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Setting up EntraPass Card Gateway with SQL Server 2008

The EntraPass Card Gateway is designed to interface with the Oracle or the SQL Server Database Engine. Unfortunately the interface has not been updated since its inception. Thus when installing Microsoft SQL Server 2008 (32- or 64-bit) certain precautions need to be taken.

The following procedure will walk you through the required steps to successfully install and configure the Card Gateway as well as Microsoft SQL Server 2008. Remember that you must have at least **local administrator privileges** to install both applications.

In order to simplify this procedure, it is assumed that all EntraPass components as well as the Microsoft SQL Server 2008 software reside on the same computer. Just remember that the Card Gateway must be installed on the same computer that runs SQL Server 2008.

Prerequisites

- Download **ntwdblib.dll** from this link:
  http://www.dlldll.com/ntwdblib.dll_download.html
- SQL Server 2008 R2 Enterprise Edition and Express Editions can be found at:
  SQL Server 2008 R2 Enterprise Edition 180-day Evaluation (x86 & x64)
  SQL Server 2008 R2 Express with Advanced Services (x86)
  SQL Server 2008 R2 Express with Advanced Services (x64)
- Microsoft .NET Framework v3.5 SP1 or above installed

The ntwdblib.dll is a Borland DLL designed to interface BDE with the SQL Server DB Engine. The OS type (32- or 64-bit) will determine where the file will reside.

Copy the file to the appropriate folder:
- **x86** platforms: c:\Windows\System32\
- **x64** platforms: c:\Windows\SysWOW64\

## SQL Server Installation & Configuration

The Card Gateway was designed to work with SQL Server 2000. To successfully interface with newer versions of SQL Server, the DB engine must be set in compatibility mode. Also the Card Gateway cannot communicate using Windows authentication which is the preferred SQL Server connection. To circumvent this, SQL Server 2008 must be set in Mixed Mode (SQL Server Authentication & Windows Authentication). Although the use of the SQL System Administrator (*sa*) account may work, it is preferable to create a new SQL Login dedicated to the Card Gateway interface.

The following procedure shows how to install SQL Server 2008 R2 Enterprise Edition (180-day Evaluation). If you are installing the Express edition, skip the steps that do not apply to your installation.

1. **If active**, disable Windows Firewall.
2. **If active**, disable User Account Control (UAC).
3. Run SQL Server Setup Wizard.
4. Once the SQL Server Installation Center comes up,
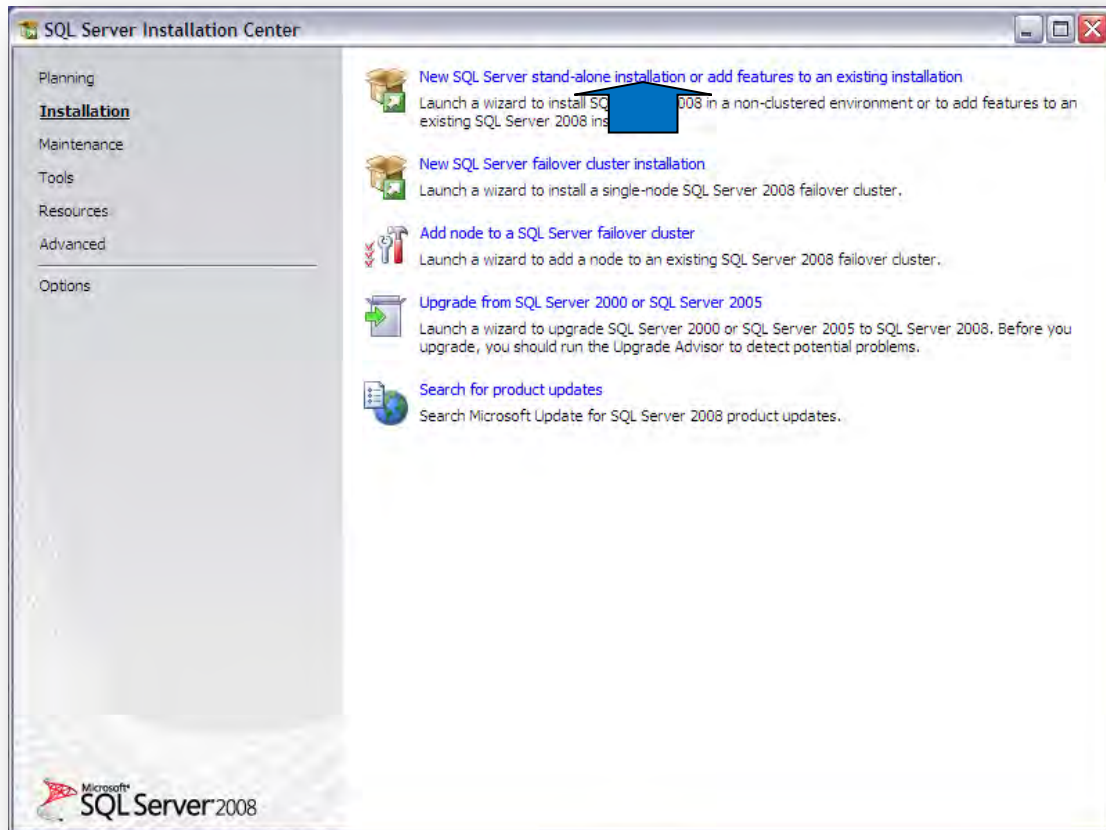   select **System Configuration Checker**.
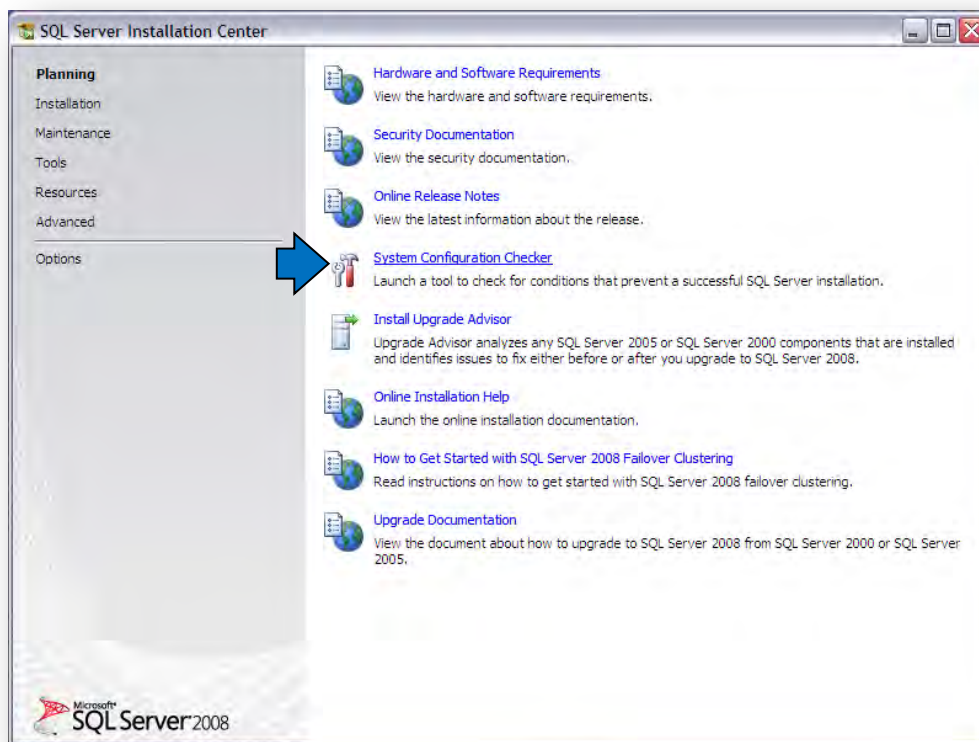
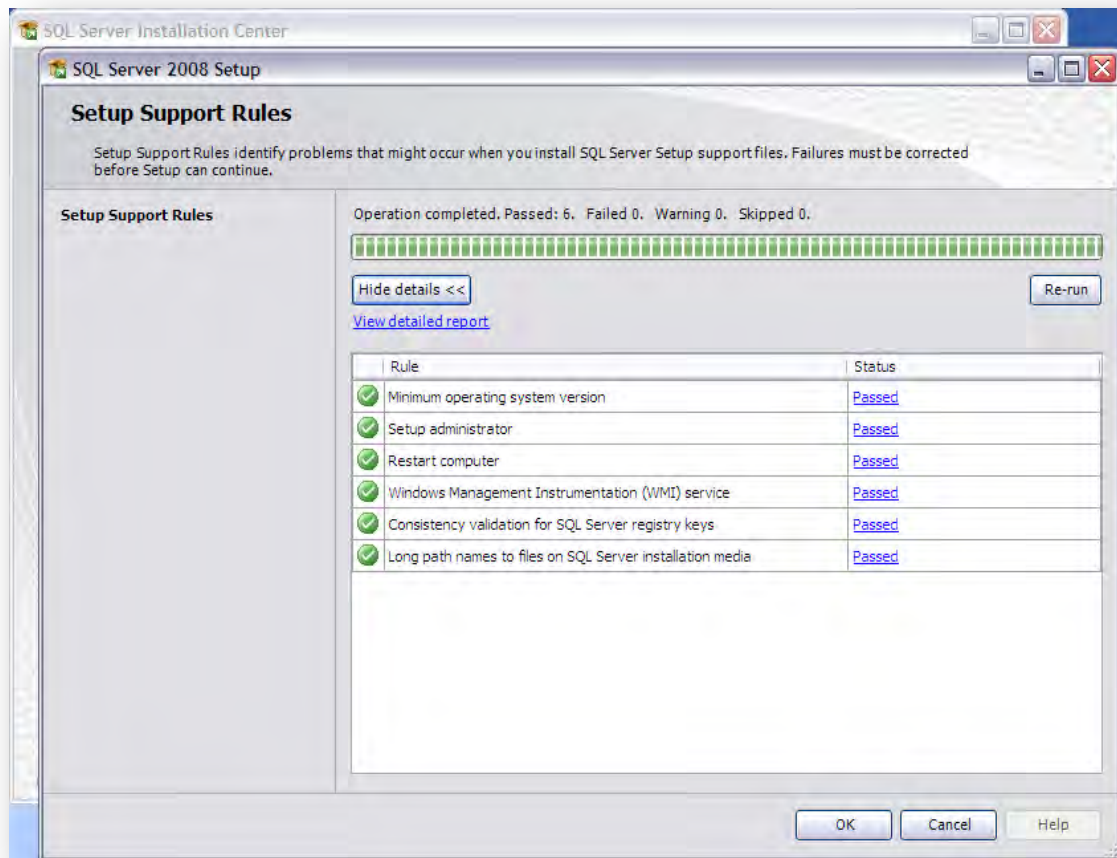5. Once completed, it will produce a report like this:
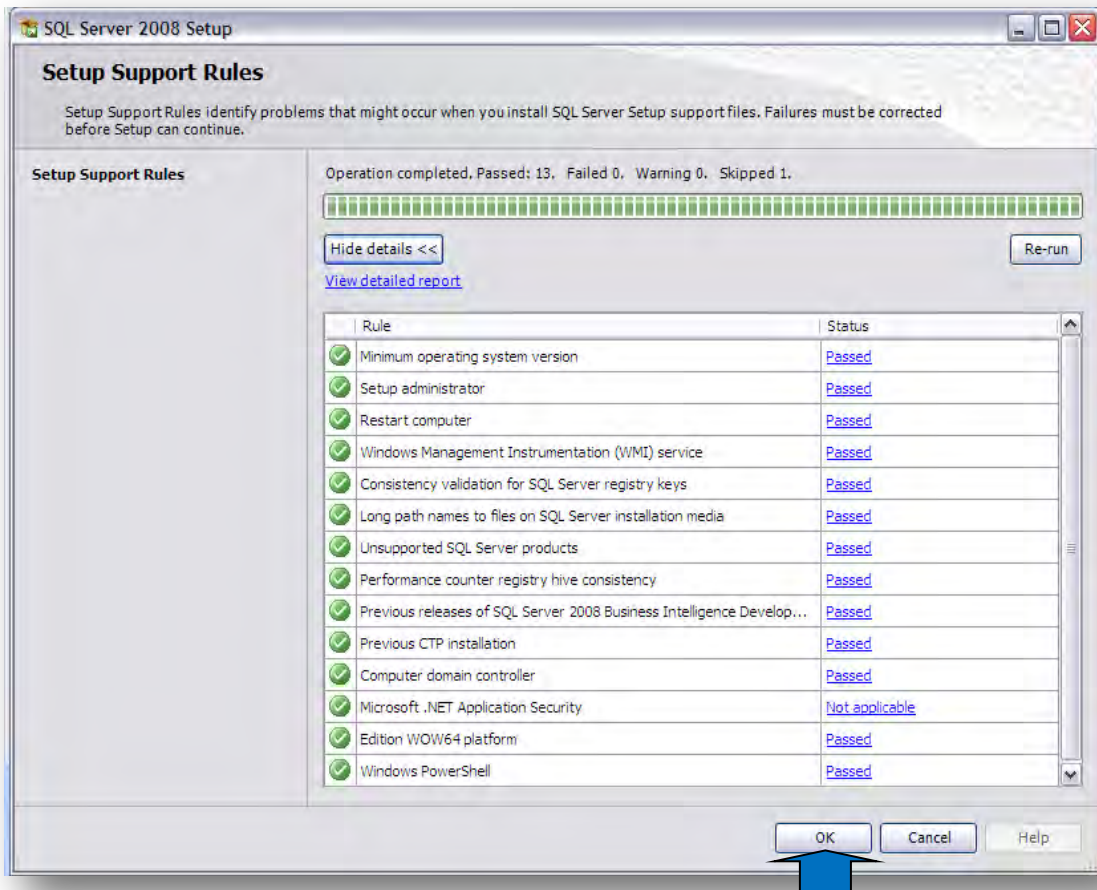
6. Click OK to continue.
7. On the left Pane, click on **Installation**.

8. Select **New SQL Server stand-alone installation or add features to an existing installation**

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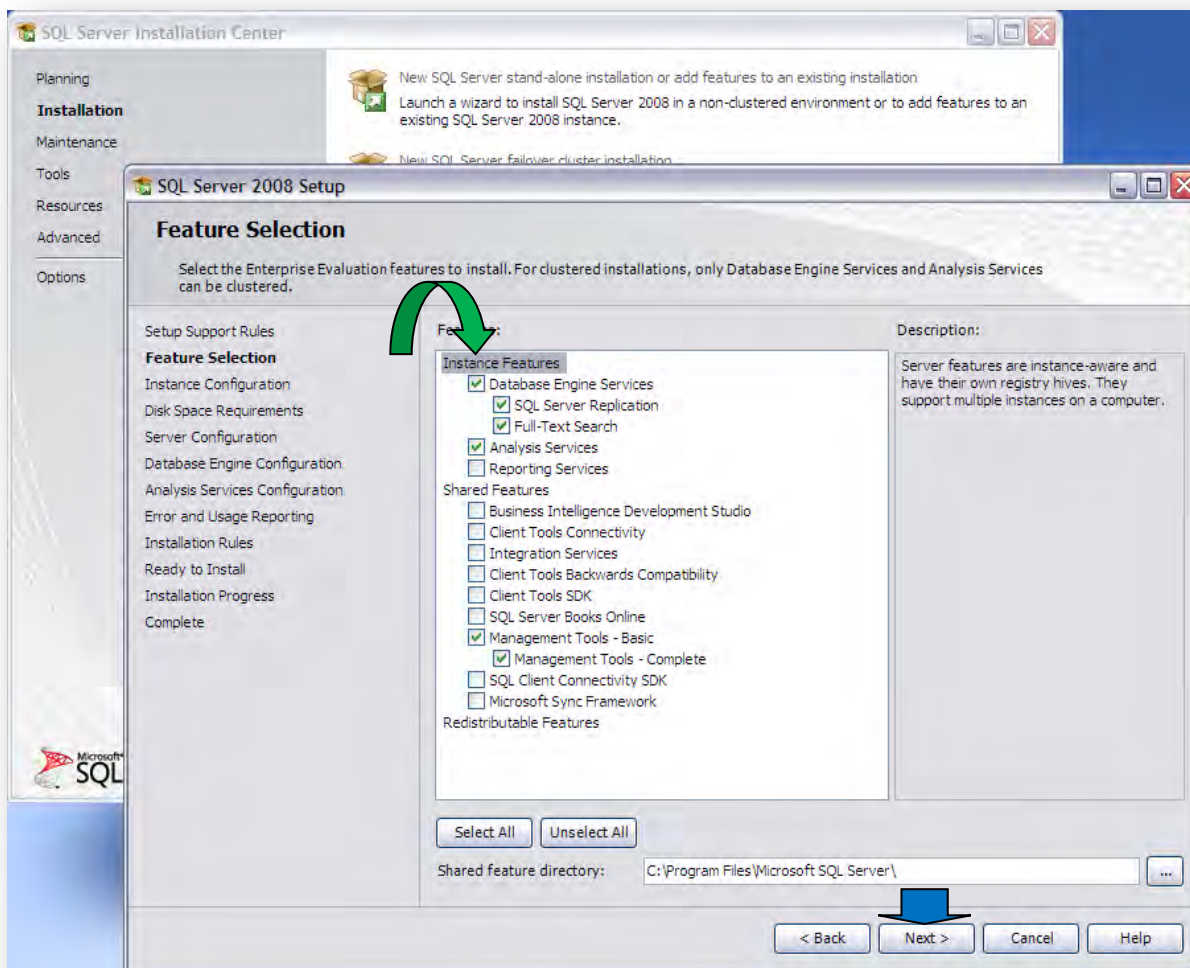(303) 670-1099   (303) 679-8949 fax

9. Once **Setup Support Rules** has completed, click on **Show details**.

10. If everything checks out, click **OK** to continue.
11. On the next page, select **Enterprise Evaluation** then click **Next**.
12. Accept the License agreement & click **Next** to continue.
13. On the Setup Support Files page, click **Install**.
14. Click **Next** on the next page.

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15. On the **Feature Selection** page, check features as indicated below then click **Next**.


16. On the **Instance Configuration** page, select **Default Instance** and click **Next**.
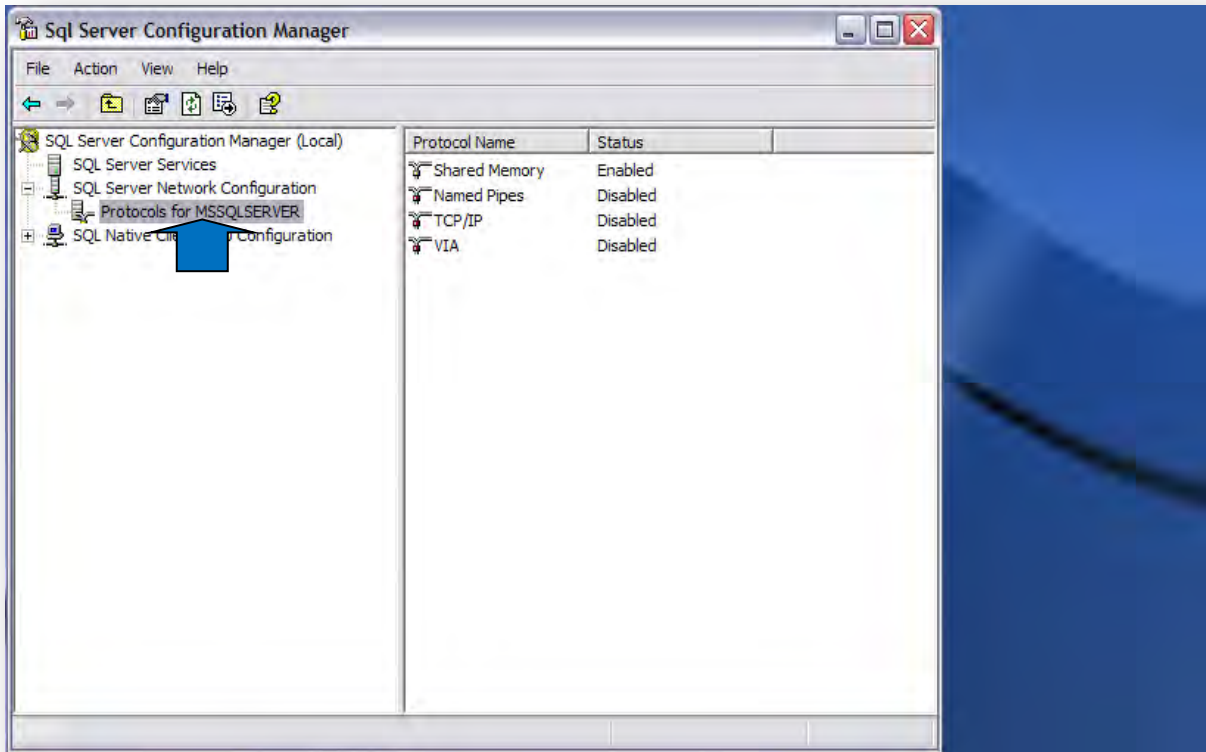**17.** Click **Next** on the **Disk Space Requirements** page.
18. On the **Server Configuration** page, click **Next**.

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19. On the **Database Engine Configuration** page, select **Mixed Mode**, enter System Administrator password (Kantech2011 / Kantech2011) and click on the **Add Current User** button. Click **Next** to continue.
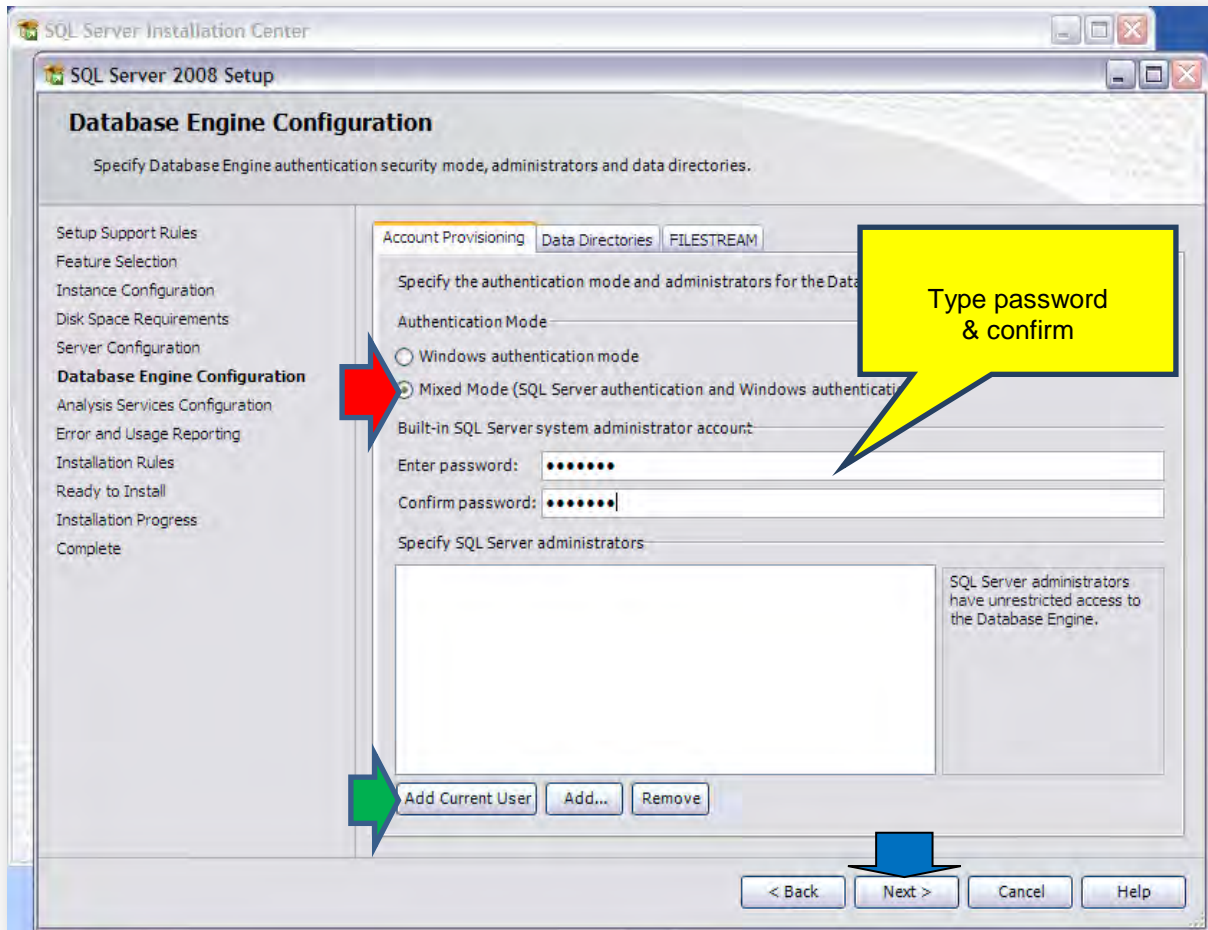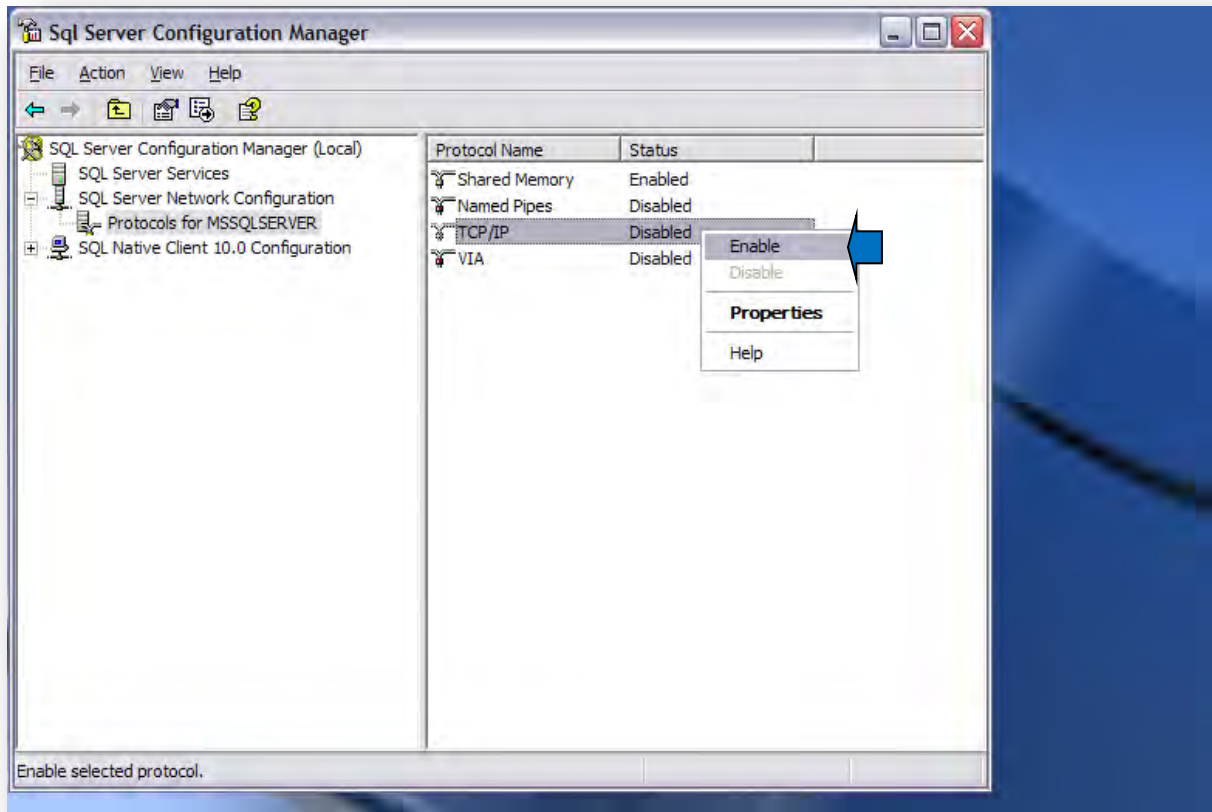

20. On the **Analysis Services Configuration,** click the **Add Current User** button, and then click **Next**.

21. On the **Error and Usage Reporting** page, click **Next**.

22. On the **Installation Rules** page, click **Next**.

23. On the **Ready to Install** page, click **Install**.

24. Once **Setup Process** is completed, click **Next** then **Close** on the **Complete** page.

25. Close the **SQL Server Installation Center** window.

26. From the Taskbar Menu/All Programs/Microsoft SQL Server 2008 R2/Configuration Tools, **start SQL Server Configuration Manager**.

27. Expand the **SQL Server Network Configuration** node then
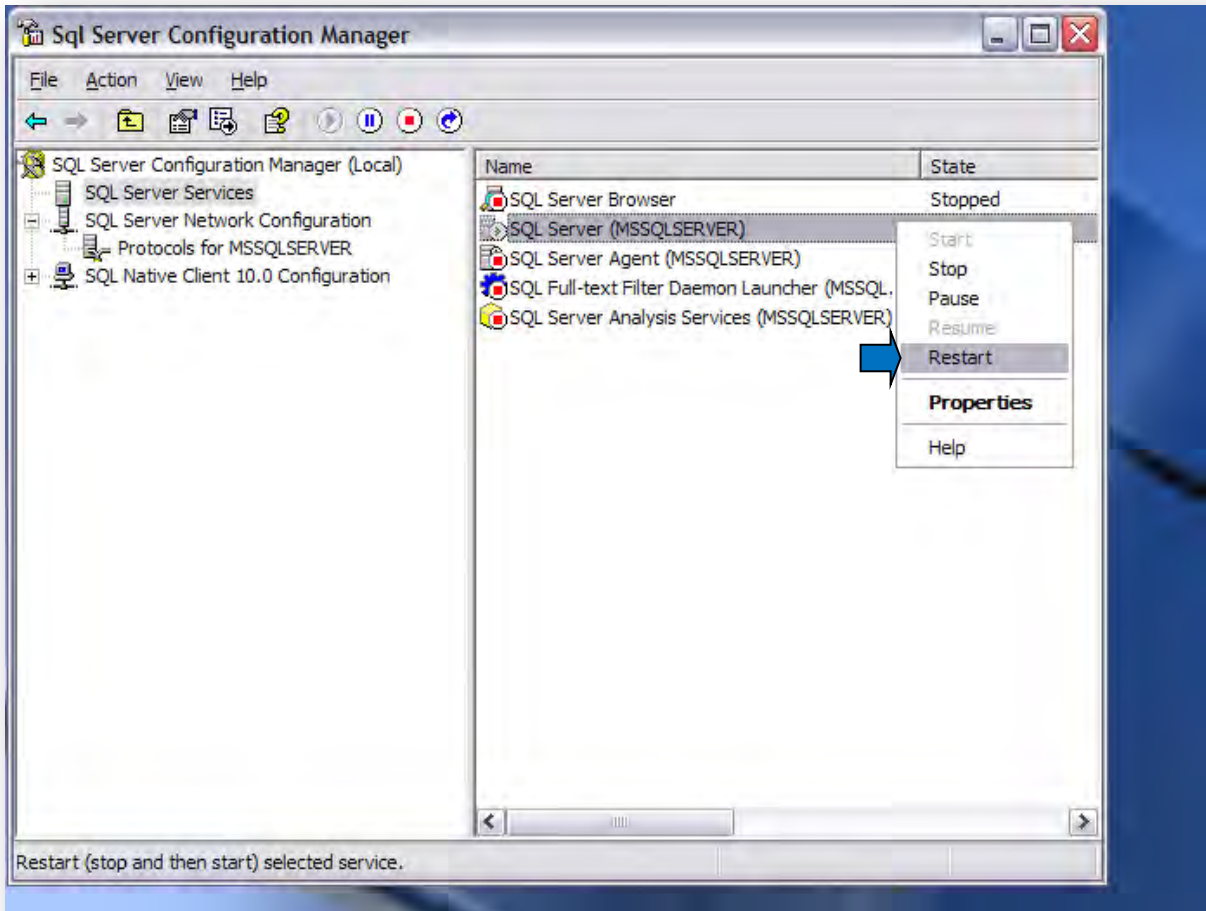click on **Protocols for MSSQLSERVER**.

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**28.** On the right pane, right-click on **TCP/IP** and select **Enable.**

29. Click **OK** on the **Warning** message window.

30. On the left pane, click on **SQL Server Services** then on the right pane,
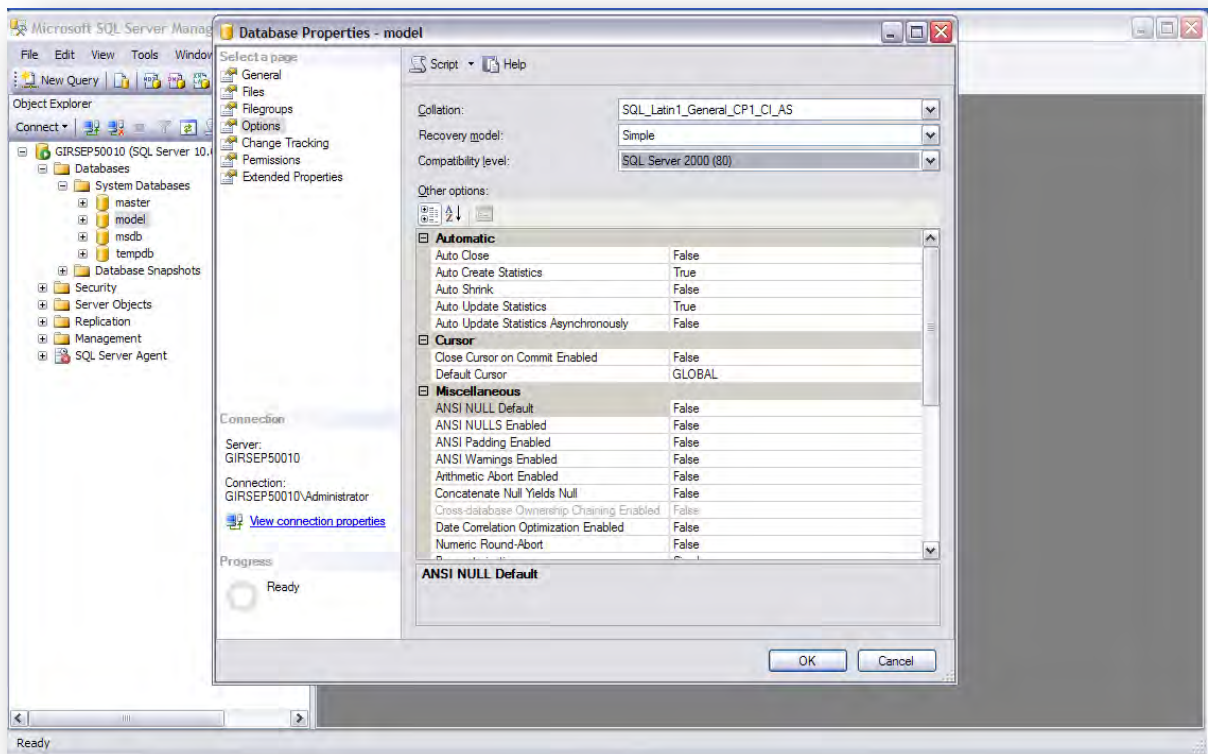right-click on **SQL Server (MSSQLSERVER)** and select **Restart**.

31. Once restart is complete, close SQL Server Configuration Manager.
32. From the Taskbar Menu/All Programs/Microsoft SQL Server 2008 R2,
start SQL Server Management Studio (SSMS).

**33.** On the **Connect to Server** window, accept the Windows Authentication and click **Connect**.
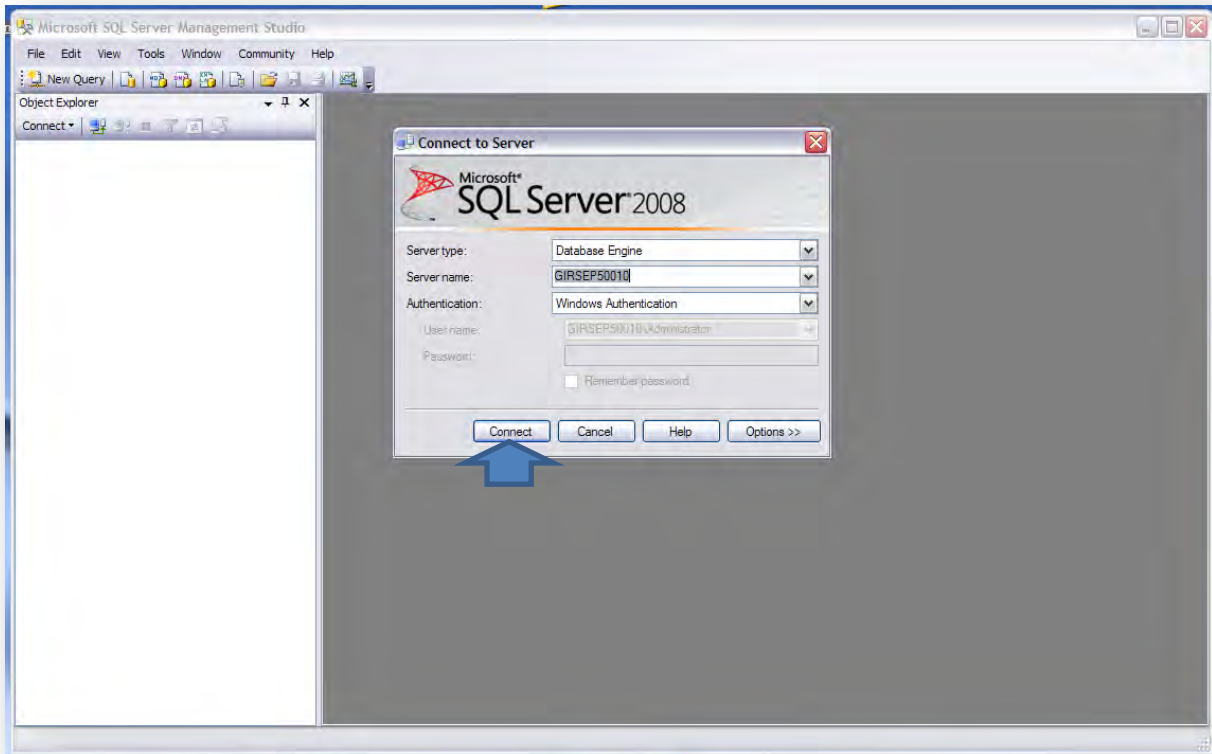
34. From the left pane, expand the **Databases** node, then the **System Databases** and finally right-click on the **model** database and select **Properties**.

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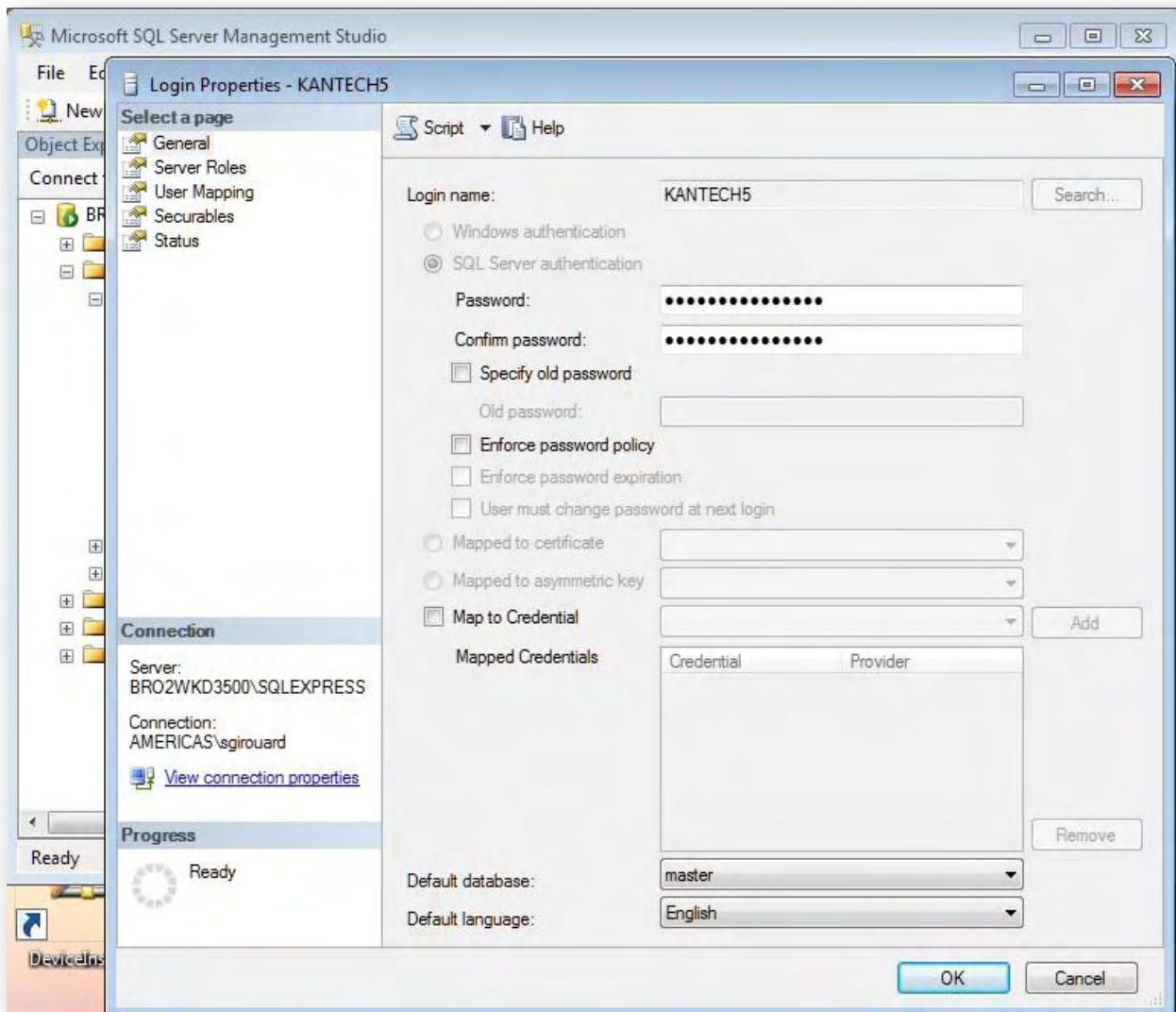**35.** From the **Database Properties – model** windows, click **Options** on the left pane.

36. Click on the **Recovery model** drop-down menu and select **Simple**.
Now click on the **Compatibility Level** drop-down menu and select **SQL Server 2000 (80)**.
Click **OK** to save settings**.**

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37. From the left pane, expand the **Security** node then right-click on **Logins** and select **New Login...**
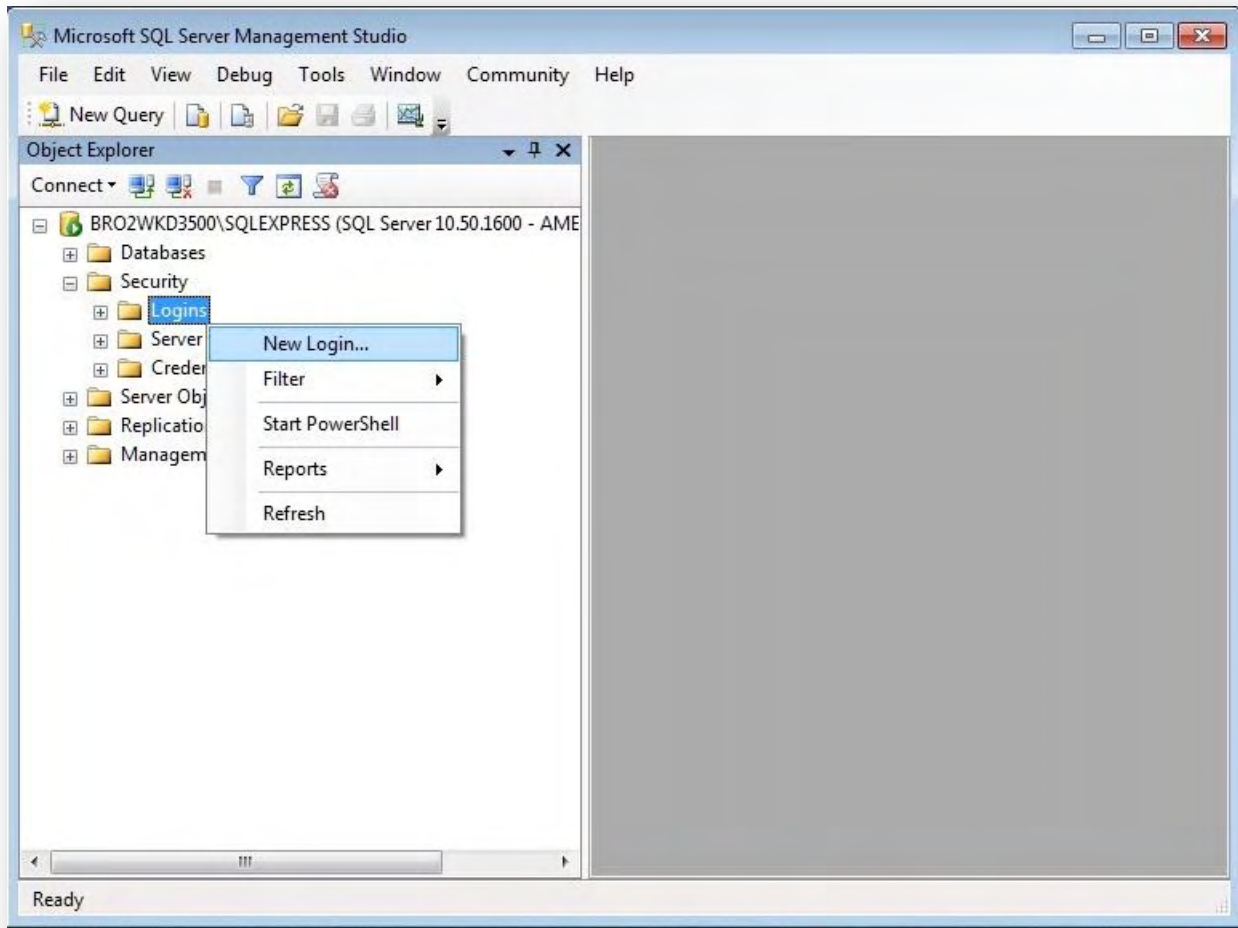
38. On the right pane, enter **KANTECH5** as Login name.
Select **SQL Server authentication** then type **kantech** in **Password** and **Confirm password** fields.
Uncheck **Enforce password policy**, the other two checkboxes will uncheck automatically.

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39. From the left pane, click on **Server Roles**. On the right pane, check the **dbcreator** checkbox. The **public** role is assigned by default and cannot be removed.
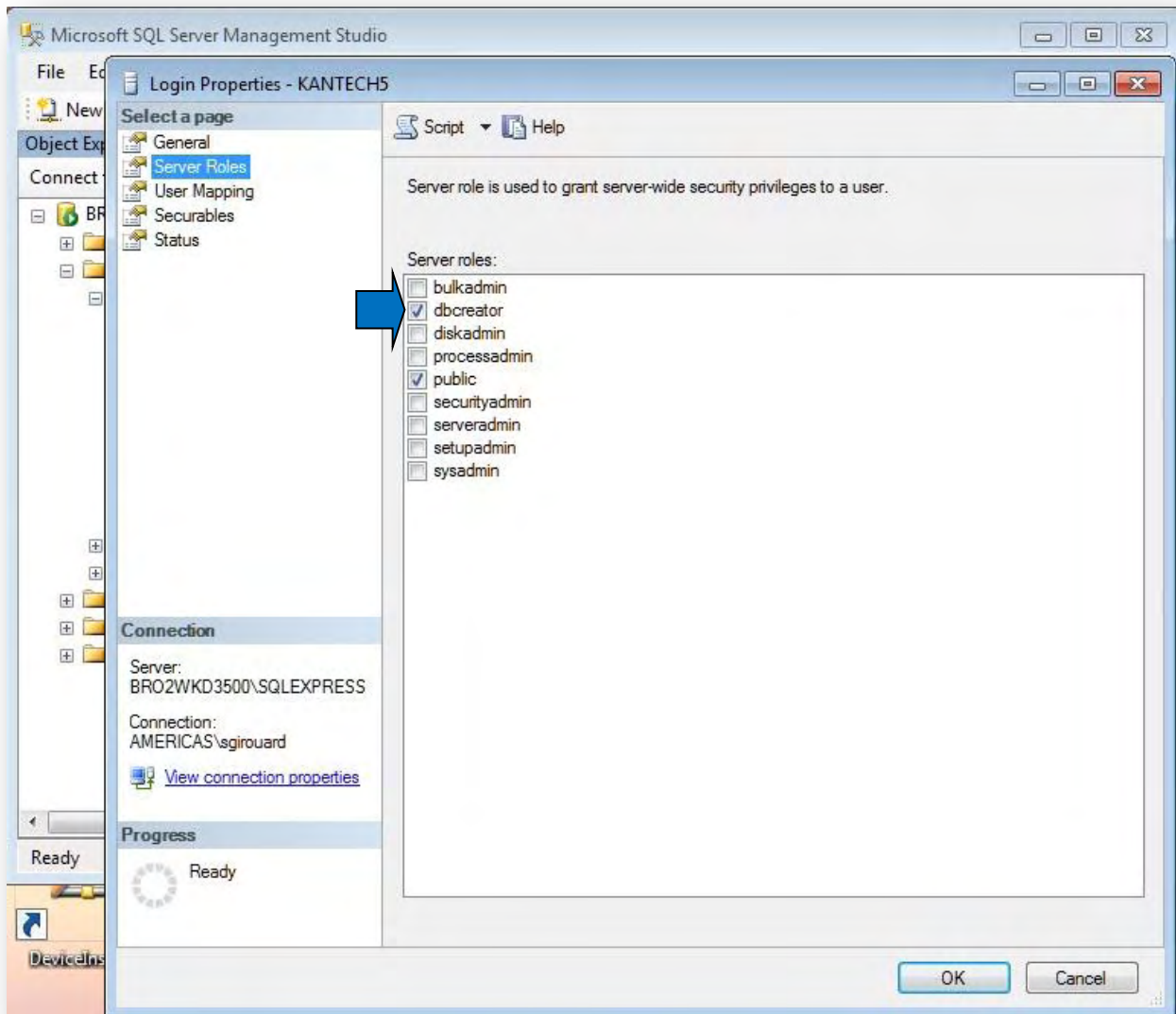
40. From the left pane, click on **Status** and confirm that **Login** is **Enabled**. Click **OK** to close.
41. Setup is now complete, you can close **SSMS**.

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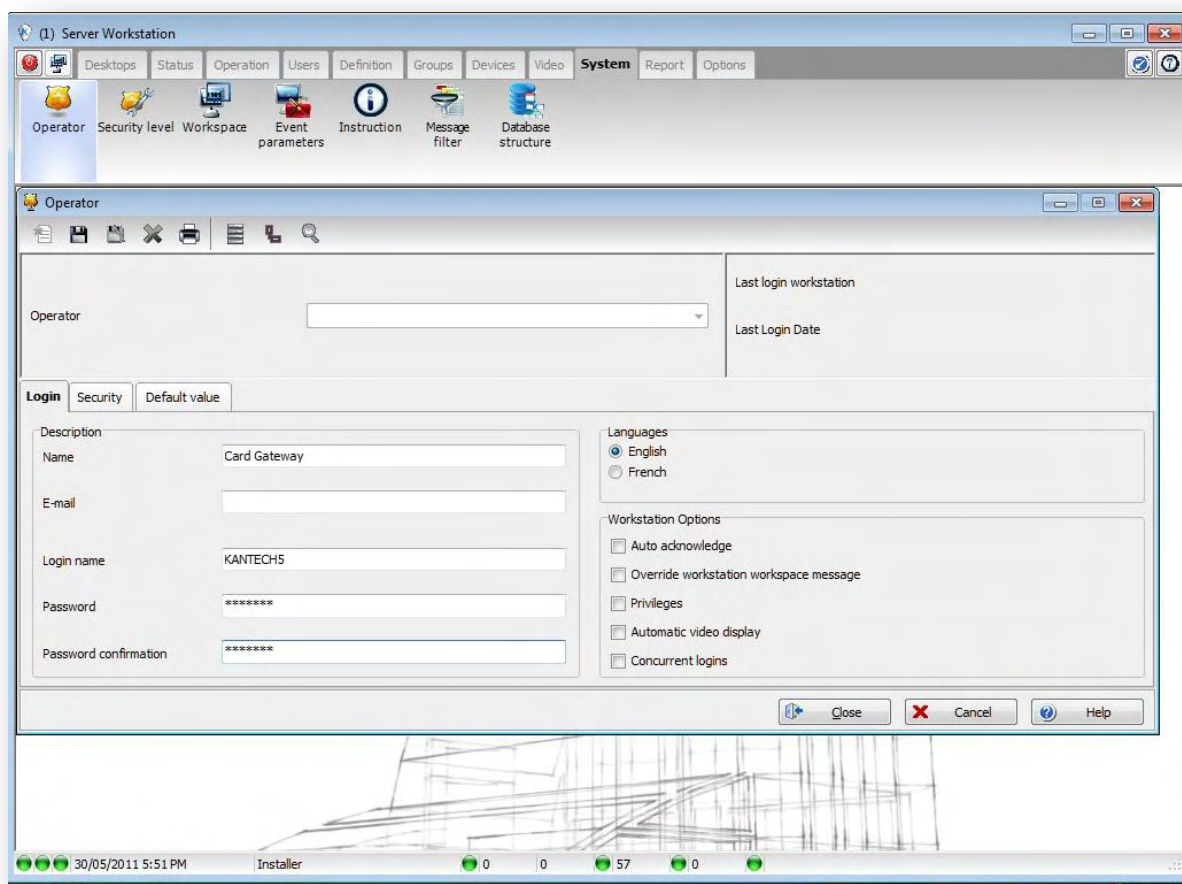
EntraPass Card Gateway Installation

Now it is time to install the Card Gateway. As mentioned before, the Oracle/MS-SQL interface must be installed on the computer that hosts the SQL Server.

Run the EntraPass Setup Wizard and install the Oracle/MS-SQL interface as an application, **do not set it as a Windows Service**.

Once installation is completed, reboot computer and log on as Local Administrator. Start Server, Gateway and Server Workstation respectively. **Do not start the Card Gateway at this time**.

To enable the Card Gateway interface, you need to create a dedicated operator as well as defining the Oracle/MS-SQL interface. To do so, proceed as follows:

1. From the Server Workstation, click on the **System** tab, select **Operator** then click the **New** icon on the upper-left corner.
2. Name it **Card Gateway**.
3. Define **Login Name** as **KANTECH5** and **Password** as **kantech**. Confirm password.

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4. Click on the **Security** tab. Set the Login Schedule as **Always Valid**, the **Security Level** as **Installer** and uncheck **Disable Operator on bad password**.
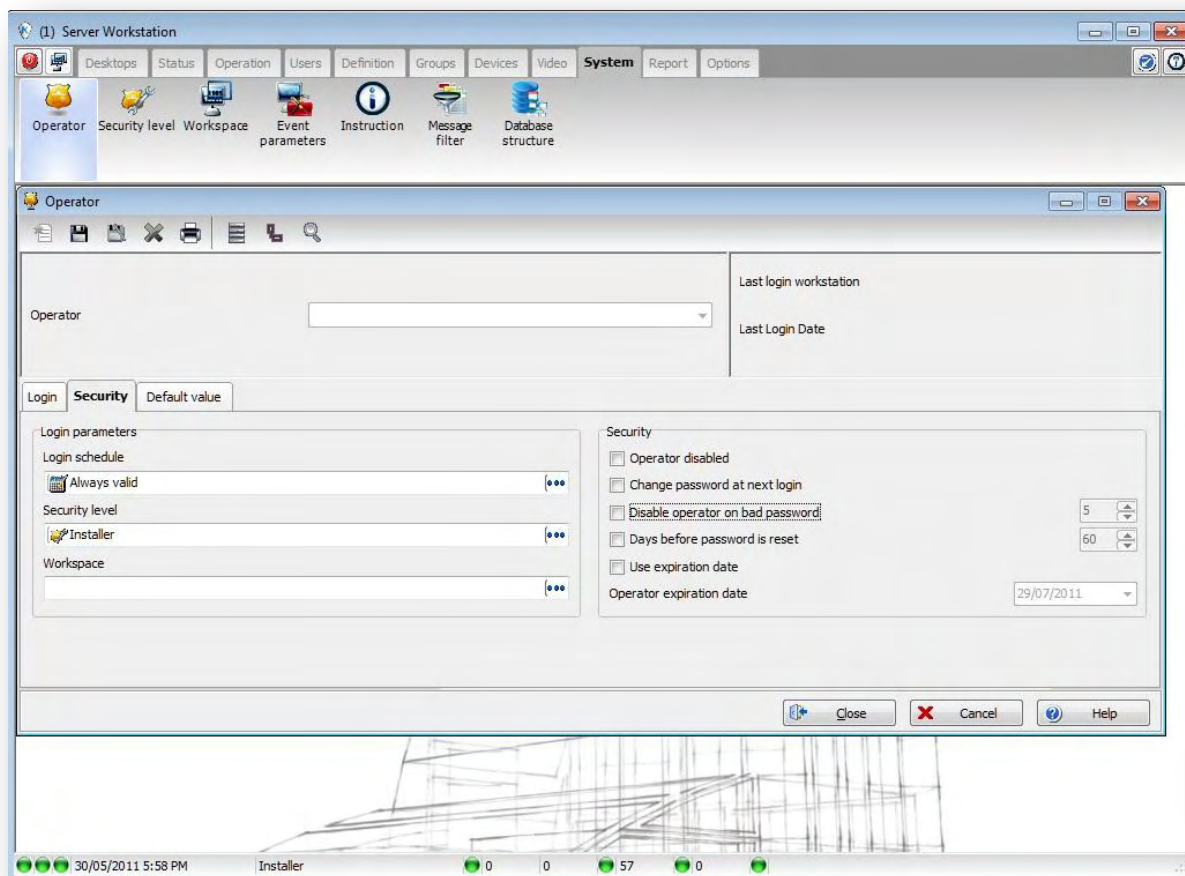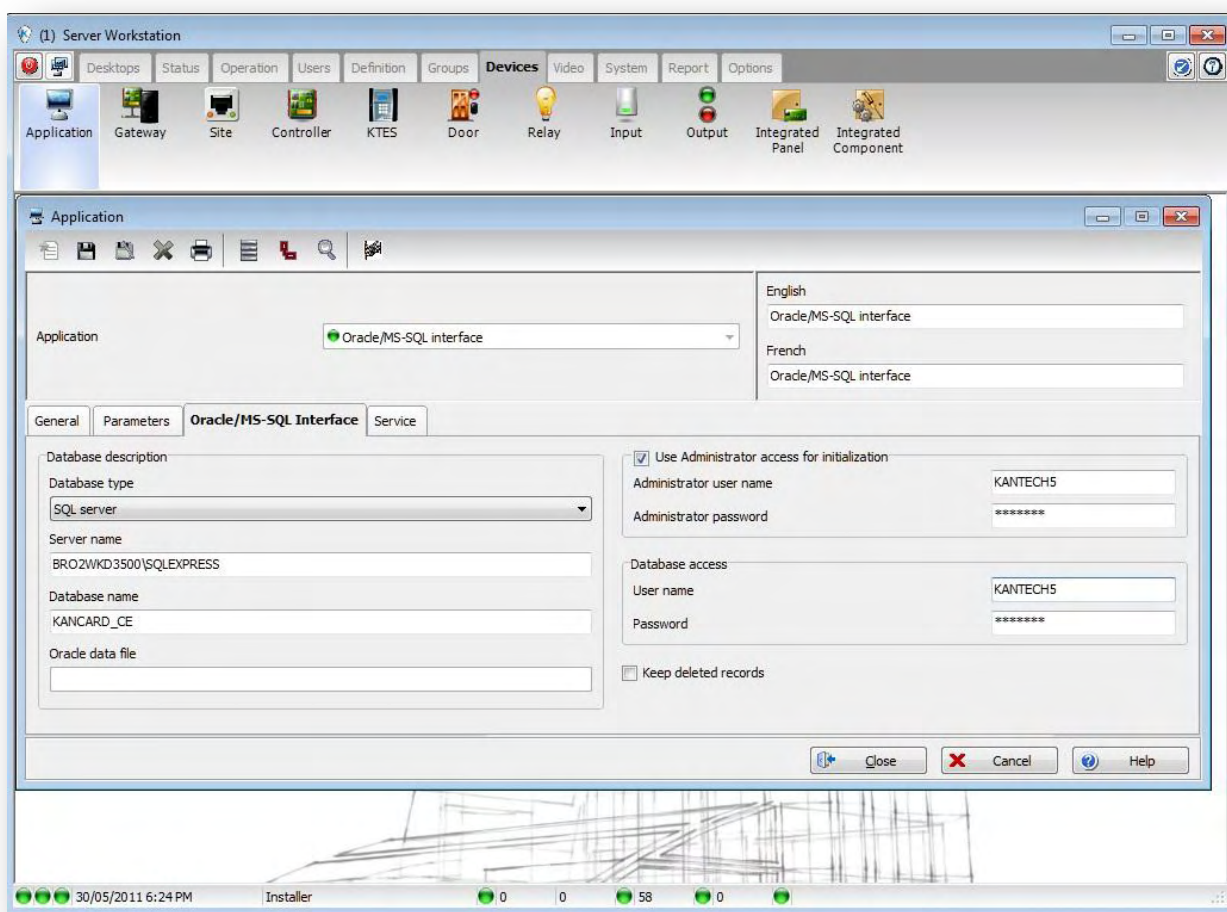

5. Click **Save** and **Close**.
   Note: This operator is used exclusively by the Card Gateway.

6. Click on the **Devices** tab then **Application**. Select **Oracle/MS-SQL interface**.
7. Click on the **Oracle/MS-SQL Interface** tab.
8. Under **Database type**, select **SQL Server**.
9. Under **Server Name**, type the name of the instance as represented in the **SSMS Connect to Server** window.
   *Note: To prevent any errors, start SQL Server Management Studio (SSMS). Once the **Connect to Server** window pops up, press **[Ctrl]-[c]** to copy the Server Name & paste same in the EntraPass using **[Ctrl]-[v]**.*

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10. Type in the **Database Name**. For the technical support staff, I suggest using **Kancard_CE** or **Kancard_GE** as it enables you to maintain two distinct DB for each edition of EntraPass.
11. Check **Use Administrator access for initialization** box.
12. Type in **KANTECH5** as **Administrator user name** and **kantech** as **password**.
    Note: *This login is used to access the SQL Server DB engine.*

13. Under **Database access**, select the **User name** field and type **KANTECH5** and **kantech** as **Password**.
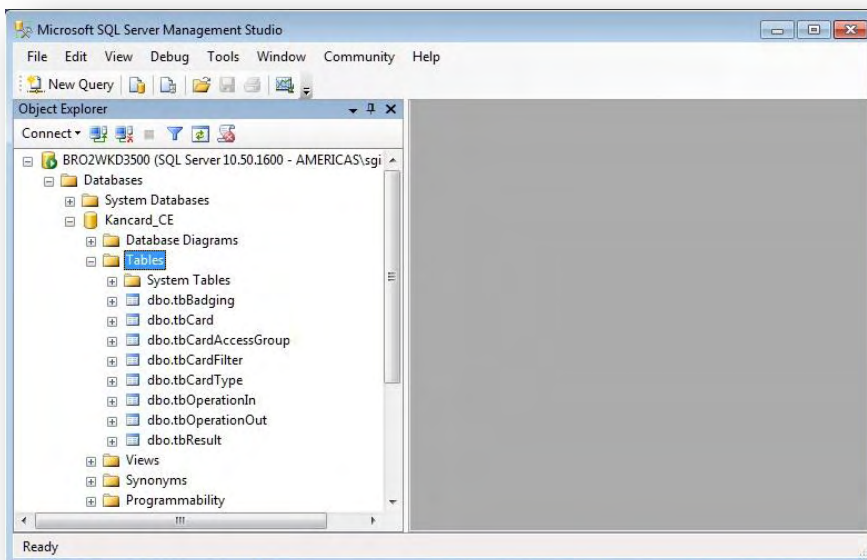   *Note:* *This login is used to access the EntraPass Database.*

14. Once completed, click **Save** then **Close.**

Now start the Card Gateway (MS-SQL and Oracle Interface), once connected to both databases it will look something like this:
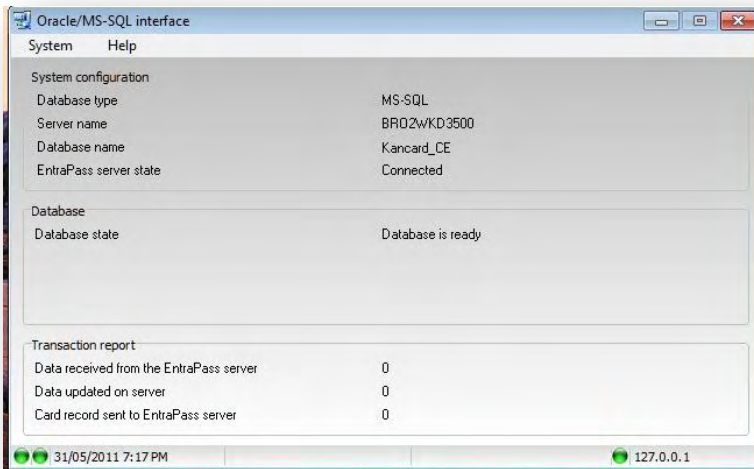
To confirm that the Kancard_XX database and tables were created, open SQL Server Management Studio (SSMS) and connect to the Database Engine.

On the left pane, expand the Databases node then the Kancard_XX object and finally the Tables object. It should look something like this:

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Summary

The EntraPass Card Gateway can interface with any editions of SQL Server 2008 R2 on both 32 and 64-bit OS platforms. To successfully connect to the SQL Server 2008, you need to:

- Copy **ntwdblib.dll** to the appropriate folder based on the OS type.
- Set the Database Engine in Mixed Mode authentication.
- Enable TCP/IP protocol through SQL Server Configuration Manager.
- Set the SQL Server *model* database to SQL Server 2000 (80) compatibility level.
- Create a SQL Server Login exclusively for the Card Gateway and assign it the **dbcreator** server role.
- Create an EntraPass Operator with Installer security level used exclusively by the Card Gateway.
- Under Devices/Application/Oracle/MS-SQL Interface, set the Database Type to SQL Server and ensure the Server Name is identical as what is shown in SSMS.

This application note assumes that the SQL Server is exclusive to the Card Gateway. If the customer is already using SQL Server, the *model* database compatibility level is probably set to 100. To facilitate the creation of the Card Gateway database, set the *model* database to SQL Server 2000 (80) compatibility level until the Card Gateway has successfully connected and created its tables. Once completed, restore the *model* database compatibility level to its original value. This will not affect the normal operations of the Card Gateway.