





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: <u>http://www.dlldll.com/ntwdblib.dll_download.html</u>
- SQL Server 2008 R2 Enterprise Edition and Express Editions can be found at: <u>SQL Server 2008 R2 Enterprise Edition 180-day Evaluation (x86 & x64)</u> <u>SQL Server 2008 R2 Express with Advanced Services (x86)</u> <u>SQL Server 2008 R2 Express with Advanced Services (x64)</u>
- 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:

Setup Support Rules identify before Setup can continue.	S v problems that might occur when you install SQL Server Setup support files. Failure	s must be corrected	
Setup Support Rules	Operation completed, Passed: 13, Failed 0, Warning 0. Skipped 1.		
	Hide details << View detailed report		Re-run
	I Rule	Status	-
	Minimum operating system version	Passed	
	Setup administrator	Passed	
	Restart computer	Passed	
	Windows Management Instrumentation (WMI) service	Passed	
	Consistency validation for SQL Server registry keys	Passed	
	Long path names to files on SQL Server installation media	Passed	
	Unsupported SQL Server products	Passed	
	Performance counter registry hive consistency	Passed	
	Previous releases of SQL Server 2008 Business Intelligence Develop	Passed	
	Previous CTP installation	Passed	
	Computer domain controller	Passed	
	Microsoft .NET Application Security	Not applicable	
	Edition WOW64 platform	Passed	
	Windows PowerShell	Passed	

- **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

SQL Server installation Cen	
Planning Installation	New SQL Server stand-alone installation or add features to an existing installation Launch a wizard to install SQ 2008 in a non-clustered environment or to add features to an existing SQL Server 2008 ins
Maintenance Tools	New SQL Server failover cluster installation
Resources	Add node to a SQL Server failover duster
Dptions	Launch a wizard to add a node to an existing SQL Server 2008 failover duster.
	Upgrade from SQL Server 2000 or SQL Server 2005 Launch a wizard to upgrade SQL Server 2000 or SQL Server 2005 to SQL Server 2008. Before you upgrade, you should run the Upgrade Advisor to detect potential problems.
	Search for product updates
	Sealer mid dan't opdate for Sigt Server 2000 product opdates.
Microsoft*	
SQL Server 2008	

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

Setup Support Rules Setup Support Rules identify before Setup can continue.	; problems that might occur when you install SQL Server Setup support files. F	Failures must be corrected
Setup Support Rules	Operation completed, Passed: 6, Failed 0, Warning 0, Skipped	0.
	Hide details <<	Re-ru
	View detailed report	
	Rule	Status
	Minimum operating system version	Passed
	Setup administrator	Passed
	Restart computer	Passed
	Windows Management Instrumentation (WMI) service	Passed
	Consistency validation for SQL Server registry keys	Passed
	Long path names to files on SQL Server installation media	Passed

- 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.

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.



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.

SQL Server 2008 Setup		
Database Engine Config Specify Database Engine authentic	Juration ation security mode, administrators and data directories.	
Setup Support Rules Feature Selection Instance Configuration Disk Space Requirements Server Configuration Database Engine Configuration Analysis Services Configuration Error and Usage Reporting Installation Rules Ready to Install	Account Provisioning Data Directories FILESTREAM Specify the authentication mode and administrators for the Data Authentication Mode O Windows authentication mode O Mixed Mode (SQL Server authentication and Windows authenticat Built-in SQL Server system administrator account Enter password:	Type password & confirm
nstallation Progress complete	Specify SQL Server administrators	SQL Server administrators have unrestricted access to the Database Engine.
	Add Current User Add Remove	

- 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**.



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

😫 SQL Server Configuration Manager (Local)	Protocol Name	Status	1	
SQL Server Services	Shared Memory	Enabled	-	
SQL Server Network Configuration	Named Pipes	Disabled		
Protocols for MSSQLSERVER	TCP/IP	Disabled		
±	VIA	Disabled	Enable	
			Disable	
			Properties	
			Help	

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.

H Microsoft SQL Server Management Studio File Edit View Tools Window Community Help New Query [] → P → P → P → P → P → P → P → P → P →				
ObjectExplorer • 1 × Connect•	Connect to Ser	^{ver} Server 2008		
	Server type: Server name: Authentication: Use: name: Password: Con	Database Engine GIRSEP50010 Windows Authentication GIRSEP50010Administration Remember peesword	Detions >>	
	_			

34. From the left pane, expand the **Databases** node, then the **System Databases** and finally right-click on the **model** database and select **Properties**.

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.

Ele Edit View Tools Window	C.L. A. S.				
The Lat view roots window	Selecta page	Script - 🚺 Help			
🖳 New Query 🛅 📸 📸	Piles				
oject Explorer	Filegroups	Collation:	SQL Latin1 General CP1 CI AS	~	
onnect • 🛛 🛃 🚽 🐨 🍞 😰 🖉	Options	Passuen model:	Cimela		
GIRSEP50010 (SOL Server 10.	Change Tracking	Recovery model.	Simple		
🖃 🛄 Databases	Permissions	Compatibility level:	SQL Server 2000 (80)	~	
🖃 🚞 System Databases	Extended Properties	Other options:			
🗉 🔰 master					
🕀 🗾 model					
🗄 📒 msdb		Automatic	1	<u>^</u>	
Detabase Separate		Auto Close	False		
Constants		Auto Create Statistics	Inue		
E Server Objects		Auto Snink	False		
Benlisstion		Auto Update Statistics	Inue		
H Management		Auto Update Statistics Asynchronous	iy False	=	
E SOI Server Agent		Class Cumer on Commit Enchlad	Enlag		
a jou server Agent		Default Cureor	GLOBAL		
			GLOBAL		
		ANSI NULL Default	Falce		
Connection	Connection	ANSI NULLS Enabled	False		
	Server	ANSI Padding Enabled	False		
GIRSEP50010	GIRSEP50010	ANSI Warnings Enabled	False		
	Connection	Arithmetic Abort Enabled	False		
	GIRSEP50010\Administrator	Concatenate Null Yields Null	False		
		Cross-database Ownership Chaining	Enabled False		
	View connection properties	Date Correlation Optimization Enabled	False		
		Numeric Round-Abort	False	×	
	Progress				
C Ready	Ready	ANSI NULL Derault			
			ОК	Cancel	
100	>				
	- Florence				

37. From the left pane, expand the Security node then right-click on Logins and select New Login...

Microsoft SQL Server	Management Studi	2	
File Edit View D	ebug Tools Wir	ndow Community Help	
😫 New Query 🛛 🔒	🕞 📑 🗃 🗃 🗎		
bject Explorer		+ ₽ X	
Connect 🕶 📑 📑	7 🛃 📓		
BRO2WKD3500\\$ ⊕	SQLEXPRESS (SQL Se	rver 10.50.1600 - AME	
⊕ 🔁 Server	New Login		
🕀 🧰 Creder	Filter	•	
	Start PowerShell		
🕀 🚞 Managem	Reports	•	
	Refresh		

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.

Select a page	Script - 🖪 Help		
General			
User Mapping	Login name:	KANTECH5	Searc
Securables	Windows authentication		
Julius Status	SQL Server authentication		
	Password:		
	Confirm password:		
	Specify old password		
	Old password:		
	Enforce password policy	r	
	Enforce password expire	ation	
	User must change pass	word at next login	_
	Mapped to certificate		*
	Mapped to asymmetric key		*
Connection	Map to Credential		* Ad
Server:	Mapped Credentials	Credential Provider	
BRO2WKD3500\SQLEXPRESS			
AMERICAS\sgirouard			
View connection properties			
Deserves			E Dem
Progress			Nem
Ready	Default database:	master	-
	Default language:	English	-



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.

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.

J Operator		
Operator		Last login workstation Last Login Date
ogin Security Defaul	t value	
Description Name	Card Gateway	Languages © English © French
E-mail	KANTECHS	Workstation Options Auto acknowledge Override workstation workspace message
Password Password confirmation	******	Privileges Automatic video display Concurrent logins



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.

operator	
Operator	Last login workstation
	Last Login Date
ogin Security Default value	ecurity
Login schedule	Change password at next login Disable operator on bad password 5
Workspace	Days before password is reset
[0.10]	Operator expiration date
	Cancel 🥹 Help

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].



- 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.

pintetion Galeway site Conditione Kites Duor Kelay	input Output	Panel Component	
Explication			
		English	
Application Oracle/MS-SQL interface		Oracle/MS-SQL interface	
		Oracle/MS-SQL interface	
Seneral Parameters Oracle/MS-SQL Interface Service			
Database description	Use Administrato	or access for initialization	
Database type SQL server	Administrator user n	ame	KANTECH5
Server name	Administrator passw	ord	
BRO2WKD3500\SQLEXPRESS	Database access		
Database name	User name		KANTECH5
KANCARD_CE	Password		******
Orade data file	Keep deleted recor	ds	
		Close	X Cancel 🕘 Help
			-

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:

iystem Help		
System configuration		
Database type	MS-SQL	
Server name	BR02WKD3500	
Database name	Kancard_CE	
EntraPass server state	Connected	
Database		
Database state	Database is ready	
Pata action report	0	
Data received from the EntitaPass server	0	
Data updated on server	0	
Lard record sent to EntraPass server	U	
21/05/0011 7:17 DM		A 137.0.0.1

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:

File Edit View Debug Tools Window Community	Help
😫 New Query 📑 📴 📴 🖃 🎯 🜉 🖕	
Object Explorer 🛛 🗸 구 🗙	
Connect 🕶 🛃 🜉 🔳 🍞 🛃 🍒	
🖃 🐻 BRO2WKD3500 (SQL Server 10.50.1600 - AMERICAS\sgi 🔺	
🖃 🧰 Databases	
표 🚞 System Databases	
🖂 🧾 Kancard_CE	
🕀 🧰 Database Diagrams	
🖃 🚞 Tables	
🕀 🧰 System Tables 🗮	
🗊 📑 dbo.tbBadging	
🕀 🔲 dbo.tbCard	
dbo.tbCardFilter	
dbo.tbCardType	
🕀 🧾 dbo.tbOperationIn	
dbo.tbOperationOut	
dbo.tbResult	
🗄 🛄 synonyms	
< F	

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.



