*.

With Secure Pay, transactions are done on-line through a portal and Counterpoint receives a token for the authorization with no credit card information kept in Counterpoint. As a result, the Check Reconciliation Interface system cannot process data for "settlement"; only "ticket posting".

d) Installing a Service Pack for NCR Counterpoint

If you are also installing a Service Pack for NCR Counterpoint and you are using *Offline Ticket Entry*, download from the FMS site the CashPoint-DropPBSObjectsinCP_DB.pdf. Follow the instructions.

VII. Additional Server Configuration

Finish the install by configuring the server.

A. Setting up User Access to PBS Databases

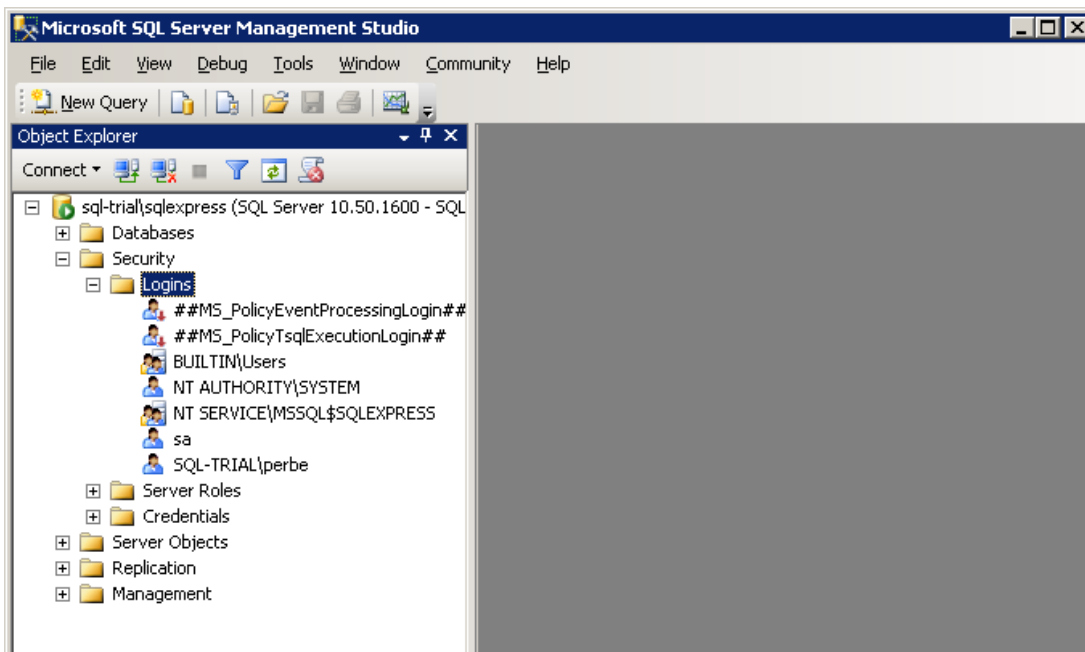
There are two methods to setting up SQL Logins to access the PBS databases.

- The most secure method involves setting up a domain group or a separate Login for each user and providing the correct mapping to the roles required to access and update the database. This method works when SQL server is configured for either Windows Authentication or configured for Mixed Mode.
- The second method uses a single login to grant access for any user that is able to run PBS. This is done by adding a login/password into the cblconfi file. This can save some time in initial setup but requires that you leave a login and password combination exposed in what is essentially a text file.

Both methods are covered in detail below:

1. Method One – Windows Authenticated or Mixed Mode Logins

After establishing the pbsmaster and pbsdata00 and other company databases, you must add user logins or a domain group using *SQL Server Management Studio*. Open the instance of SQL server that contains your databases and go to Security/Logins:



Right click on Logins and select *New Login*:

Login - New

Select a page

- General
- Server Roles
- User Mapping
- Securables
- Status

Script Help

Login name: Search...

Windows authentication

SQL Server authentication

Password:

Confirm password:

Specify old password

Old password:

Enforce password policy

Enforce password expiration

User must change password at next login

Mapped to certificate

Mapped to asymmetric key

Map to Credential Add...

Mapped Credentials

Credential	Provider
------------	----------

Remove

Default database:

Default language:

OK Cancel

Connection

Server: sql-trial\sqlexpress

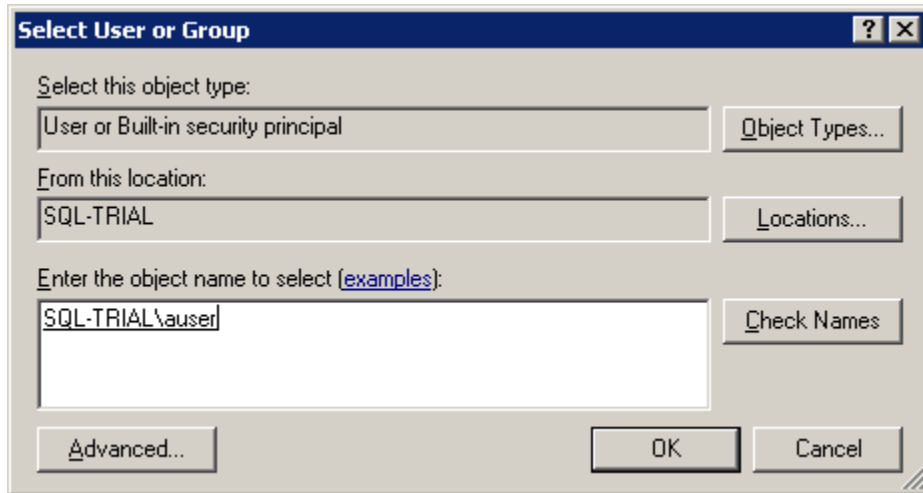
Connection: SQL-TRIAL\perbe

[View connection properties](#)

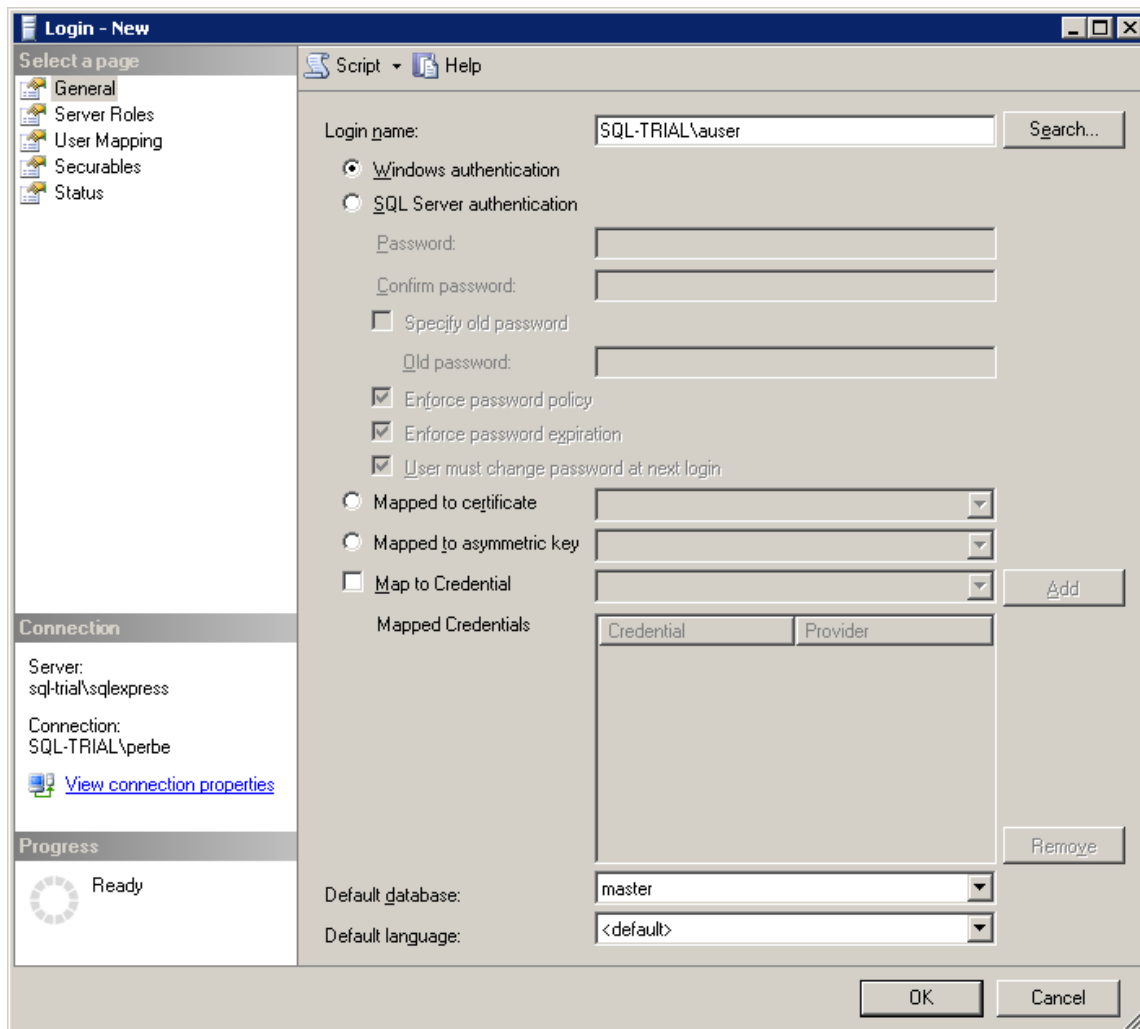
Progress

Ready

Using the search button, locate the Windows user account or domain group you would like to add:

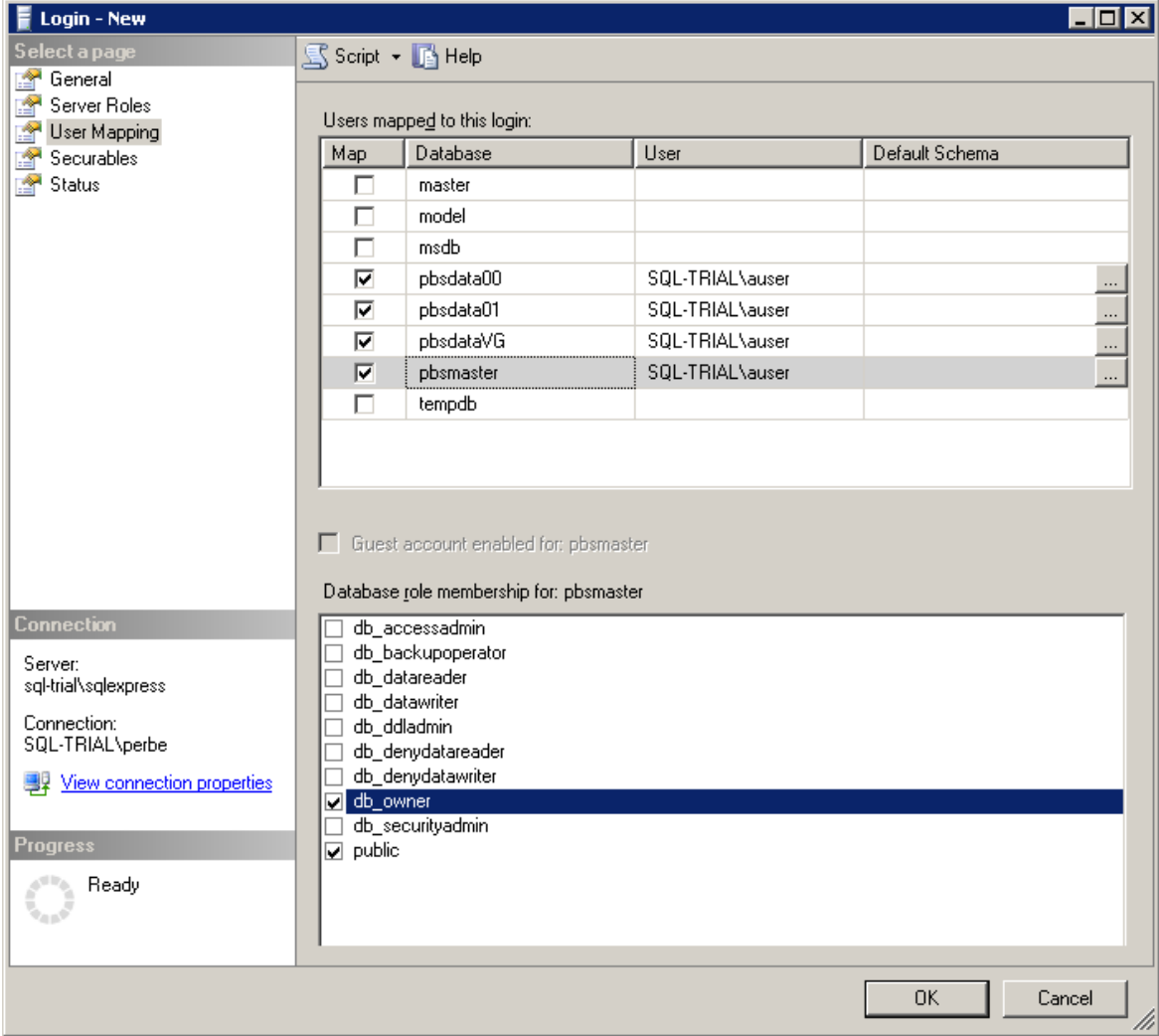


Hit OK and your user id will be added to the Login properties page:



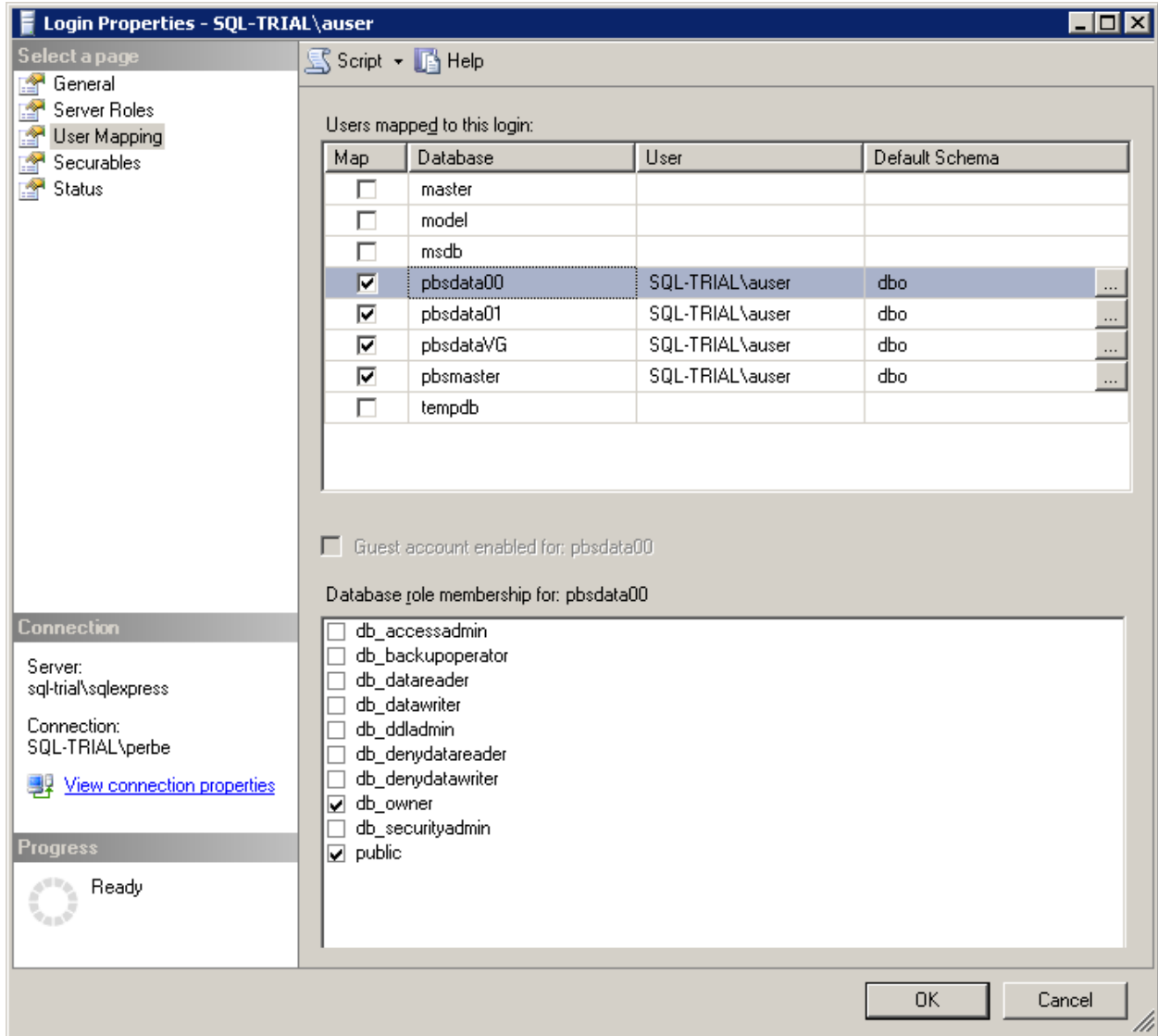
Under Security Logins, select the user. Select the Server Roles page and verify that the user is set up to as sysadmin. If not, set the user this way.

Select User mapping to assign roles and schema to the Login for each database:



For each database selected assign the role membership of db_owner.

When you select OK it will add the default Schema of dbo to each database you selected. Once this is done that user will be able to access the PBS databases:



The Schema of 'dbo' is required to handle tables properly between PBS and the Database. Details of the errors caused when this is not set up correctly are in the Appendix on trouble shooting and error messages.

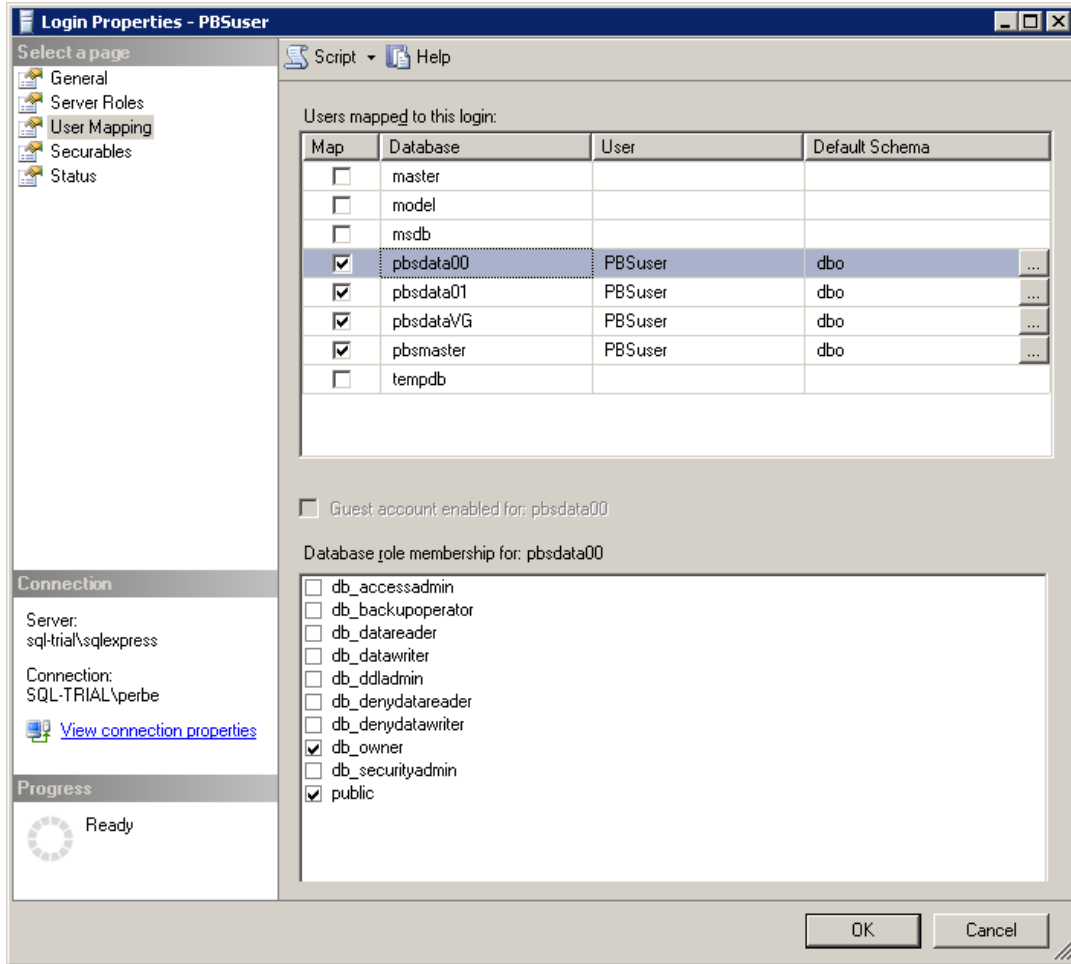
2. Method Two – Single SQL Authenticated login

With this method we will create a single SQL Login to provide access to all users of PBS SQL. The basic setup of the SQL login is very similar to Method One except we will only need one account and it will use SQL authentication rather than Windows Authentication.

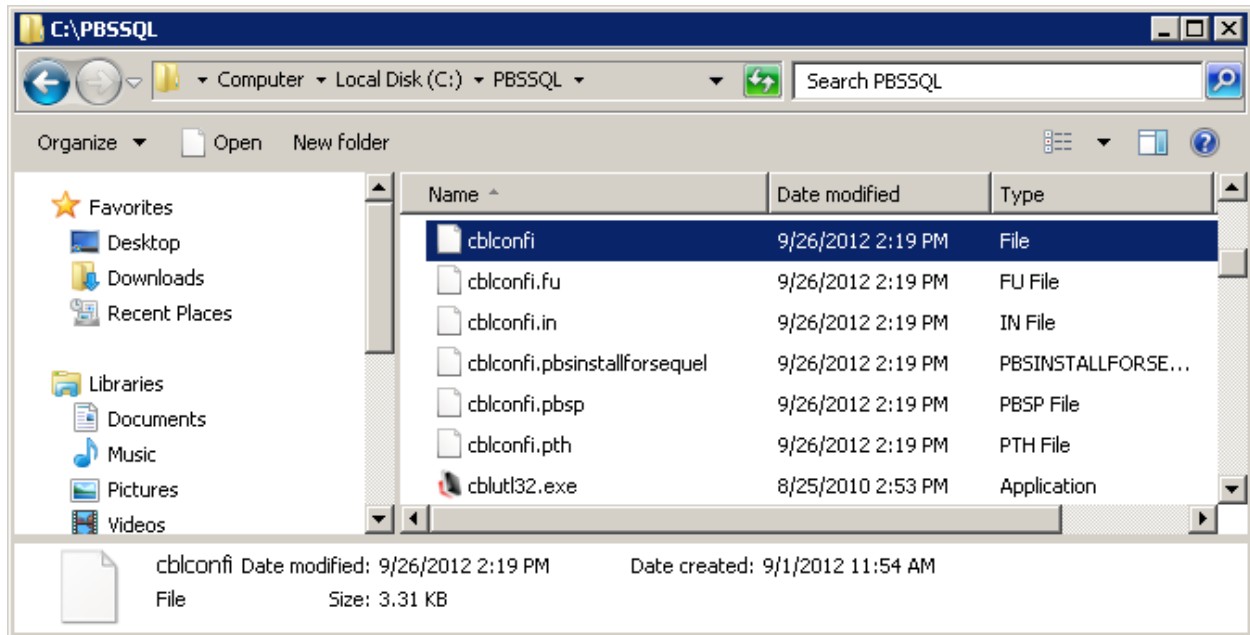
Open *SQL Server Management Studio* and select Security/Logins. Right Click Logins and choose *New login*. In this example we will set up a Login PBSuser with SQL authentication which will require you to setup a password for the account. The password complexity may be controlled by the operating system if those options are turned on.

The screenshot shows the 'Login - New' dialog box in SQL Server Enterprise Manager. The dialog is for creating a new login named 'PBSuser'. The 'SQL Server authentication' radio button is selected. The password fields are filled with masked characters. The 'Enforce password policy', 'Enforce password expiration', and 'User must change password at next login' checkboxes are checked. The 'Default database' is set to 'master' and the 'Default language' is set to '<default>'. The 'Connection' section shows the server as 'sql-trial\sqlexpress' and the connection as 'SQL-TRIAL\perbe'. The 'Progress' section shows a 'Ready' status.

Again, this login is mapped to the proper membership role and schema of 'db_owner' and 'dbo' respectively.



In order for PBS to utilize this SQL login we will need to add credentials to the 'cblconfi' files and remove the A_MSSQL_NT_AUTHENTICATION variable. There are six of these cblconfi.xxx files that are used for various functions and they are located in the top level of the install directory:



We are editing the top one, *cblconfi*, which is the primary file used when you run PBS. The other *cblconfi.xxx* files are also used during various utility functions so they must be changed as well. Open the file and page down to the end of the text. Two variables are commented out that are used to provide credentials to SQL Server;a2 SQL server must be configured to Mixed Mode for this to work. The variables are:

```
#A_MSSQL_LOGIN
```

```
#A_MSSQL_PASSWD
```

The A_MSSQL_NT_AUTHENTICATION variable must be removed by adding a # in front of it.

The default settings are shown here:

```
#--06-01-2015-----
PBSSQL_DEFAULT_CONNECTION QATEST\ZEUS3
PBSSQL_DEFAULT_DATABASE pbsdata
PBSSQL_MASTER_DATABASE pbsmaster
SQLDB_FLG Y
SQLDB_TYP MSSQL
4GL_ILLEGAL_DATA Unchanged
XFD_DIRECTORY 4GLXFD
A_MSSQL_ADD_TIMESTAMP 1
A_MSSQL_DEFAULT_CONNECTION QATEST\ZEUS3
A_MSSQL_DATABASE pbsmaster
A_MSSQL_LOCK_DB pbsmaster
A_MSSQL_ADD_IDENTITY 1
#DEFAULT_HOST MSSQL
#A_MSSQL_LOGIN ←
#A_MSSQL_PASSWD ←
PBS_VERSION <--12.04.00.00-->
PBS_INSTALLATION_TYPE Upgrade from all prior versions of PBS to PBS SQL v12.04 using Ezconvert

##--AcuSQL 9.2.5 additions Start
ACUSQL_RUNTIME_DLL asqlsrvr.dll
##--AcuSQL 9.2.5 additions End

##--Acu4GL 9.2.5 additions Start
A_MSSQL_ODBC_DRIVER_NAME SQL Server Native Client 11.0
A_MSSQL_NT_AUTHENTICATION 1 ←
```

Copy and paste the LOGIN and PASSWD just below the current entries and remove the hash tag(#) from the first position of the line. This will make the lines available to the runtime and document what was originally in the file. Just after each variable label, add a space and the SQL Login and password we just created. Add a hash tag(#) to the A_MSSQL_NT_AUTHENTICATION variable. Here is an example:

```
#A_MSSQL_LOGIN
#A_MSSQL_PASSWD
A_MSSQL_LOGIN PBSUser ←
A_MSSQL_PASSWD PBSUser1 ←

PBS_VERSION <--12.04.00.00-->
PBS_INSTALLATION_TYPE Upgrade from all prior versions of PBS to PBS SQL v12.04 using Ezconvert

##--AcuSQL 9.2.5 additions Start
ACUSQL_RUNTIME_DLL asqlsrvr.dll
##--AcuSQL 9.2.5 additions End

##--Acu4GL 9.2.5 additions Start
A_MSSQL_ODBC_DRIVER_NAME SQL Server Native Client 11.0
# A_MSSQL_NT_AUTHENTICATION 1 ←
```

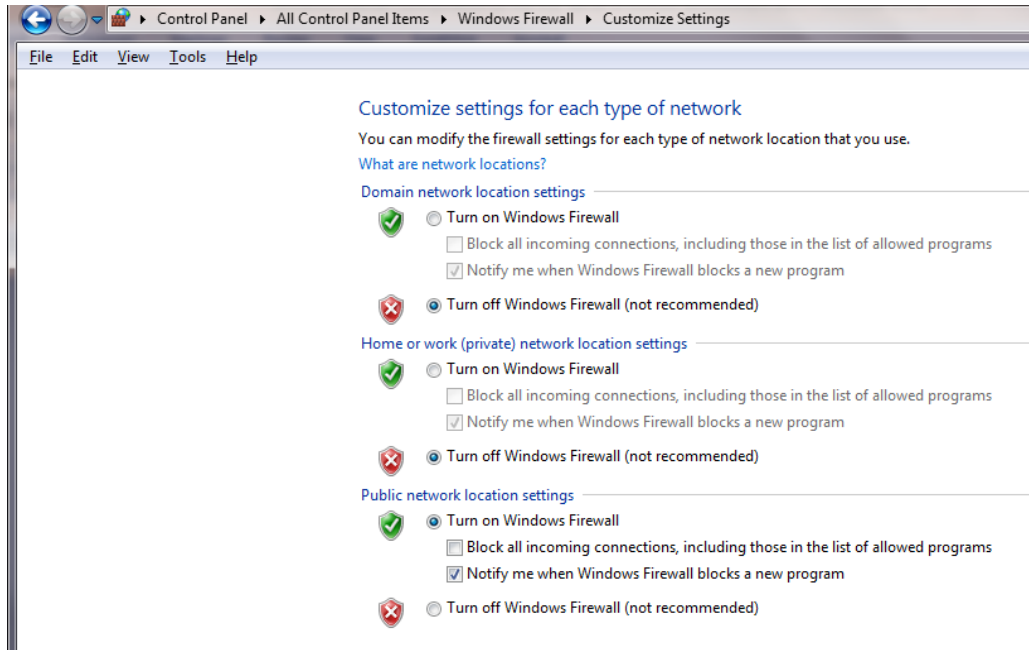
Now any user with rights to execute the PBS.BAT startup script can access the database through the application.

B. Creating an Inbound Firewall Rule

On the SQL Server you have to Turn OFF Windows Firewall.

From the *Control panel*, select *Windows Firewall*.

Select *Turn Windows firewall on or off*. This screen displays:

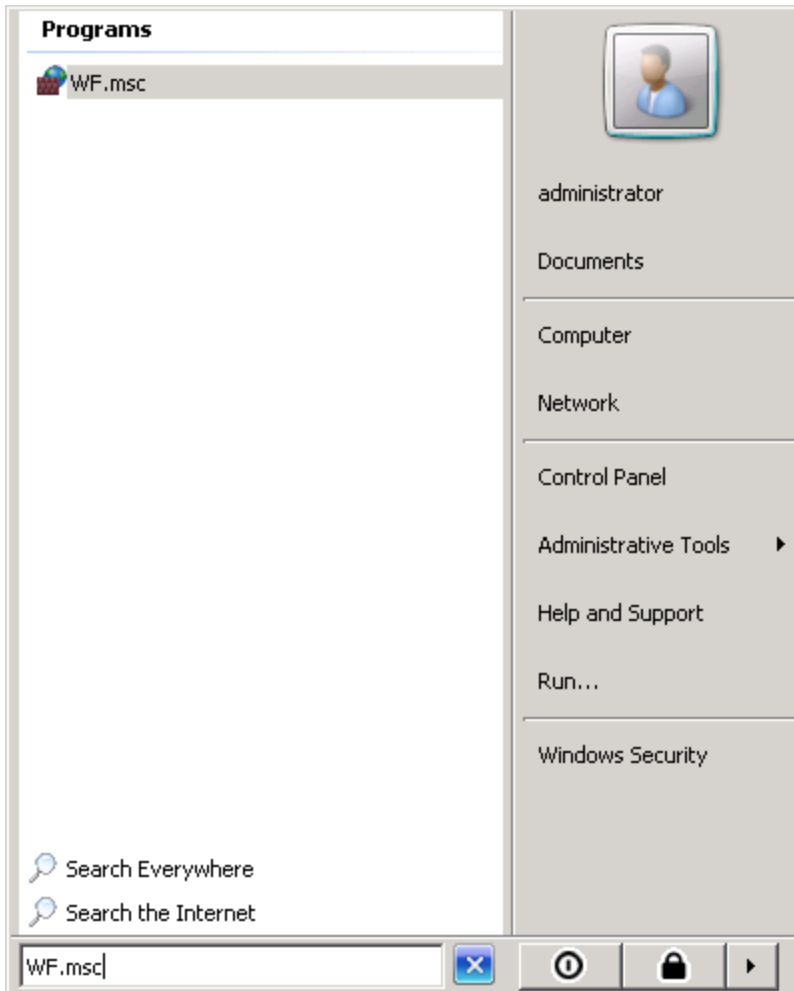


Turn off all three.

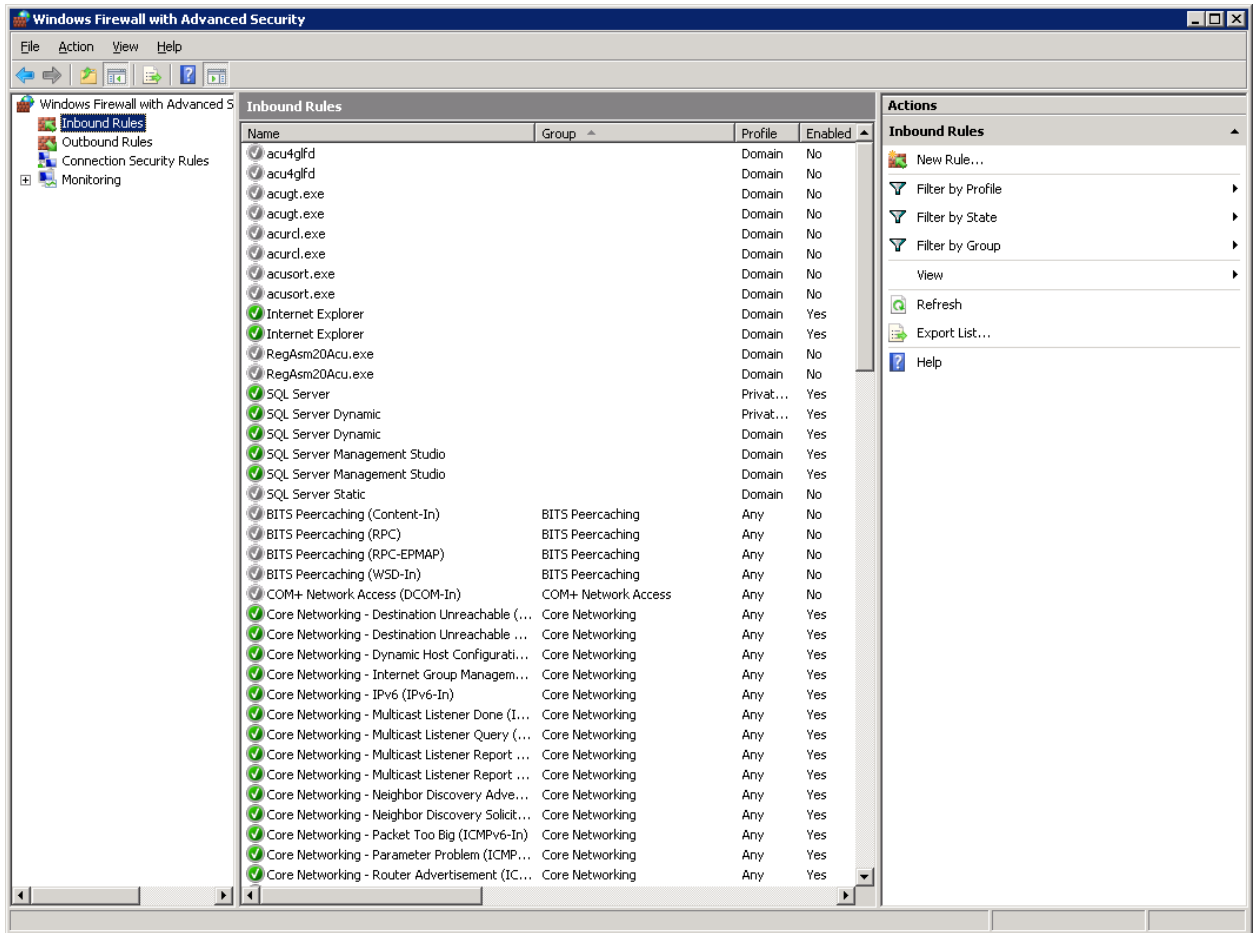
Close it.

Follow the instructions below to create a New Inbound Rule where PBS and SQL are installed.

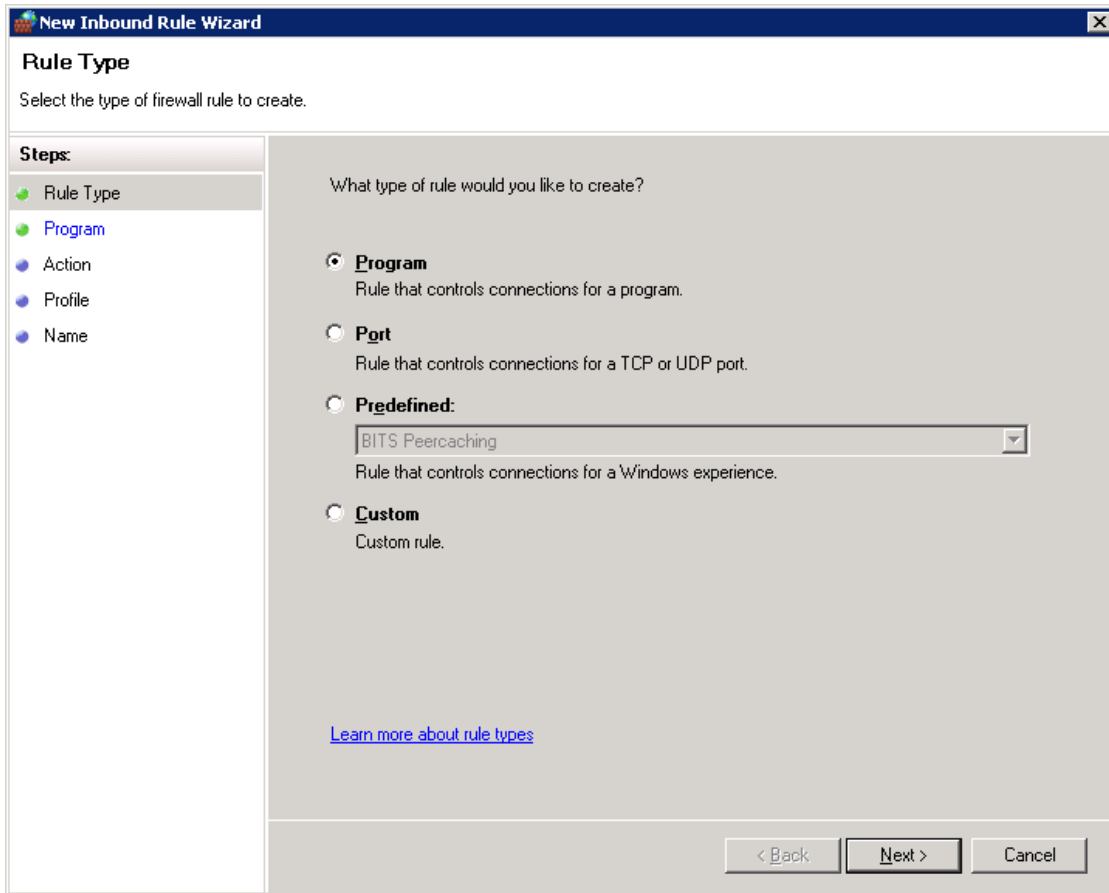
1. Login into the SQL Server as administrator
2. Click the *Start* button and select -> *Run*, type this command *WF.msc*



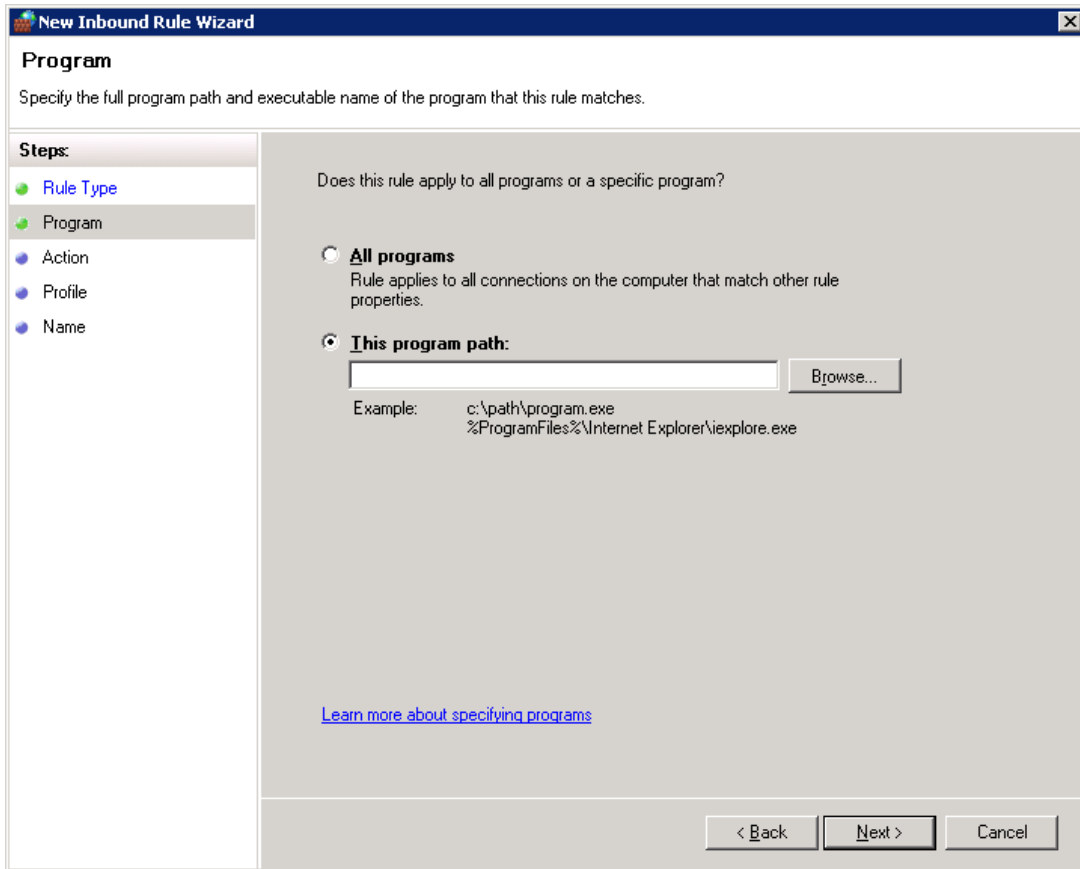
3. Click *Enter*.



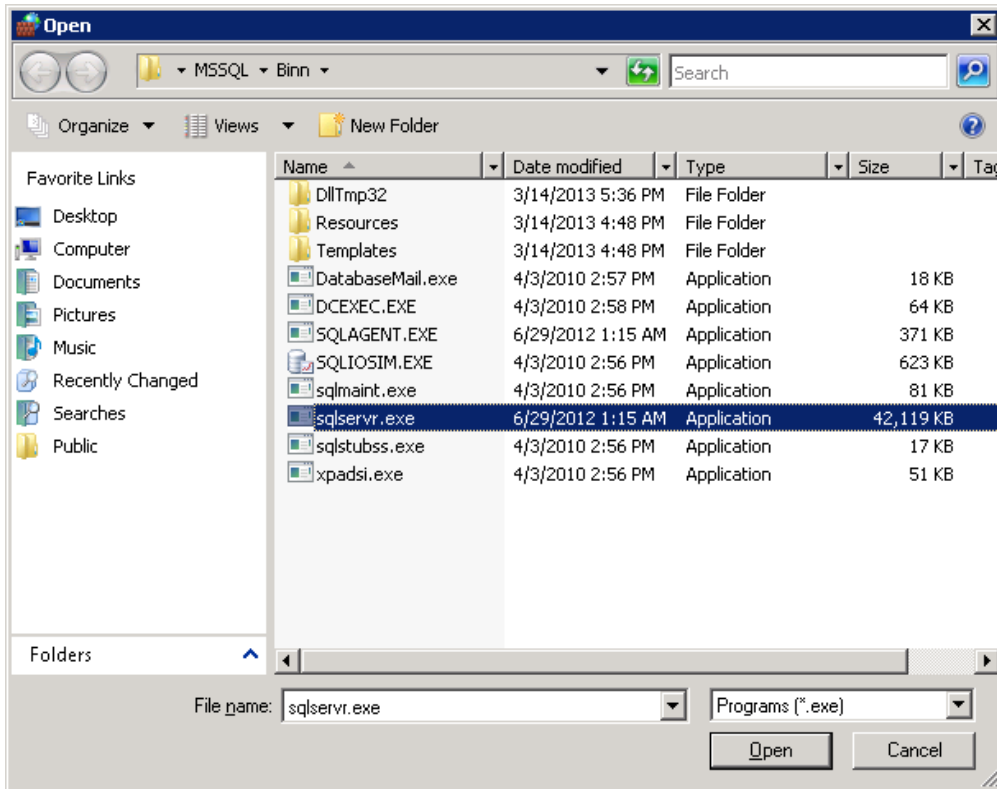
4. Select *Inbound Rules*.
5. On the right panel click on *New Rule*.



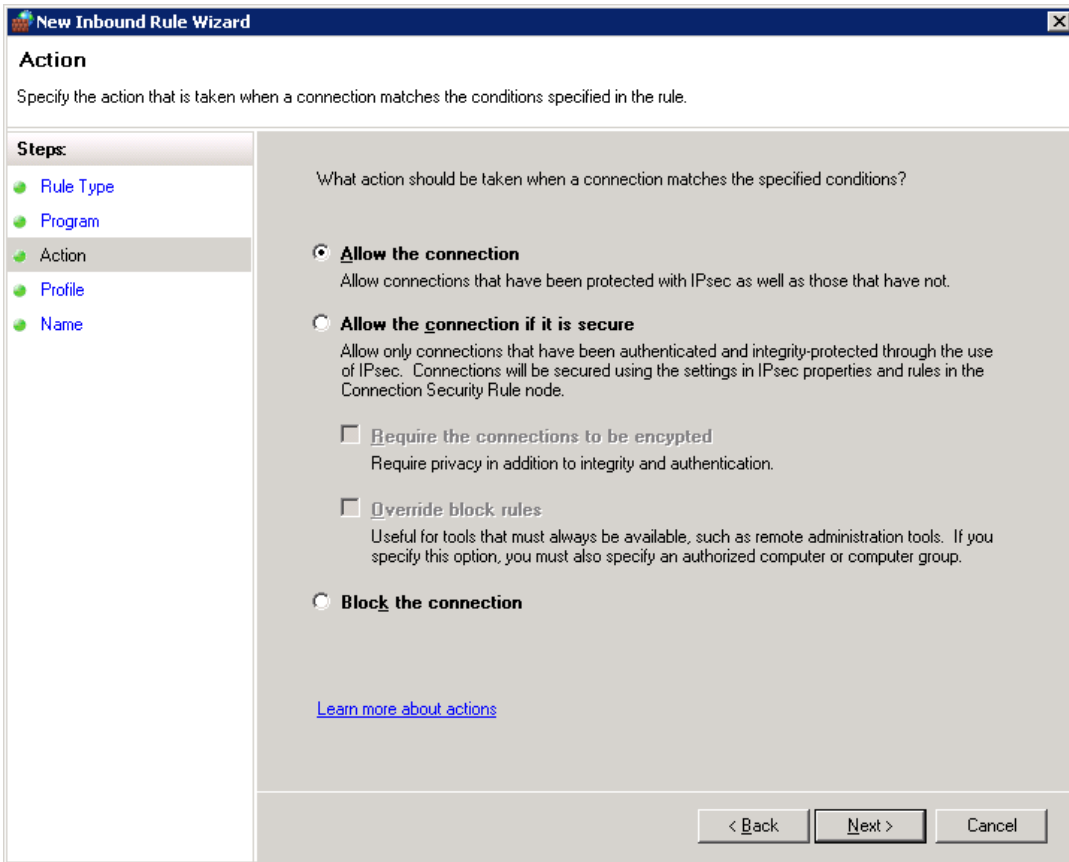
6. Make sure *Program* option is selected and click *Next*.



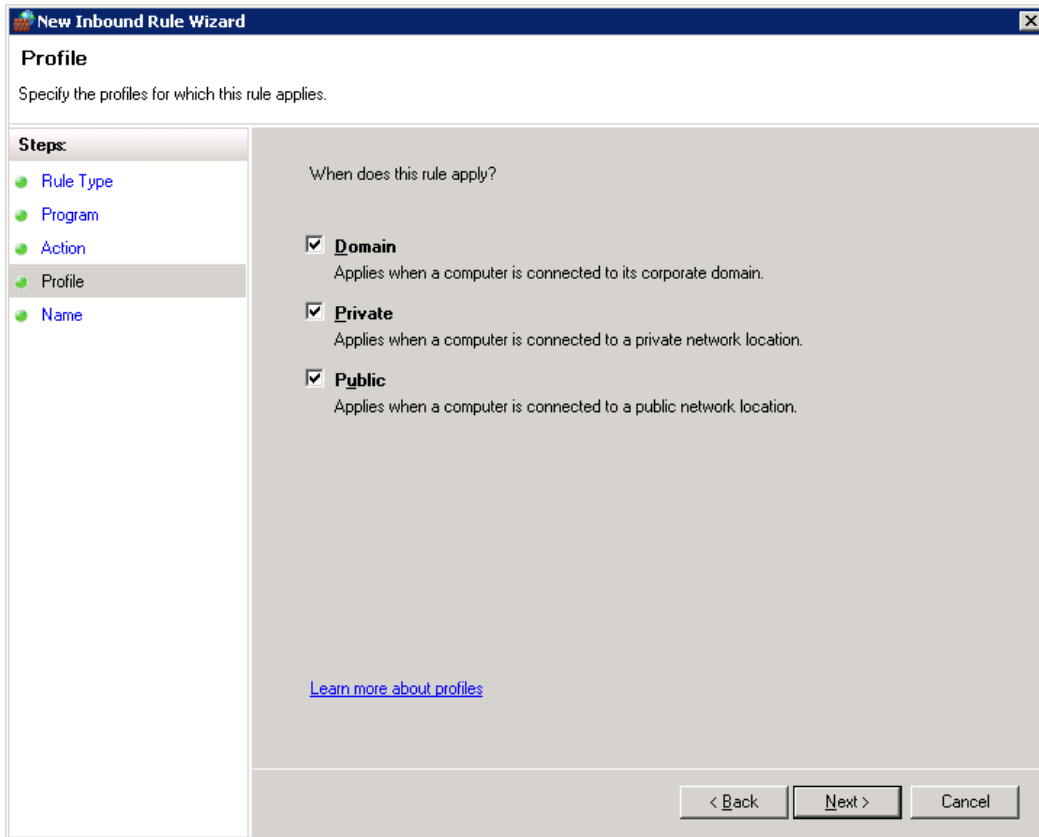
7. Select *This program path*. Click *Browse*, and navigate to the instance of SQL Server that you want to access through the firewall, and then click 'Open'. By default, SQL Server is at 'C:\Program Files\Microsoft SQL Server\MSSQL10_50.PBSSQL1202\MSSQL\Binn\sqlservr.exe'. Click 'Next'



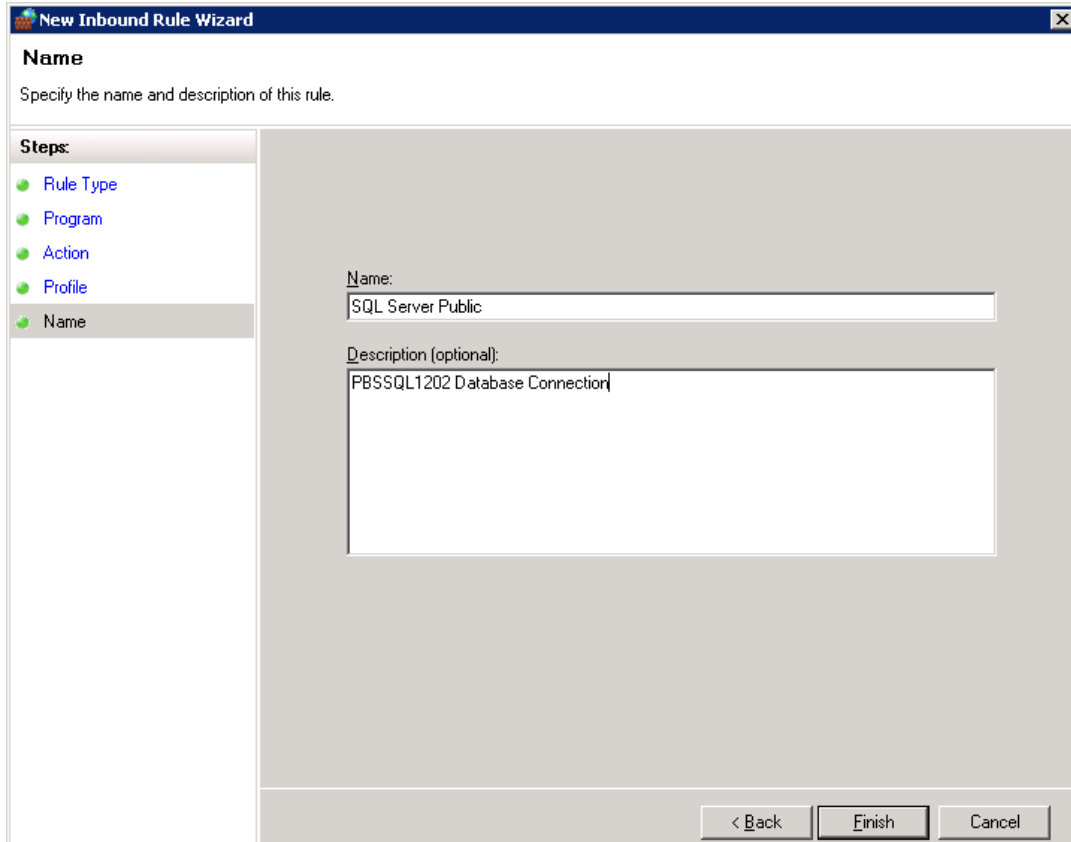
8. In the *Action* dialog box, as seen below, select *Allow the connection*, and click *Next*.



9. In the *Profile* dialog box select any profiles that describe the computer connection environment when you want to connect to the Database Engine, and click *Next*.



10. In the *Name* dialog box, type a name and description for this rule, and click *Finish*.



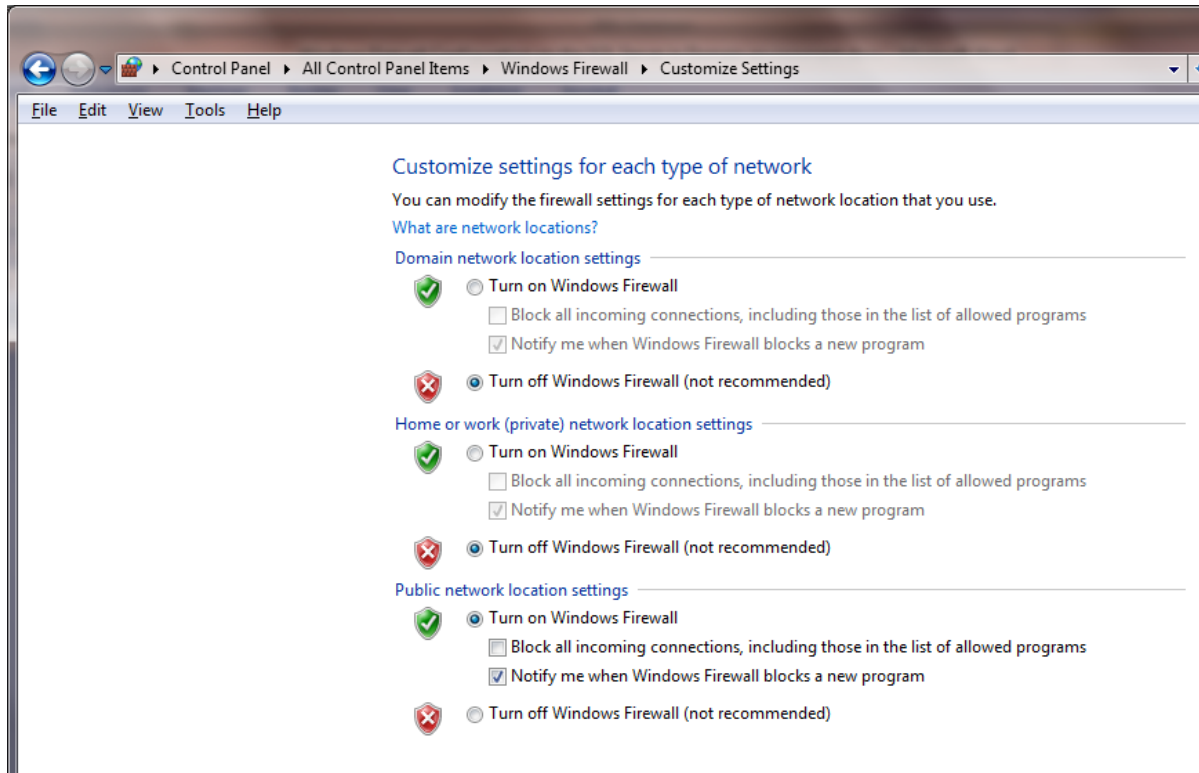
Your new Rule will appear in the list of Inbound Rules.

C. Testing the Connection on the Workstation

Go to the user's desktop or laptop. Run PBS from a mapped drive. Log into PBS to verify that it is running. One way to do this is by running PBS.BAT located in the top-level PBS folder.

D. Back to the SQL Server

Go back to the SQL server and turn ON Windows Firewall.



E. Client Install

You should un-install the previous PBS client install if on version 12.02 or earlier, if they exist, and install the new client shortcuts for PBS 12.05. The thin-client install is new so you must remove the previous thin client install and install the new one.

Install the Windows startup on the workstation. Run PBS from the workstation again to confirm that it is still running.

If using Thin client you MUST install thin client for v12.05 on each workstation.

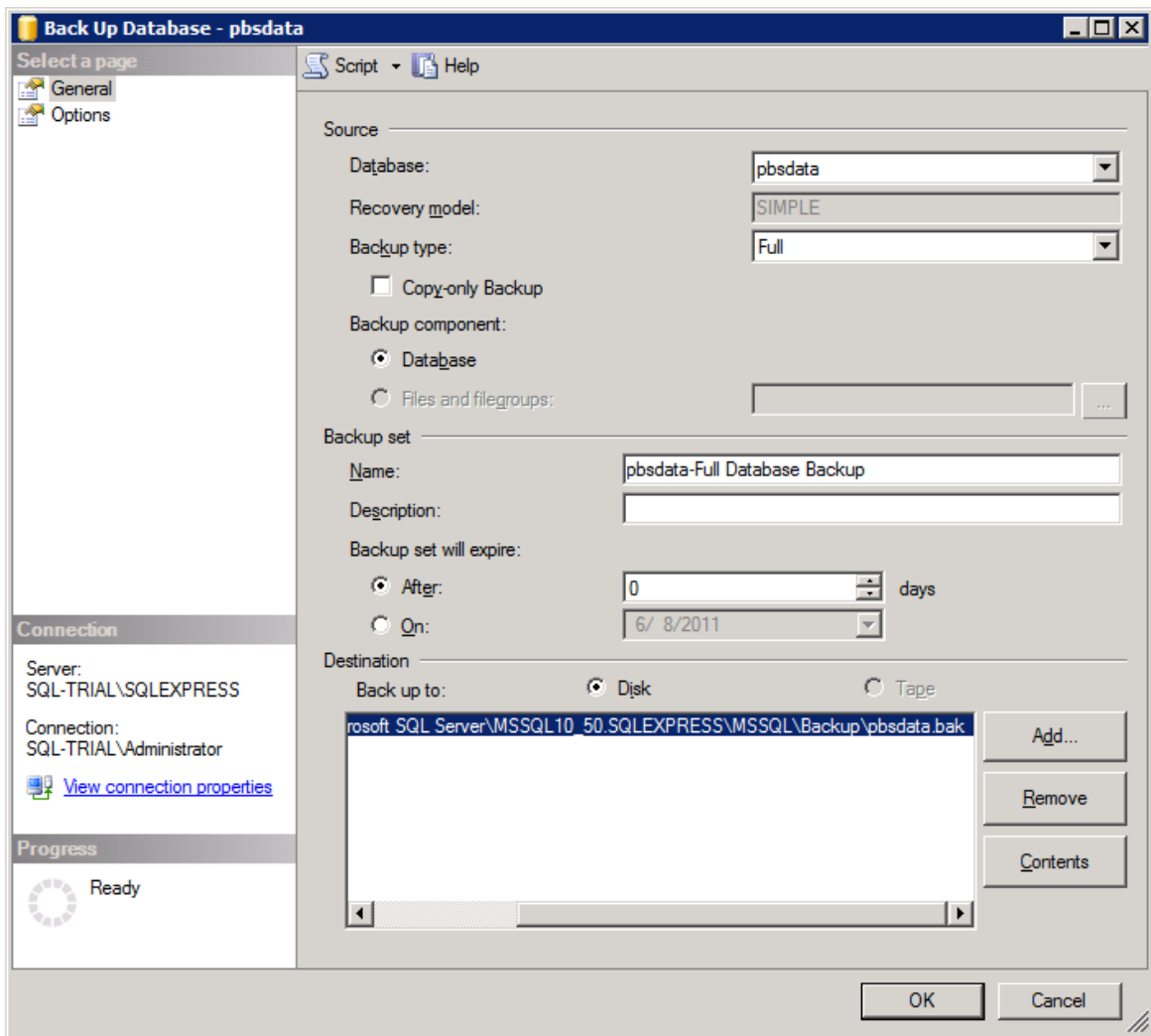
See [Connecting Workstations to PBS SQL](#)

VIII. Backing up PBS in a SQL Server Environment

Traditional Vision file installation of PBS could be backed up simply by copying the entire Top Level Directory and all Sub Level directories to another location on network or written out to a removable storage device or to an offsite server. This could be done with a simple script or two and the Scheduled task facility built into Windows. We can do much the same in SQL but we'll need to use the SQL server management tools to help us generate the script for the backup of the database. We will also need to set up a task to back up the installed program separately. In our example we have installed SQL Server Express w/Tools so these are already installed for us. With SQL Server Standard or Enterprise you will have access to Maintenance Plans which can handle this task setup through a scripted interface.

A. Create SQL backup script- this creates a script for each individual database

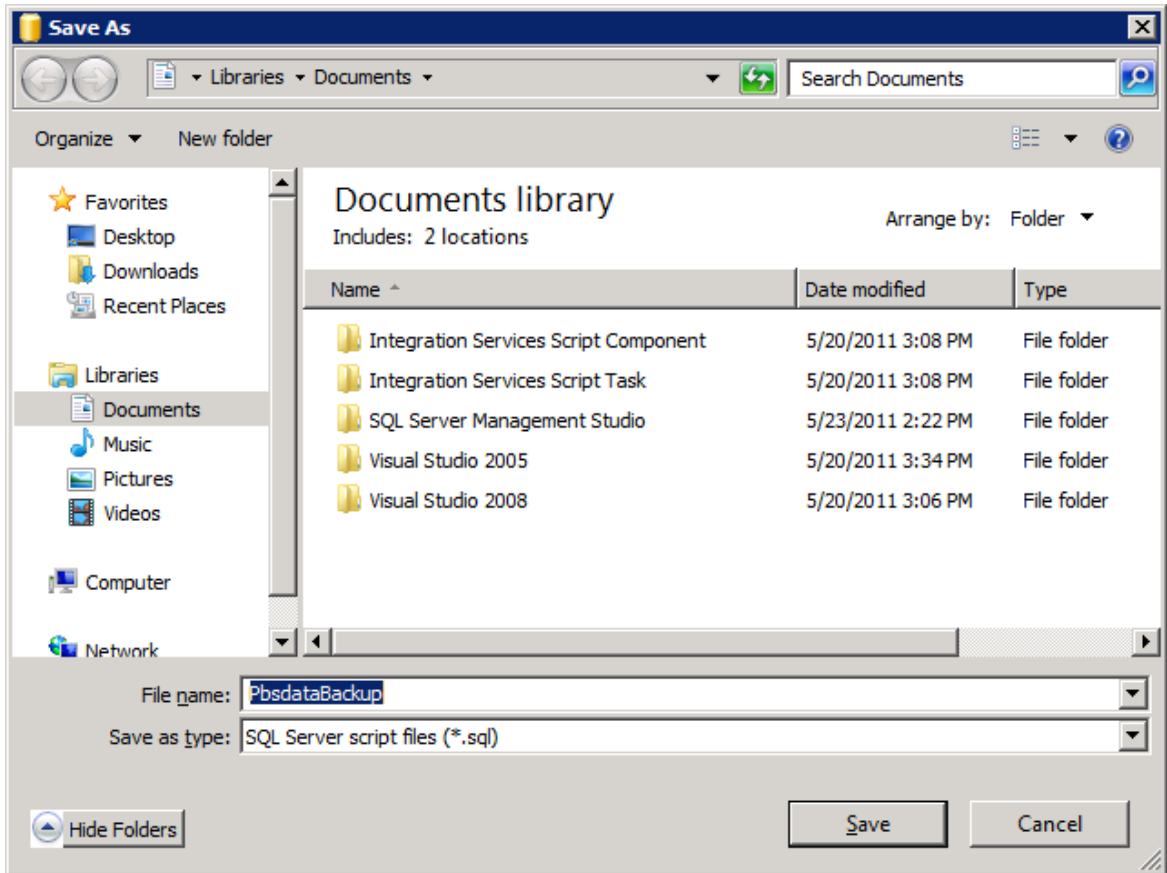
1. Open **SQL Server Management Studio** and expand the database folder to expose the databases on the server. Right click the **pbsdata** database and select **Tasks | Back Up**.



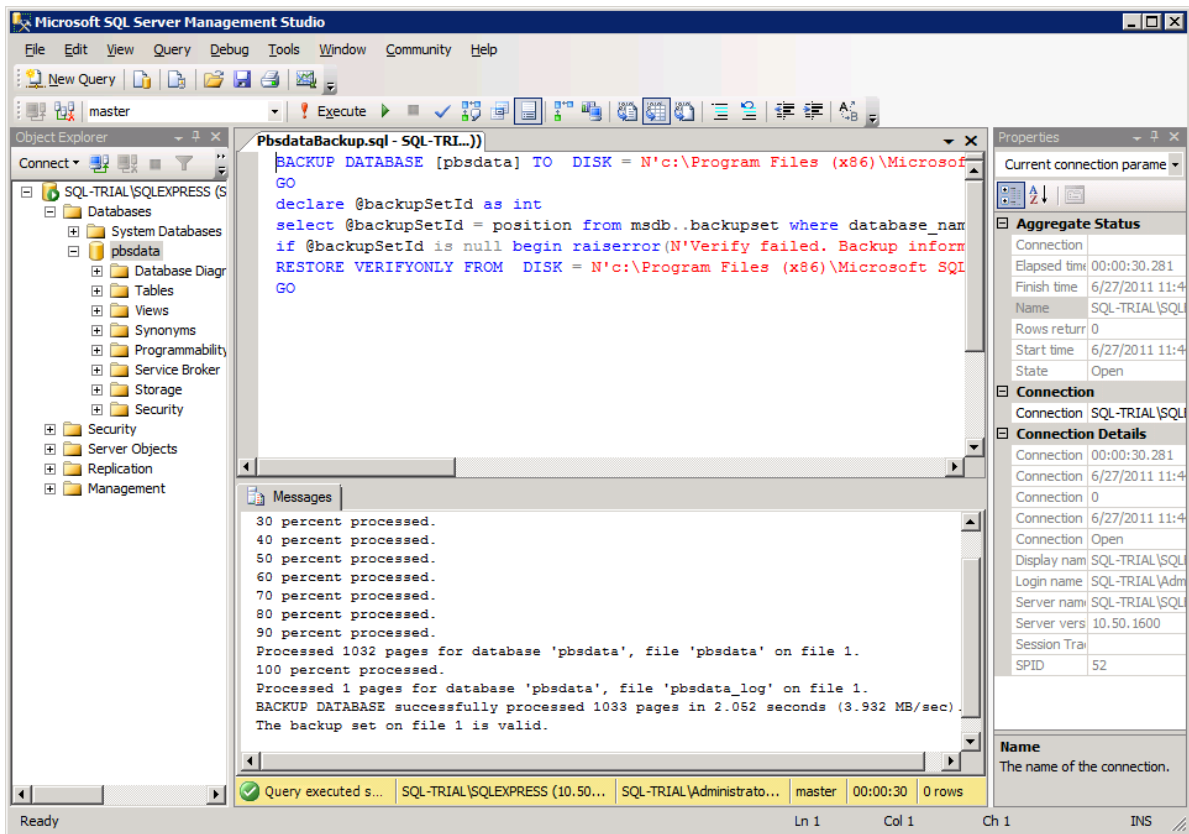
By default the tool selects a disk location within the SQL Server Install directory structure. You

could direct it to a different location that falls within the scope of an existing off-site backup solution. I am going to leave it here and then use a scheduled task to make a copy to the spot so I have an instantly available backup on the SQL server box and in an alternate location. I am not going to discuss all of the backup options here as I assume you can get that information from Microsoft.

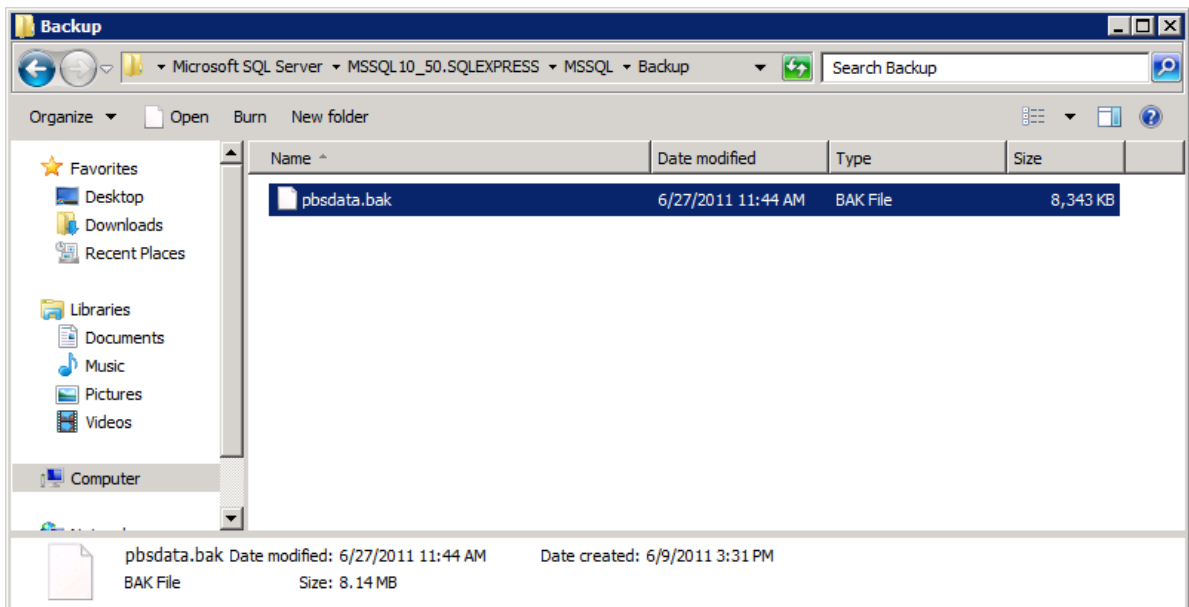
2. Once all desired options are set, select **Script | Actions to File** and enter a desired file name, for example, *PbsdataBackup*, and specify the location where to save the file.



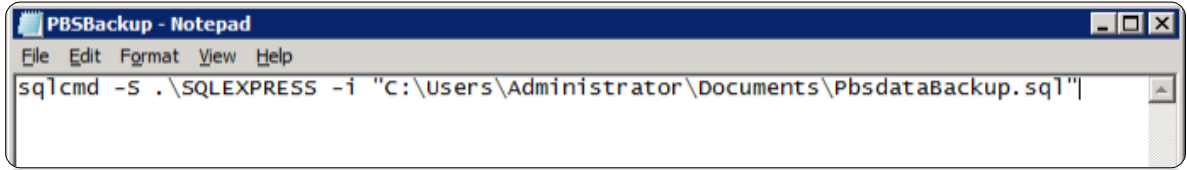
- After saving the script file it would be a good idea to open it and run it to create a backup. You can do this in SQL Server Management Studio or from the command line using SQLCMD.exe. Here is a result using SQL Server Management Studio:



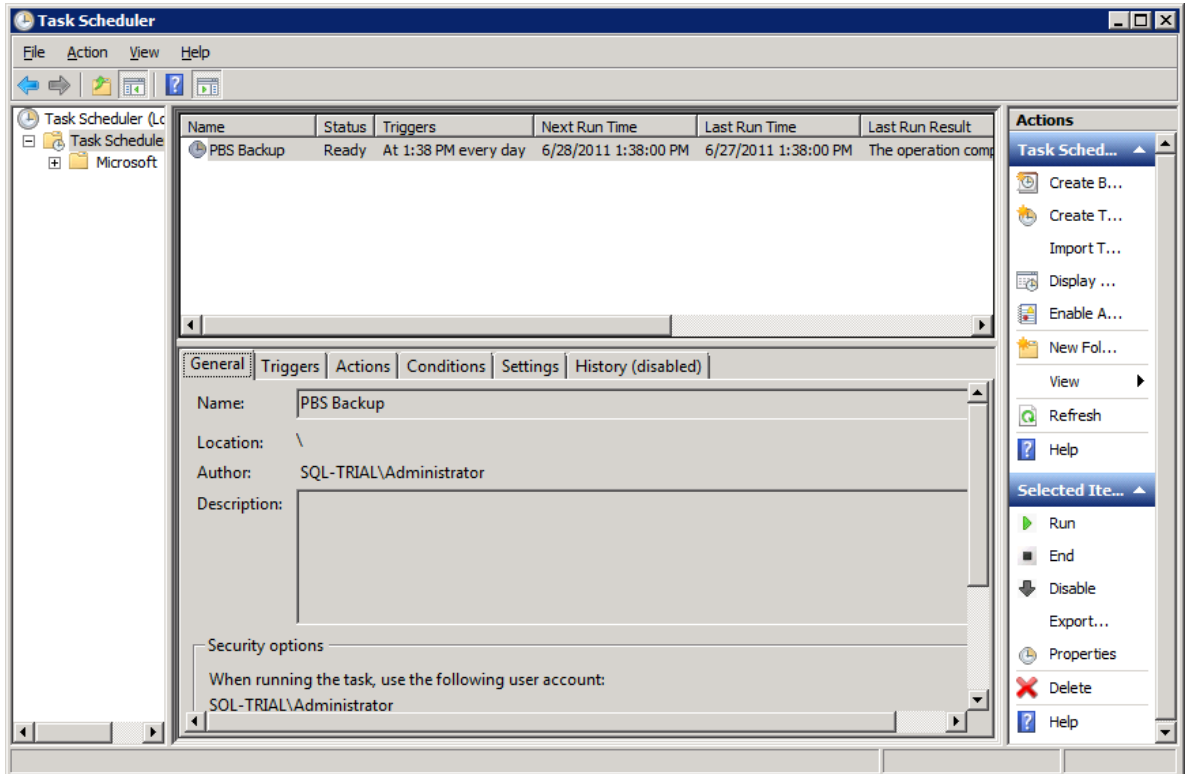
- The file is located in the place specified when setting up the script, which in this case is the default **Backup folder** for the **SQL EXPRESS** installation:



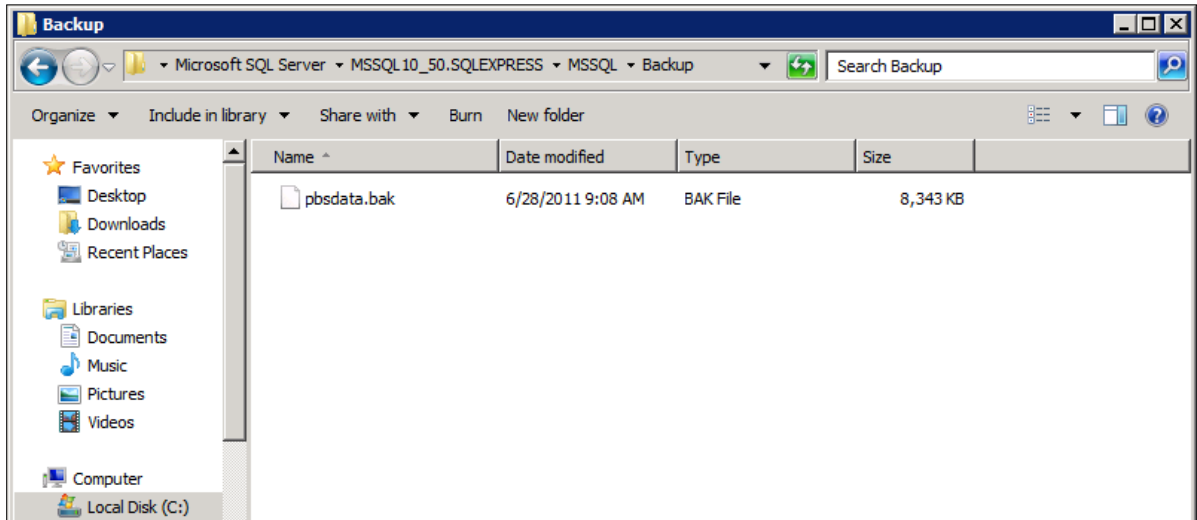
- In order to schedule this backup, we will create a simple batch file that will execute SQLCMD and call the script we just created.



- Save this script to a location accessible by the user account that has access to the data and who will set up Scheduled Tasks.
- Set up a scheduled task to run the batch script:



8. Run it manually to verify that the scheduled task will provide the results expected:



9. This has created a backup file located within the directory structure provided by the default SQL Server Express Install. You can either include this location in the scope of your normal backup or create another batch file and scheduled task to copy the contents of this folder to a location on another device that gets backed up regularly. In this case we chose the latter approach as it creates a readily available backup that can be accessed without the need to go back to removable media.

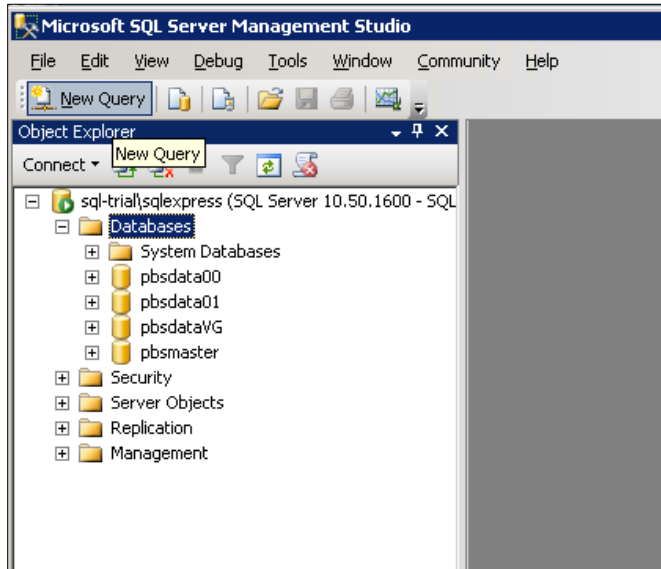
1. Important backup note

The above routine creates a backup of the database that has your PBS data. You **must** also create a backup of the directory structure that contains the PBS installation, as this area includes reports printed to disk, PDF documents, a few Vision files, PBS programs and other data that will be required to fully recover your system in the event of a server failure.

B. Backing up multiple databases

In the previous example we created and scheduled a script to backup an individual database. Here is an example of a script that can be used to backup multiple databases with date stamped backup files.

Open SQL Server Management studio and connect to the database that contains your PBS databases.



Click the button New Query:

Copy and paste the following block of text into the blank query window:

```
DECLARE @name VARCHAR(50) -- database name
DECLARE @path VARCHAR(256) -- path for backup files
DECLARE @fileName VARCHAR(256) -- filename for backup
DECLARE @fileDate VARCHAR(20) -- used for file name

SET @path = 'C:\Backup\'

SELECT @fileDate = CONVERT(VARCHAR(20), GETDATE(), 112)

DECLARE db_cursor CURSOR FOR
SELECT name
FROM master.dbo.sysdatabases
WHERE name NOT IN ('master', 'model', 'msdb', 'tempdb')

OPEN db_cursor
FETCH NEXT FROM db_cursor INTO @name

WHILE @@FETCH_STATUS = 0
BEGIN
    SET @fileName = @path + @name + '_' + @fileDate + '.BAK'
    BACKUP DATABASE @name TO DISK = @fileName

    FETCH NEXT FROM db_cursor INTO @name
END

CLOSE db_cursor
DEALLOCATE db_cursor
```

The above script is set up to backup all databases except for some system databases that are installed when you installed SQL Server and are used for the internal operation of SQL Server. You will need to back these up but not with the same frequency of your production accounting databases.

In the example above you will need to change the `C:\Backup\` to a location that you use for your organizations backup procedures and routines. Once you make this change, save the file with a name that describes the script and a location that will be available to a scheduled task to run the script.

Create a batch file similar to the one you made above in the individual database backup and setup a scheduled task to fire off the batch script at a time when you will not interfere with normal operations.

SQL Server backups are very fast. You could set up one of these to run daily to do a full backup and one to run every few hours if you have transaction volume that indicates that kind of highly available backup.

C. Move Back to PBS v12.02 or v12.03 after Database In-Place Install

If you upgraded using the Database in-place installation and you need to move back to PBS 12.02 or 12.03, do these steps:

1. Make a backup of the 12.05 SQL databases.
2. Restore the 12.02 or 12.03 SQL databases from backup.
3. Move the cblconfi.* files from the PBS1202\VSUTIL or PBS1203\VSUTIL folder back to the top-level PBS.
4. You should move or rename the cblconfi.* files in the PBS 12.05 installation so that no one accidentally runs that version.

You are now ready to run the previous version.

If you later restore the 12.05 database you **MUST** remove the cbconfi.* files from the 12.02 or 12.03 install so that no user accidentally enters or posts data with the programs from that version. A system crash could occur.

IX. Connecting Workstations to PBS SQL

Three methods are available for configuring a workstation to access your installation of PBS SQL:

A. Thin Client

If you plan on installing the runtime upgrade for Windows 10 support, do the Thin Client configuration after installing the new runtime. The runtime upgrade is available on the FMS site. Use the AcuConnect code and key for the new runtime.

The PBS Thin Client is a small footprint application that essentially represents PBS as a local application to the workstation but utilizes the Server to do all the heavy lifting. This greatly enhances the performance of PBS and reduces network traffic significantly. This feature also enables delivery of the application over the internet through a secure proprietary encryption protocol -- ideal for large installations and any installation with remote users whether there be one or many.

Previous versions of the client install for Thin client will not work for PBS v12.05. You must install the new client install.

The Thin Client product is licensed separately from the PBS SQL option. Once you are licensed, you must activate Thin Client on the server first. To activate Thin client on the server you need an AcuConnect 10.0.1 product code and key. Activation instructions are in the Thin Client documentation. After the activation and configuration of Thin Client on the server, you are ready to install the workstation.

If you installed the version 10.x runtime upgrade for Windows 10 support, install the PBS1204TC1001.exe Thin Client for each workstation.

You need the workstation Thin client startup install. For Thin client installation instructions see [PBS_ThinClient_Configuration.pdf](#). The install and documentation are downloadable from the Passport's FMS site. Use the <http://fms.pass-port.com/> address. For access you will need a login and password. The documentation is found in *updates/PBS_1204/doc*. Go to the *updates/CommonUtil/1204Startup* folder and download the *pbs1204tc910.exe* executable.

Run the executable from the workstation. You must have the correct ip address and port number to complete the install.

B. Terminal Services

Terminal Services can be set up using a number of tools, most notably Microsoft Terminal Services/Remote Desktop Connection and Citrix XenServer/XenDesktop. The primary advantage of these solutions is the use of the server horsepower for processing and reduced load on the network. We will defer to those companies and your network administrator for setup of these types of services. Keep in mind that PBS uses PCL printing with laser printers when printing forms. Making this work properly using Terminal Services can produce issues.

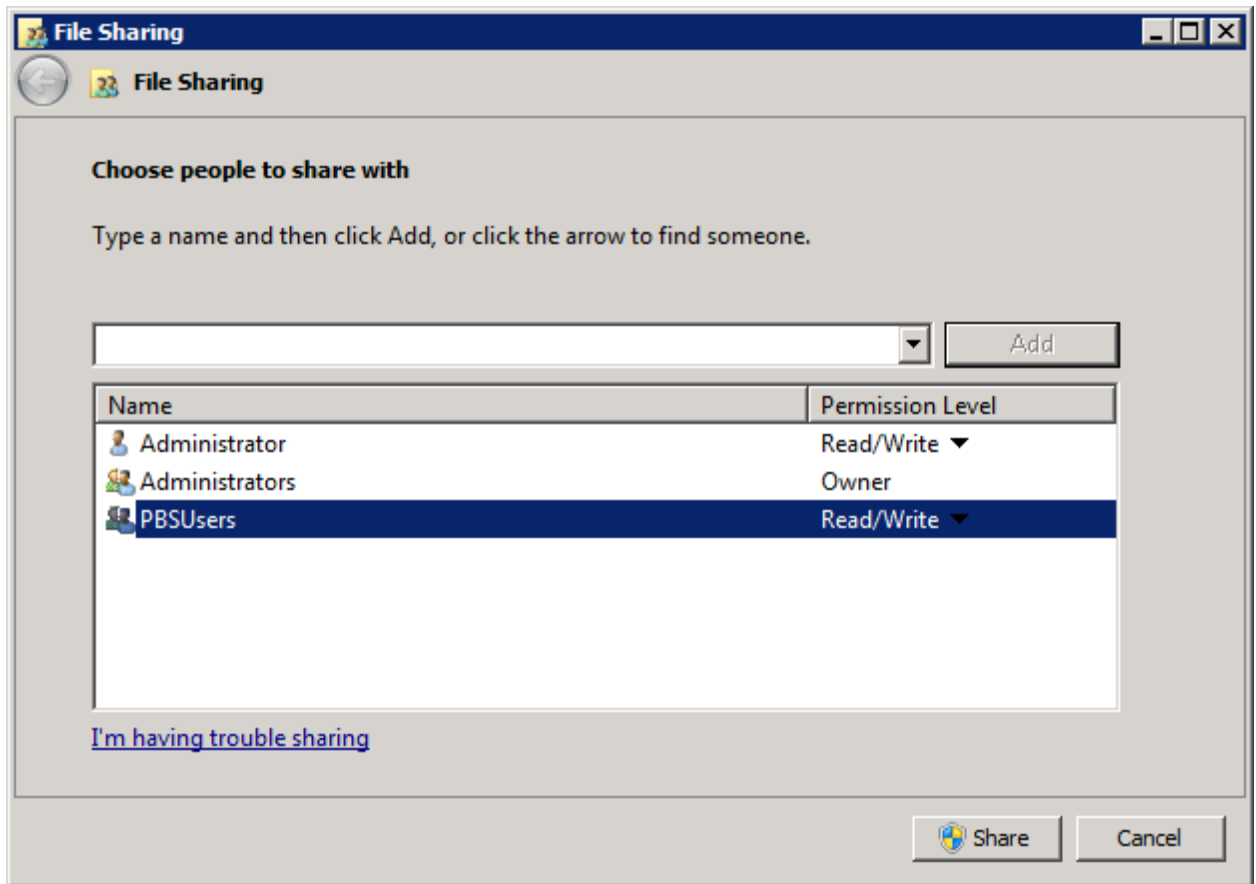
Install the PBS fonts on the server for each user login. They are located in the fonts folder under the top-level PBS folder.

C. Network File Share

Probably the most common way to run the PBS application on a network is through the use of a file share and the installation of the Client Workstation setup available from our download site. The workstation setup creates menu items and installs the fonts required to run PBS. When configuring to run this way you are going to be running the application on the workstation so the programs and data will be sent over the network to the workstation for processing. Obviously this puts a bigger burden on network performance. If the site has slower-performing and dated workstations, network cards and switches, this type of implementation is not recommended.

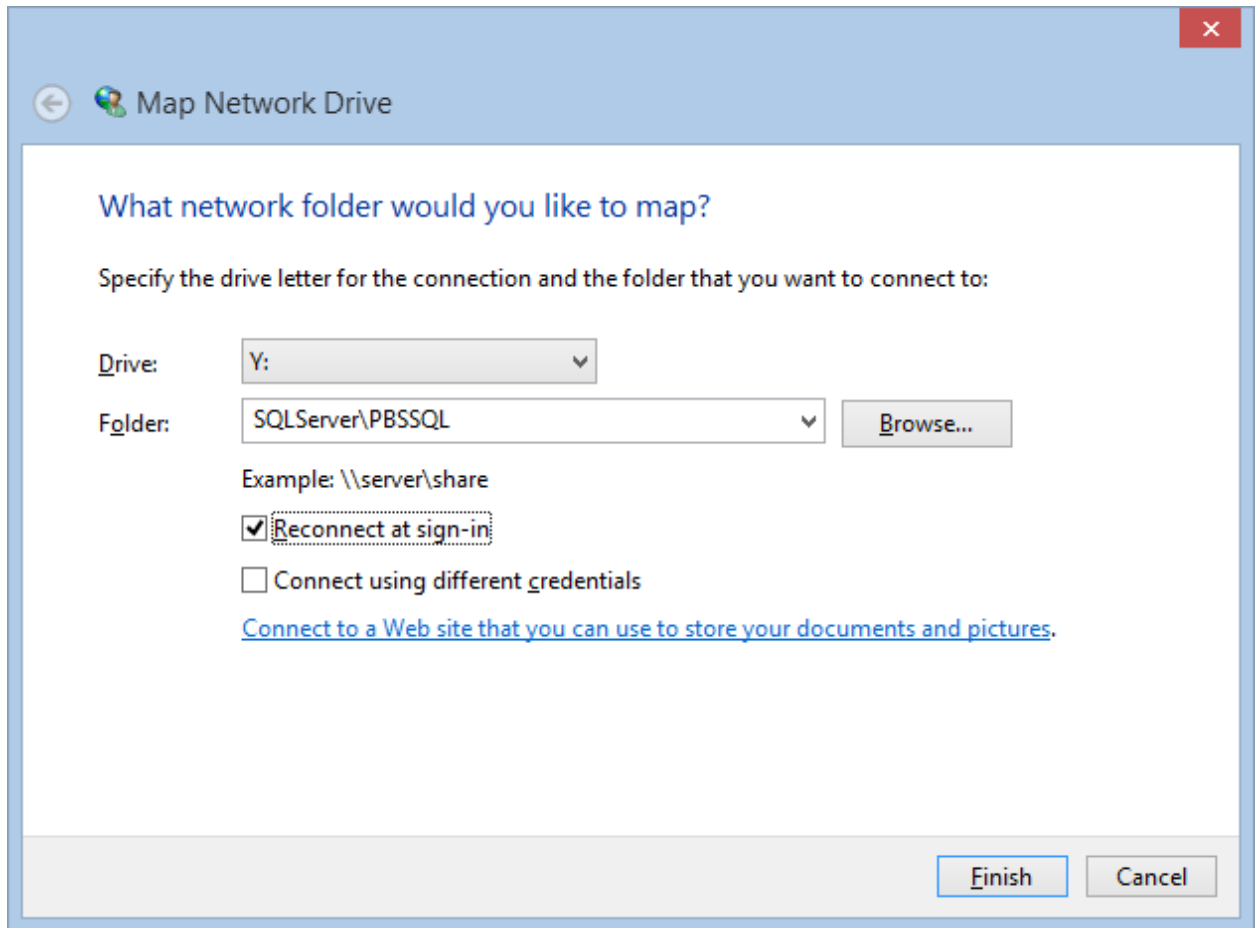
The following is a short guide to setting up a simple network share and running the application through a shortcut.

1. Add user to the share who are being given access to PBS



2. These same users will need access to the database. There are two methods documented earlier. One in which individual users are setup to access the database and the second which grants access to all users through a single SQL authenticated login.

3. Map the network drive onto the workstation:



4. Click on Finish to open the mapped drive.
5. To test PBS, double click **PBS.BAT**

You may also install the PBS startup on the workstation. It includes start menu selections and fonts needed to run PBS. These instructions are in the next section.

If you prefer to run PBS from the batch, you should install the fonts on the workstation. The fonts provide the proper boxes when using character mode. These are located in the top-level PBS fonts folder. Copy the fonts to a temporary folder on the workstation, highlight, right click and selection *Install*.

Testing TCP/IP Connectivity

Connecting to SQL Server by using TCP/IP requires that Windows can establish the connection. If there is a problem you may run the following processes to test the connection.

1. On the Start menu, click **Run**. In the **Run** window type **cmd**, and then click **OK**.
2. In the command prompt window, type ping and then the IP Address of the computer that is running SQL Server. For example, **ping 192.168.1.101** using an IPv4 address,

or **ping fe80::d51d:5ab5:6f09:8f48%11** using an IPv6 address. (You must replace the numbers after ping with the ip addresses on your computer.)

3. If your network is properly configured you will receive a response such as **Reply from <IP address>**. If you receive an error such as "**Destination host unreachable.**" or "**Request timed out.**" then TCP/IP is not correctly configured. (Check that the IP address was correct and was correctly typed.) Errors at this point could indicate a problem with the client computer, the server computer, or something about the network such as a router.
4. Next, if the ping test succeeded using the IP address, test that the computer name can be resolved to the TCP/IP address. On the client computer, in the command prompt window, type **ping** and then the computer name of the computer that is running SQL Server. For example, **ping pbsserver**.
5. If you receive an error such as "**Destination host unreachable.**" or "**Request timed out.**" you might have old (stale) name resolution information cached on the client computer. Type **ipconfig /flushdns** to clear the DNS (Dynamic Name Resolution) cache. Then ping the computer by name again. With the DNS cache empty, the client computer will check for the newest information about the IP address for the server computer.
6. If your network is properly configured you will receive a response such as **Reply from <IP address>**. If you can successfully ping the server computer by IP address but receive an error such as "**Destination host unreachable.**" or "**Request timed out.**" when pinging by computer name, then name resolution is not correctly configured.

Also, if you are unable to connect you could verify access to an existing MS SQL server and instance. You must have MS SQL installed on the workstation in order to run this test. Keep in mind that having SQL installed on the workstation is not required for running PBS. You would only need it to test the connection. Once a connection is established you may uninstall it. With MS SQL installed, open a command prompt and type "sqlcmd -L". A list of the available servers and instances should display. If not, there is a problem with the connection. Go to the server and check your settings.

1. Install the Local Network Share Access

a) Native Client 11.0

For each workstation that accesses PBS via a mapped network drive you must have Native client 11.0 installed. You check this by going to the *ODBC Data Source Administrator* and check the *Drivers* tab. If it is not installed you must install it. You will find a 32 bit and 64 bit install of Native Client 11.0 in the PBS top-level folder called *Native_Client11.0*. Select either the 32 bit or 64 bit version and install it before you continue.

b) Startup

For network sharing, install the PBS startup. This installs the start menu selections and fonts needed for PBS. This install is downloadable from the FMS site and if you received the PBS via a disk, it is available from the disk in the *pbs_startup* folder.

The required version of .Net Framework for installing the start menu selections is 4.030319 or higher.

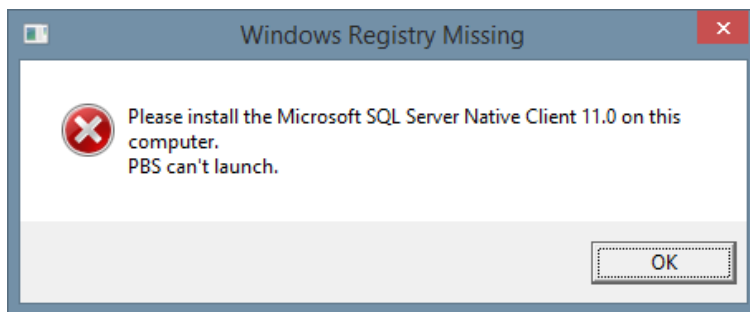
The client install for 12.03 is the same as the client install for 12.05. You may select the properties of the startup icons to enter the path to the new PBS v12.05 folder and that would allow access to PBS v12.05.

Note: If you are upgrading from PBS 12.02 or earlier and you installed the older start menu selections, to avoid having two sets of start menu selections uninstall the older version before you install the new version. You may do this in *Programs and Features* found under *Control Panel*. Look for *Passport Software Start Menu Items*. See [Uninstall Old Startup](#).

Download the start menu installation from the <http://fms.pass-port.com/> address. You will need a login and password. Go to the *updates/CommonUtil/PBS1204Start* folder. Create a temporary folder on the workstation C drive, copy the *PBSStartIconInstall.exe* file to that folder and run the executable from the workstation. If you have to install it for an additional user on the same workstation, copy the executable install to a different temporary folder and install it from there.

Note: Verify that the fonts install. It has been found that the install program is not working consistently on Windows 8. As a backup we recommend that you copy the fonts from the top-level PBS fonts folder to the workstation. Highlight the fonts, right click and select Install. *If they are already installed a message will indicate this. Otherwise it will install the fonts.*

It is required that Microsoft SQL Server Native Client 11.0 be installed on each workstation. If not, when you try to start PBS you will get the following message:



You will find a 32 bit and 64 bit install of Native Client 11.0 in the PBS top-level folder called *Native_Client11.0*. Select either the 32 bit or 64 bit version and install it before you continue.

For information on modifying the shortcuts, using the original colors, uninstalling the shortcuts and more, see the *Workstation Install/Configure* chapter in the PBS Administration documentation.

2. Uninstall Old Startup

This is regarding the old startup intended for 12.02 and earlier. The uninstall is done from the workstation Control panel > Programs and features. Look for Passport Business Solutions. The uninstall removes a file called *Uninst.isu* from the top-level PBS. This file is needed for each short cut uninstall for each workstation. Save a copy of this file before you do the first uninstall. If you have already removed the file, there is a zipped copy of this file on the FMS site in the *CommonUtil* folder. Extract it into the top-level PBS.

3. Use of Offline File Syncing on the PBS Folder

Be sure to disable the syncing of offline files on the workstation. When offline syncing is on you may find the PC displays File Error 98s when accessing PBS data. You disable offline syncing in the *Sync Center* under the *Control Panel*.

D. Windows 8 and PDF Reader

Windows 8 is installed with a default PDF reader. It uses this symbol:



It will allow you to view PDF files that are generated from PBS, but it displays them in a separate window which makes it difficult to get back to PBS. For optimum viewing of PDF files download and install Adobe Reader or Adobe Pro.

E. Adobe Reader Registry Fix

Adobe Reader version 11 and more recent versions like Adobe Acrobat Reader DC have a bug in the installation that makes it impossible to use –PDFP- to generate PDF files and print them at the same time.

If this applies to your workstation, you may download the fix and apply it to the registry. The fix can be found, along with the installation instructions, in the CommonUtil/Adobe11RegistryFix folder on the FMS site. HOWEVER, this fix only applies to Adobe 11. Adobe Acrobat Reader DC's version should be based on the YEAR it has been released. If the version is Version 2017.009.20044 the register should be 17. In the registry fix file there is this line:

```
@="AcroViewR11"
```

Substitute the 11 with 17 when version 17.

If Adobe Reader or Adobe Acrobat Reader DC are setup to automatically download updates, applying the update could and has reversed the registry fix. It is possible to reverse automatic updates. Keep in mind that fixes can be important for security.

F. General Ledger View accounts

The View accounts screen, in graphical mode, now has the field *Always show detail and totals* unchecked. This is different from 12.03 and earlier. It was found that if the first account has a great deal of data, it would take several seconds or even minutes to display all the data for the account. You must put a check in the box to display data as seen here:

The image shows a checkbox control in a software interface. The text 'Always show detail and totals' is displayed in a dark font, followed by a small square checkbox that is currently checked, indicated by a white checkmark inside a dark square.

X. Other Procedures and Documentation

Below are links to the online documentation.

After PBS is installed, the User and Administrative documentation is also accessible via `PBS_Full_HTMLDoc.htm`, located in the top-level PBS.

A. Defragmenting PBS Tables

If you feel it is necessary you may run a script for each PBS company that will defragment the tables. The script is available in the top-level PBS and is called `PBSIndexDefrag.sql`.

Do NOT defragment PBS Master.

You may defragment any PBS company. It must be run separately for each company.

It is recommended that you run this when no one is accessing PBS data in the company you are defragmenting.

B. Upgrading from 12.01

When upgrading from 12.01 SQL or 12.01 Vision to 12.05 SQL, the SQL install is a standard upgrade that requires you to install PBS 12.05 as a new system. Then you follow the EZ convert instructions for upgrading your data.

C. Increasing User count for PBS SQL

PBS installs as a one user SQL system. You must have a *product code* and *product key* to increase the user count. To see your current user count, in top-level PBS open the `wrun32.mlc` file with a text file viewer. Do NOT edit the file or the PBS SQL will stop operating.

The product code and key may be delivered in an email, via a PDF file downloaded from the FMS site or received it in a shipment. Check your emails from Passport for delivery method. The product code and product key is on a line `Acu4GL` for MS SQL. The file name will be something like: `EndUserName – ResellerName Acu4GL v10.0.1 5User.pdf`. The PDF license content is similar to this:

License Key Summary
End User Name

Serial number: 9999999	Version 10.0.1	x86 running Windows 7, 8, 10 Server 2003, Server 2008 32Bit
Acu4GL for MS SQL	Product Code: 3XXX999111BBBASQW12 Product Key: XXX6666ZZZZ	License Type: New product Users/Devs: 5 Serial: 9999999 End User: xxxxxxxx

Verify that the user count is correct. Make a backup of the existing `wrun32.mlc` license file which is located in the `bin` folder. Copy the `pbsactivator.bat` from the top-level PBS to the `bin` folder.

In the PBS bin folder run pbsactivator and enter the product code and key and it will create a new *wrun32.mlc* file in the *bin* folder. It is a text file. You may open it to view and verify the new user count. Do NOT alter the file or it will not work.

D. License Information

When working with Acu4gl, we are actually using two separate products, the runtime itself and the Acu4gl interface; in this case we need two different licenses, one for the runtime, (*wrun32.alc*) and another for Acu4GL-MSSQL (*wrun32.mlc*).

Now, for each runtime (*wrun32-acu4gl*) launched it counts against the number of users in both licenses; *wrun32.alc* and *wrun32.mlc*. If there are users which don't access SQL server, those users count exclusively against the *wrun32.alc* license and in this case the number of users for each license could be lower in the Acu4GL one; but if all users access SQL server, the number of users for each license must be the same.

Three users launching three runtimes each will use 9 users from the total of users that they have on each license.

E. Field Definition Guides with SQL Column Names

Use the field definition guides to obtain a description of the PBS files, field names, SQL column names, export file field sizes and more.

Doc name	Document description	Download version link
PBS_fdg.pdf	PBS Field Definition Guide for Accounting and Distribution	PBS FDG
Pbsmfg_fdg.pdf	Manufacturing Field Definition Guide	PBS Mfg FDG

F. User and Administrative Documentation

PBS documentation links are available below. However these links below do NOT replace the PBS documentation installation. There are 2 versions of the documentation: one for local help and the other for Internet help. Download and install the documentation installations separately.

This is a full set of documentation for each PBS application. Select from the links below:

Accounting	Distribution
System Accounts Payable Accounts Receivable Check Reconciliation General Ledger Payroll	Inventory Control Job Cost Order Entry Purchase Order Point of Sale Sales Analysis
Manufacturing	Manufacturing
Customer Orders Capacity Requirements Planning Inventory Management Manufacturing Job Costing	Master Scheduling & MRP Product Definition & Costing Product Purchasing Shop Floor Control
Administration	Administration
Administration	Data Import

Other Documentation:

Doc name	Document description	Download version link
CashPoint-CP_interface.pdf	CashPoint – PBS Interface to NCR Counterpoint	CashPoint
BasicAccountingConversionUtility.pdf	Converting data from Basic Accounting to PBS	Basic Accounting Conversion Utility
Syn_int.pdf	CounterPoint 7 Interface	CP 7 Interface

G. Access PBS SQL Tables via Excel

What steps may vary depending on the version of Office you are using. This procedure accesses one table at a time:

1. Open Excel
2. Select *Data*

3. Select *From other sources*
4. Then select *From SQL server*
5. In the *Server name* field, enter the SQL server name. You may have to connect via Data Sources (ODBC) by setting up a SQL Server DSN
6. For the Log on credentials field, select *Windows Authentication*
7. It should immediately connect to the master database. The name master is the default. Be sure to select the one that has PBS data. PBSdata00 is data in company 00.
8. Select a table and location on the spreadsheet for the table.

For a list of tables with names and columns, see the [Field definition guides](#).

H. Changing Server, Instance and Databases

It may become necessary to move to a new server, instance and database. Here are some examples of why:

- Moving from Microsoft SQLExpress to the full version of SQL Server.
- Moving to a new more robust server.
- Upgrading from Microsoft SQL Server 2008 or Microsoft SQL Server 2012 to Microsoft SQL Server 2014.

The procedure is the same for each:

- Back up the existing database using SQL Server Management Studio. Right click on the database and Select *Tasks*. Then select *Backup*. Include all the company databases and the pbsmaster database.
- Install an instance of the new SQL Server software on the same server or a different server if that applies.
- Do the following: [Configuring the SQL Server before the Install of PBS](#)
- Restore your PBS databases. This includes pbsmaster and all the company databases. From the SQL Server Management Studio of the new version of SQL or on the new server, on *Databases* select *Restore Database*.
- Install the **ms_inst.sql** script using Microsoft SQL Server Management Studio. This is installed with the instance and not exported and restored with the backup.
- On the old system check the security setup for users in SQL Server Management Studio. Re-create these settings in the new SQL instance. See [Setting up User Access to PBS Databases](#)
- Set up an inbound and outbound firewall rule. See [Creating an Inbound Firewall Rule](#)
- You may un-install the old instance if you like. It is not a required step, however it does take up resources if your new database is on the same server. The main point is that you do not want users updating the old instance anymore. If you do not want to uninstall the old instance you may also stop the service of the old instance so that your users do not accidentally enter data into the old system.

You may copy the top-level PBS to the new server, if you are moving to a new server, or use an existing top-level PBS on the old server. In either case, in order to utilize the PBS SQL data in the new instance you must also:

- Point PBS to the new database by modifying the cblconfi* files. In each file, look for these settings: PBSSQL_DEFAULT_CONNECTION and A_MSSQL_DEFAULT_CONNECTION. Change them to match the new server and instance.
- Using Microsoft SQL Server Management Studio, modify the multi-company table, found under pbsmaster, to point to the new database. The table is MLTCMP and the column is svr_nam.

Configure and test the access to the new instance from each user's system:

If you make the access to new system the same drive letter and path as the old system, the workstation shortcuts to PBS will work as is.

Alternatively, you may manually modify the start menu selections to point to the new system, if it is on a different drive letter or path. For Windows 8, right click and select *Open file location*. For Windows 7 and Windows 8 right click on each and select properties. On the *Shortcut* tab change the path for the *Target:* and *Start in:*.

XI. Glossary

Many of the terms below are used when talking about SQL. Not all of them are used in this document. However, they may come up when developing your own custom reports and reviewing PBS data using the SQL Server Management Studio.

Column

Database tables are made of different columns (fields) corresponding to the attributes of the object described by the table.

Data

Piece of information collected and formatted in a specific way. The term data is frequently used to describe binary (machine-readable) information.

Database

A database is a collection of information organized into related tables of data and definitions of data objects. The data within a database can be easily accessed and manipulated through computer programs like found in PBS.

Field

See Column definition above.

Lock

Locks are used by Database management systems to facilitate concurrency control. Locks enable different users to access different records/tables within the same database without interfering with one another. Locking mechanisms can be enforced at the record or table levels.

NULL

The NULL SQL keyword is used to represent a missing value. When viewing data in a column, you may see the word NULL when data is missing from a field.

Query

Queries are the main way to make a request for information from a database. Queries consist of questions presented to the database in a predefined format, in most cases SQL (Structured Query Language) format.

Record

A record is a complete set of information presented within a database system. Records are composed of different fields (columns) in a table and each record is represented with a separate row in this table.

RDBMS

An RDBMS (**R**elational **D**atabase **M**anagement **S**ystem) is essentially a database management system that is designed to store data which can later be used for a specific application. RDBMS is the basis for SQL.

Row

See Record definition

SQL

SQL is short for Structured Query Language and is an industry standard language used for manipulation of data in a RDBMS. There are several different dialects of SQL like, ANSI SQL, T-SQL, etc.

SELECT

The SELECT is a SQL command, which is the primary means for retrieving data from a database system.

Stored Procedure

Stored Procedure is a set of SQL statements stored within a database server and is executed as single entity. Using stored procedures has several advantages over using inline SQL statements, like improved performance and separation of the application logic layer from database layer in n-tier applications.

Table

A Table refers to data arranged in rows and columns, which defines a database entity.

Trigger

Triggers are special type of stored procedures executed automatically when certain events take place. There are different types of triggers – for update, for insert and for delete. Each trigger is associated with a single database table. PBS does not use triggers at this time.

XII. Appendix A – Error Messages

The following link contains a list of SQL errors and a description of each:

[http://technet.microsoft.com/en-us/library/aa258719\(v=sql.80\).aspx](http://technet.microsoft.com/en-us/library/aa258719(v=sql.80).aspx)

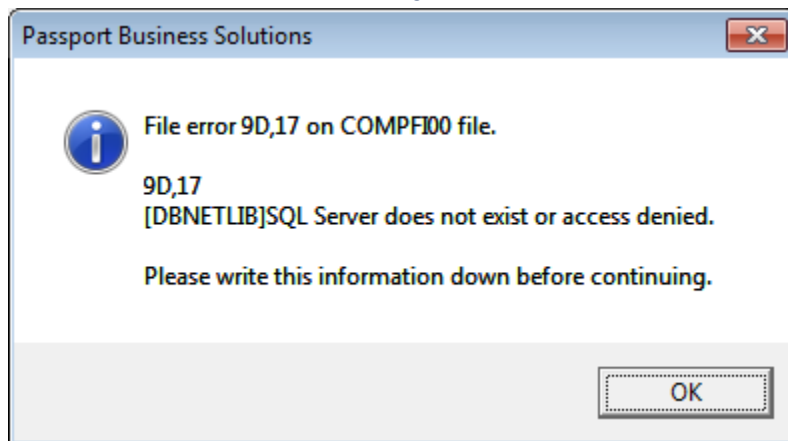
The descriptions do not relate directly to PBS, however they may be useful in resolving data and connection issues.

A. AllSqlMessages.csv

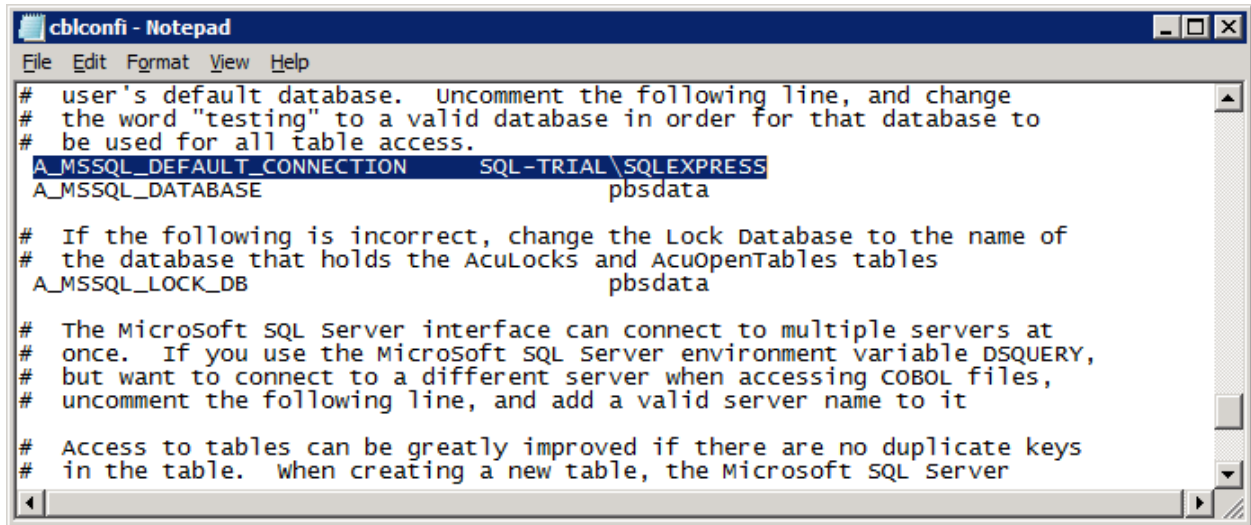
Many of SQL error messages are in a file called *AllSqlMessages.csv* found in the top-level PBS. If you don't find the error in that file or if you need more information about the error, you may also search for it on the Internet. For example search for SQL Server 22007.

The following has some common examples of error messages that could occur after installing PBS SQL and when attempting to start PBS.

B. File error 9D,17 - SQL Server does not exist or access denied.



Potential issue #1:



```
File Edit Format View Help
# user's default database. Uncomment the following line, and change
# the word "testing" to a valid database in order for that database to
# be used for all table access.
A_MSSQL_DEFAULT_CONNECTION SQL-TRIAL\SQLEXPRESS
A_MSSQL_DATABASE pbsdata

# If the following is incorrect, change the Lock Database to the name of
# the database that holds the AcuLocks and AcuOpenTables tables
A_MSSQL_LOCK_DB pbsdata

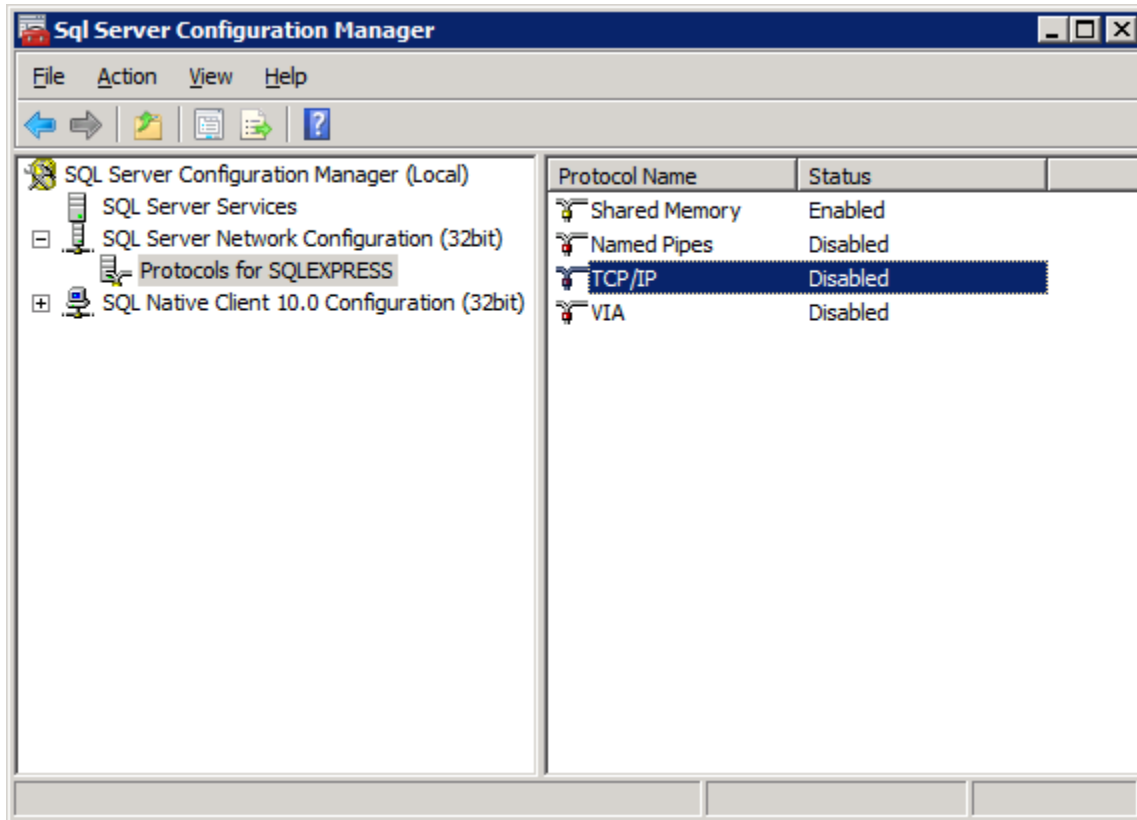
# The Microsoft SQL Server interface can connect to multiple servers at
# once. If you use the Microsoft SQL Server environment variable DSQUERY,
# but want to connect to a different server when accessing COBOL files,
# uncomment the following line, and add a valid server name to it

# Access to tables can be greatly improved if there are no duplicate keys
# in the table. when creating a new table, the Microsoft SQL server
```

Accurately identifies the SQL server that is hosting the **pbsdata** database. In the example above **SQL-TRIAL** represents the machine name and **SQLEXPRESS** is the instance name.

Potential Issue #2

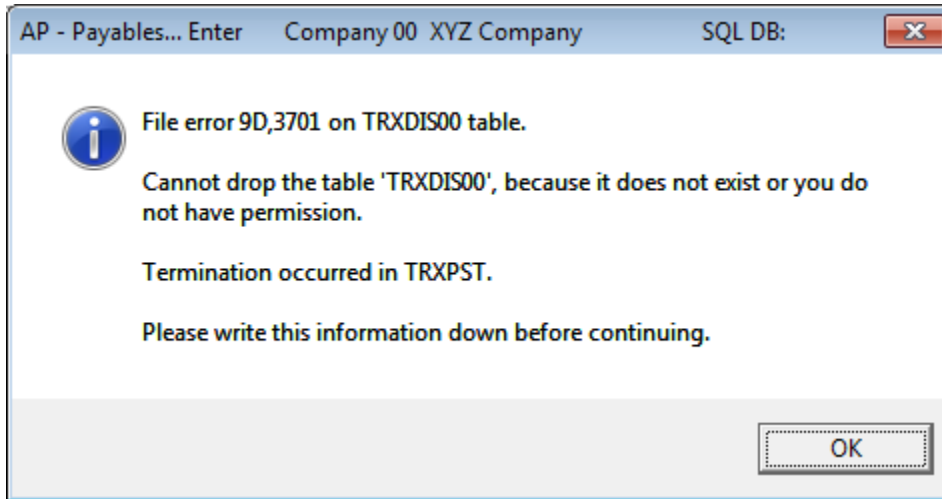
The protocol for **TCP/IP** is not enabled on the SQL Server. Using the **SQL Server Configuration Manager**.



Check to see if **TCP/IP** has been enabled; if it is not, right click the item and choose **Enable**. You will need to restart the **SQL Server Services** for this change to take effect. This can be done in the **SQL Server Configuration Manager** as well.

Refer to [SQL Named Pipes](#) and [Restart the SQL service](#).

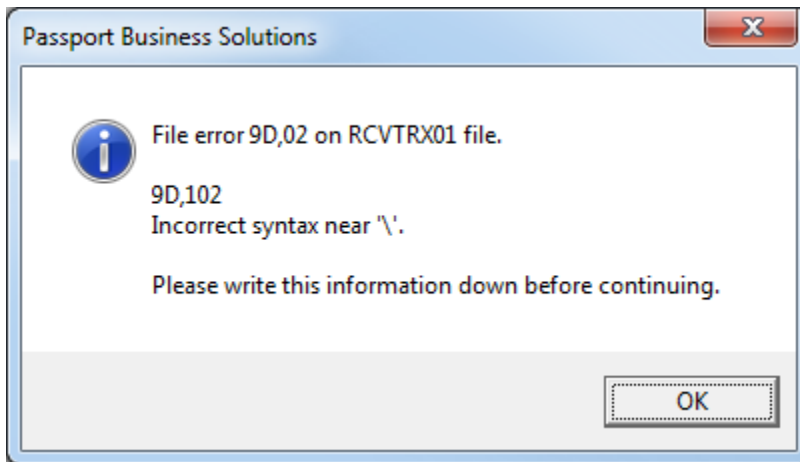
C. File error 9D,3701 - Cannot drop the table



This issue is caused when the user has been granted the default Schema of 'dbo' but does not have the role membership of 'db_owner.'

Refer to the section [Setting up User Access to PBS Databases](#).

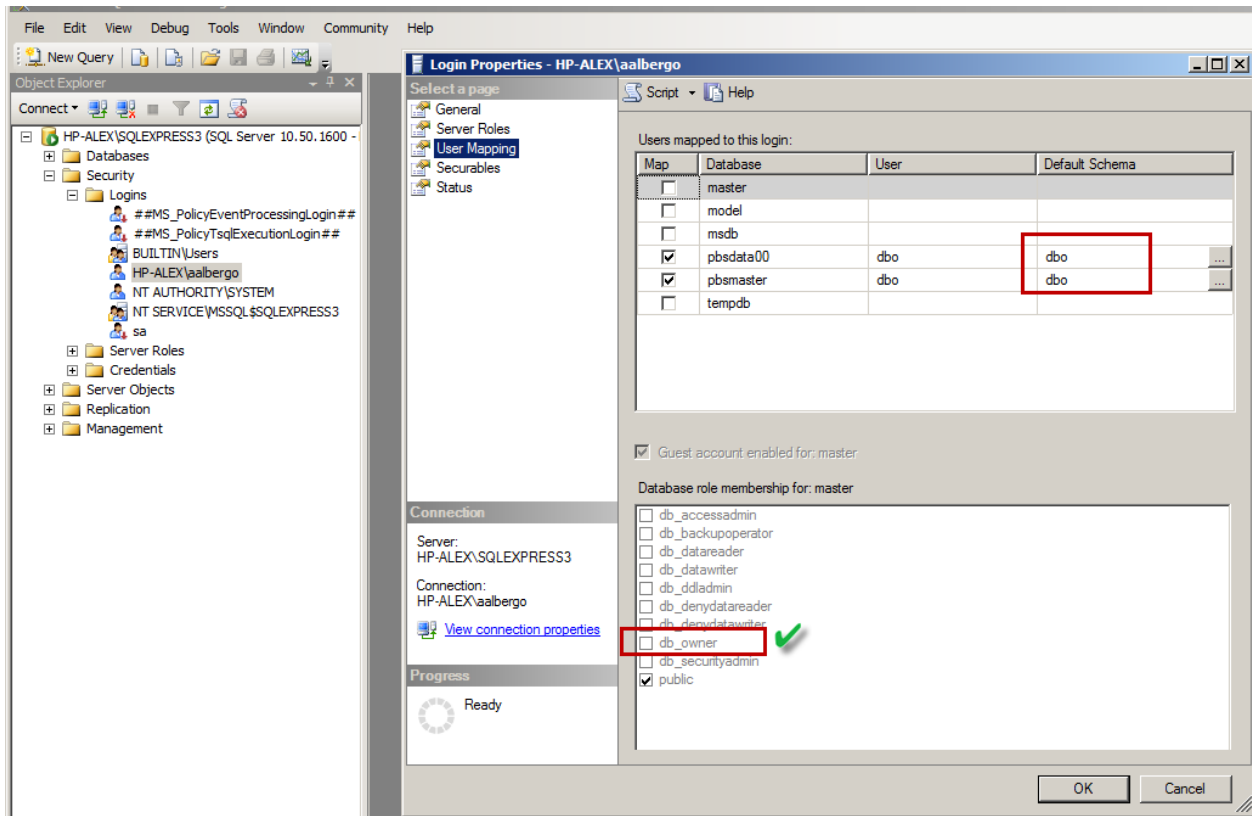
D. File error 9D,102 – Table created with incorrect permissions



This is a SQL Server permissions issue.

Make sure the users default schema for the pbsdata database is dbo. If it is not, the tables are created with the user as the owner. When you look at the table in SQL Management Studio it should be, to match the example above, *dbo.RCVTRX01*. In other words, all of the tables must start with the letters *dbo*. To fix this there are two procedures you can do:

Procedure 1. The table must be dropped (removed). Using SQL Management Studio apply the changes below to your uses. Initialize the table and it will then be created as "dbo".

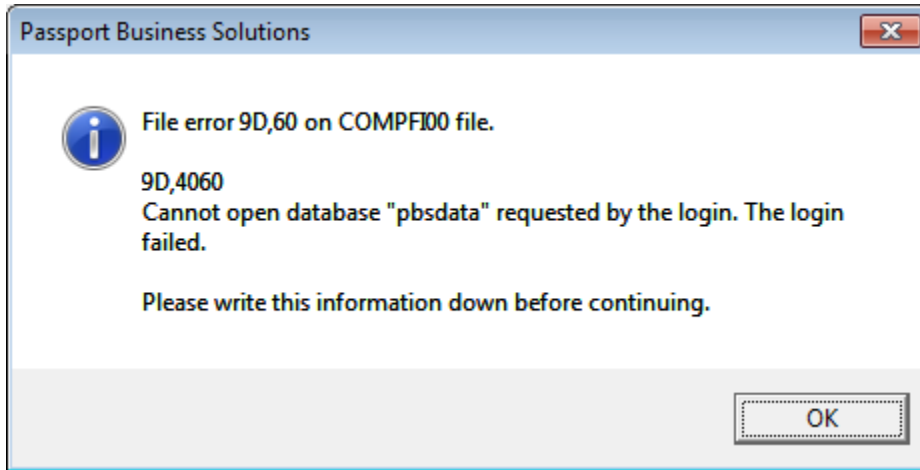


If you are unable to update the user, delete the user and add the user using the correct Schema.

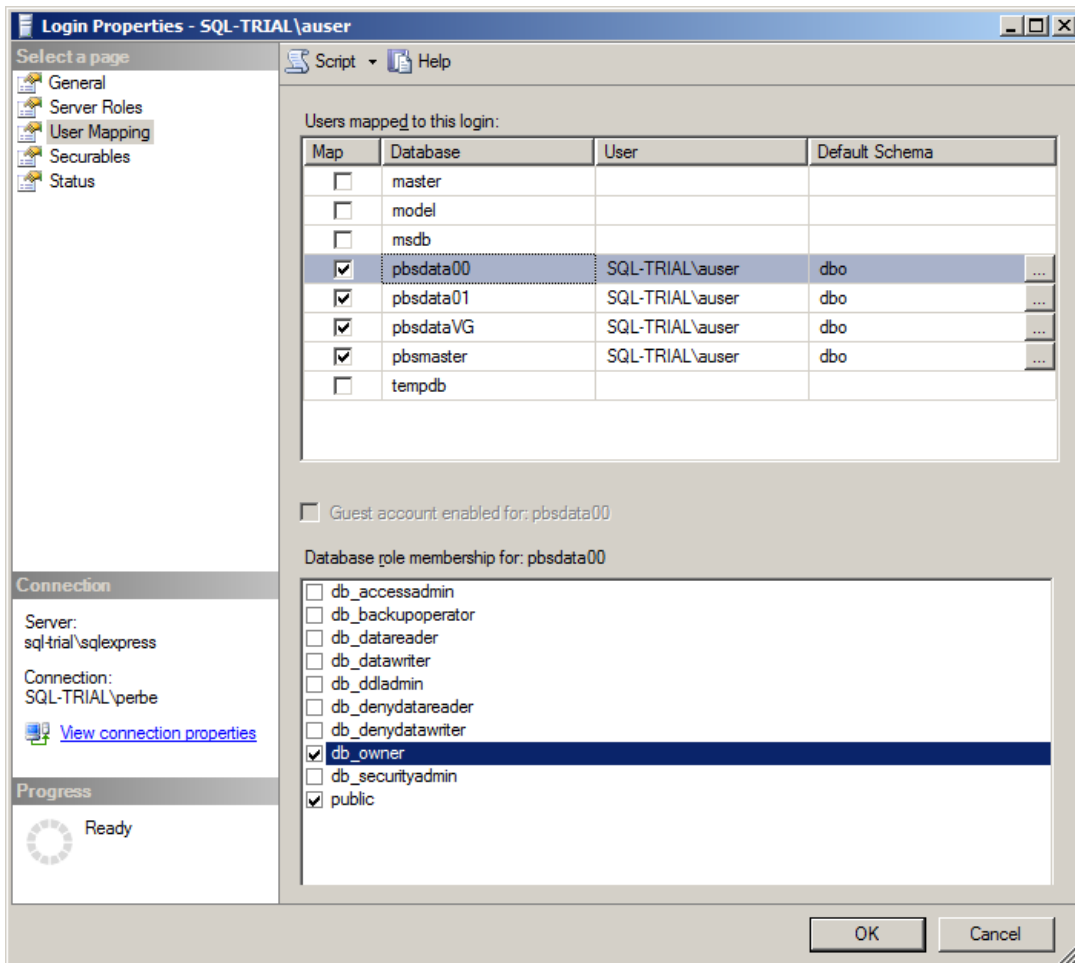
Procedure 2. Under Security *Logins*, select the user. Select the *Server Roles* page verify that the user is set up to as sysadmin.

E. File error 9D,60 - Cannot open database “pbsdata” requested by the login

There are 2 issues that could cause this error.

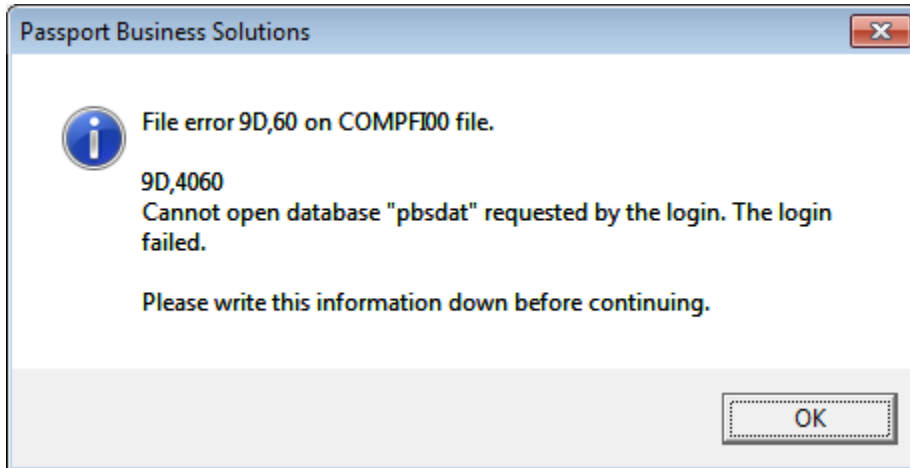


Issue #1 The user has not been mapped to the database with default schema ‘dbo’ and role membership of ‘db_owner’

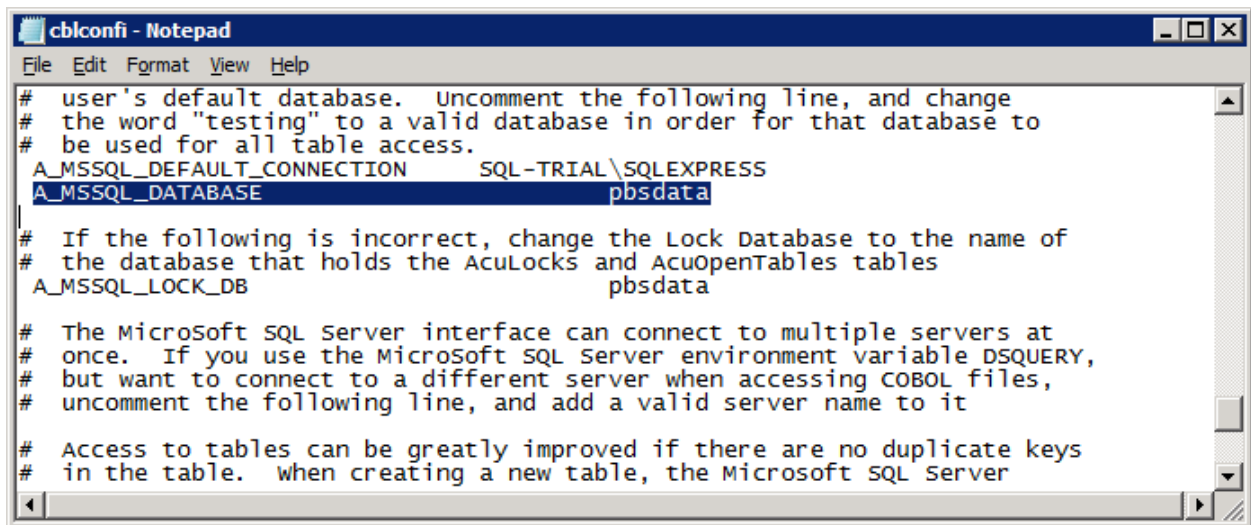


Issue #2

The name of the database is defined incorrectly in the **cblconfi** file. In this example we have purposefully misspelled the database name to force the error:



The database is misnamed above. The correct name for this example is “pbsdata”. So we will correct the file to look like this:



```
File Edit Format View Help
# user's default database. Uncomment the following line, and change
# the word "testing" to a valid database in order for that database to
# be used for all table access.
A_MSSQL_DEFAULT_CONNECTION SQL-TRIAL\SQLSERVER
A_MSSQL_DATABASE pbsdata
# If the following is incorrect, change the Lock Database to the name of
# the database that holds the AcuLocks and AcuOpenTables tables
A_MSSQL_LOCK_DB pbsdata
# The Microsoft SQL Server interface can connect to multiple servers at
# once. If you use the Microsoft SQL Server environment variable DSQUERY,
# but want to connect to a different server when accessing COBOL files,
# uncomment the following line, and add a valid server name to it
# Access to tables can be greatly improved if there are no duplicate keys
# in the table. When creating a new table, the Microsoft SQL Server
```

Be sure to check the name in **all** the cblconfi configuration files and rename where needed.

F. Error 9D, 22007

The program is attempting to write non-numeric data to a numeric field.

This could happen in several situations:

- You are importing data.

- You are upgrading data from a previous non-SQL system and some of the old data has corrupted non-numeric data being written to a numeric field.

The solution is to locate the bad non-numeric data and fix it.

G. Unable to Locate PBS Database Master

Also, MLTCMP table is missing.

- This could mean that the Firewall is blocking the port. Turn off the Firewall. Launch PBS and if you can now connect, you know the port was blocked.

Refer to the section [Creating an Inbound Firewall Rule](#).

- It could be that the *SQL Server Browser* is not running. Run Services and look for *SQL Server Browser* on the list of services. If not running, start it.

H. Error 9D,00 on SYSINI00

1. This could be the firewall or user permissions. Verify the setup for both.
2. The *SQL Server Browser* may have been turned off. That is normally enabled following an install of SQL Server. If this is the case you must turn it back on.

For the SQL Standard Edition open the *SQL Server Configuration Manager* and select *SQL Server Services*. If it is off, turn it back on.

When using SQL Express the SQL Server Browser has to be accessed via *Services* from *Administrative Tools*. The status should be Started, if not turn it on. It should be set to start automatically.

I. MSVCR100.dll not found

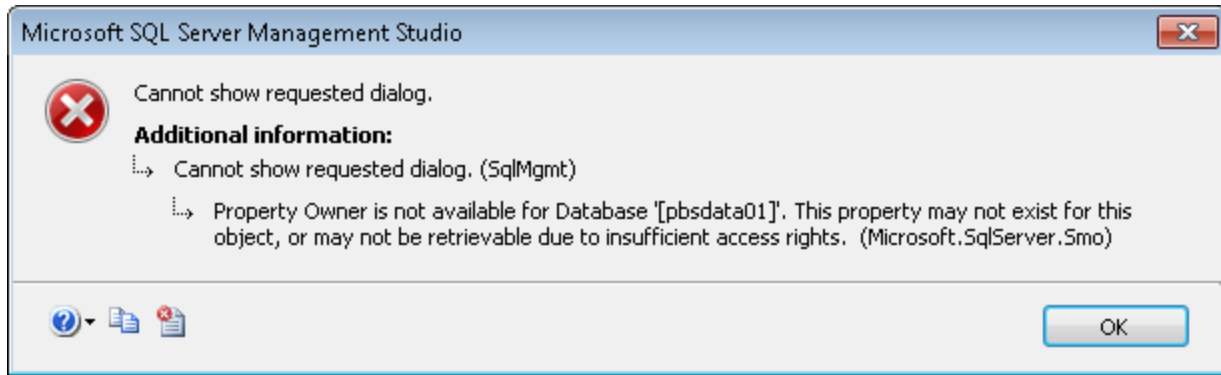
There are two situations where you may get this message: *MSVCR100.dll not found*

- After the upgrade, if you get *MSVCR100.dll not found* when trying to run PBS on the file server.
- When the install fails due to a missing MSVCR100.dll program on the server.

In either case, copy this file from the *Microsoft.VC100.CRT* folder to the top-level PBS folder and the bin folder. Run the install again. You may also download and install the Microsoft Visual C++ 2010 Redistributable (32-bit) on the server.

J. Property Owner is not available for Database '[pbsdataxx]'.

Here is an example of the message:



You will see this message when attempting to access the database properties in Microsoft SQL Server Management Studio. The cause of the error is not clear. It may be a bug in Microsoft SQL Server.

The solution, is to run the following command against each database:

```
SP_CHANGEDBOWNER @LOGINAME = SA  
, @MAP = REMAP_ALIAS_FLAG
```

It resets the ownership to the database, and database properties are available for all users again.

K. Locked Tables

Locked tables could occur when a user turns off their computer with PBS tables still open. Exit PBS before turning off your computer.

If locked tables occur, to fix this, everyone must be out of PBS. Open SQL Server Management Studio and access the PBS instance. With the focus on *Databases* run this script:

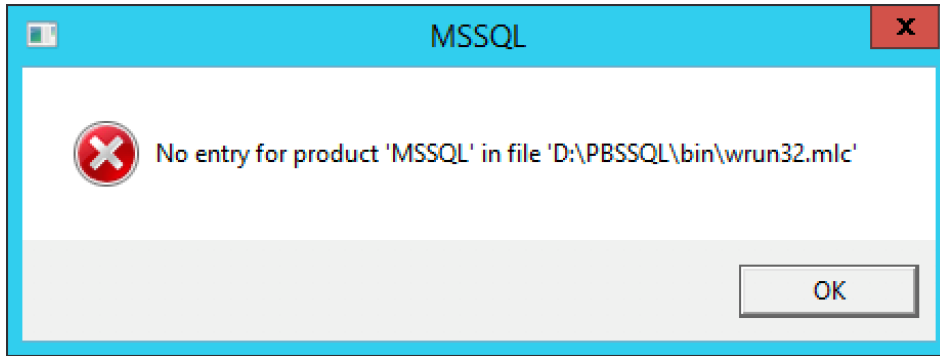
```
select * from pbsmaster.dbo.AcuOpenTables1
```

Locked tables could display is someone is running PBS SQL. However, if no one is in PBS and if there are locked tables listed in the Results window, execute this command:

```
delete from pbsmaster.dbo.AcuOpenTables1
```

L. No entry for product "MSSQL" in file

If you see the message below during the install you have an incorrect version of the Acu4GL product code and key. Contact Passport for a replacement of the Acu4GL for MS SQL license.



XIII. Appendix B – Initializing PBS Tables

There are 2 methods available for initializing PBS tables.

A. Initialize Individual Tables

It is not required after the install or before running EZ Convert, but it may become necessary at some time to initialize a PBS table. An SQL table should never be added via the SQL Server Management Studio.

Use the appropriate initialization utility to create a table when needed. For information on running these utilities, see the *Initializing Data* chapter in the PBS Administration documentation

B. Initialize Multiple Tables

There is a utility that allows initializing multiple tables. To run this utility selected select INITPB.BAT.

It can initialize tables for individual modules, multiple modules, for one company or all companies.

CAUTION: This utility will remove ALL of your existing data. So be certain that you want to run it. If you are uncertain, backup your PBS databases and top-level PBS before you run it.

The screen looks similar to this:

```
PBS          Initialize files
Passport Business Solutions (tm)

Company to process  |
                   |
SY                 Mfg C/O
A/R                Mfg C/P
I/C                Mfg I/M
O/E                Mfg J/C
A/P                Mfg M/S
P/R                Mfg P/D
G/L                Mfg P/P
J/C                Mfg S/F
P/O
C/R
S/A
T/B
POS

<F5> = "All"
```

XIV. Appendix C - Troubleshooting

Debug Log File

Running PBS in debug mode to generate a log file may help you identify a problem. You may create a log by running PBS in debug. Review the log after running PBS to where the problem occurs. If looking at the log does not help you, it may help Passport support to identify the problem. To run in debug and generate a log, see the *Running in Debug* section of the PBS Administration appendix *Error Messages*.

Connection Checks

Here are some things to check if you cannot connect:

Is the user setup to be part of the domain?

If no, set it up.

Did the user log in on the workstation using the domain?

If not, log in to the workstation using the proper domain.

If you are not using a Domain, the users and passwords on the workstation and server must match. Each user has to have administrator rights on both the server and workstation.

If the PBS application is installed on one server and the databases on a separate SQL server, the permissions must be the same for both servers. The workgroup or domain must be the same on both.

You moved the PBS databases to a new server and PBS is not running correctly. When you move a PBS database(s) to a new server you must:

- Re-install the ms_inst.sql stored procedure on the new server.
- Set up the SQL named pipes, users and permissions as they were on the old server.
- Modify SQL settings in the cblconfi.* files as needed.
- The server name (srvr_nam) is stored in each row in the MLTCMP table found in the pbsmaster database. Modify as needed.

XV. Appendix D - What's New in PBS 12.05

PBS v12.05 includes many new features, enhancements and fixes. For an explanation of new features and benefits introduced with v12.05, use this link to download the [v12.05 list of enhancements](#).

XVI. Appendix E – Document Changes

7/27/17	Corrected information in the Prerequisites section.
8/03/17	Updated the changing server, instance and database section
8/22/17	Changed the name of the install files for v12.05.01.
8/31/17	Added the requirement for a version 10.0 product code and key.
10/31/17	Added steps to fix the Point of Sale menu.
12/06/17	Checklist clarification on upgrading to an existing database.
12/27/17	Added error message when Acu4GL for MS SQL is an incorrect version.
12/29/17	Added more warnings about PBS v12.05 requiring MS SQL with Advanced tools.
01/26/18	Noted that SQL Server should not be on the same system as the Domain server.

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