# Setting up the MS-SQL Card Gateway with EntraPass Corporate/Global

The purpose of this application note is to configure the MS-SQL Card Gateway using a MS-SQL Server in order to have it work with EntraPass Corporate Edition or EntraPass Global Edition.

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# Requirements:

- EntraPass Corporate Edition (version 3.10 and above) or EntraPass Global Edition (version 3.11 and above) installed.
- Oracle/MS-SQL Card interface option code registered and activated
- Oracle/MS-SQL Card interface must be installed on the MS-SQL server or a computer with a MS-SQL client.
- LAN connection with the EntraPass software, the MS-SQL Server and Oracle/MS-SQL Card interface.
- MS-SQL system administrator password.
- IT must have created the database in the Ms-SQL Server.

# Initial Setup:

# -DLL for 2005, compatibility mode

-Client components on card gateway computer

From the EntraPass workstation, under **Devices/EntraPass** application, choose the *Oracle/MS-SQL Interface* and go to the **Oracle/MS-SQL** interface tab. (see Fig 1)

- The **Database type** is the type of Database engine you will use. Note that if you are using the Oracle 9i or 10i you will need to select *Oracle 8*.
- The Server name is the PC where the MS-SQL/Oracle Server is located (BRO1WDK250/SQL\_SRV).
- The **Database name** is the name of the database in the MS-SQL/Oracle.
- The Oracle Data File is ONLY used when an Oracle database is used.
- Administrator access for initialization needs to be checked for the first time setup. Enter the Administrator User name and Password of the MS-SQL Server.
- The **Database Access** is the EntraPass account that will be used by the MS-SQL/Oracle database to connect to the EntraPass Server. Please note that this account cannot be used by any other Workstation. Also, it is recommended to set the account as an installer account.

		English	
		Oracle/MS-SQL interface	9
ntraPass application	×	French	
		Oracle/MS-SQL interface	3
Database description Database type SQL server SQL server BRO2WKD237\SQL_TEST	Use Administrat Administrator user n Administrator passwe Database access	or access for initialization — ame ord	50 ******
Database name	User name		KANTECH5
Oracle data file	Password		****
	Keep deleted record	ds	
			Cancel ? Help

Figure 1

Go on the PC where the Card Gateway is installed and start the *MS-SQL and Oracle Interface* application located on: *Start/Programs/EntraPass Corporate Edition/ MS-SQL and Oracle Interface/* for EntraPass Corporate edition or *Start/Programs/EntraPass Global Edition/ MS-SQL and Oracle Interface/* for EntraPass Global edition. Every time the application starts, it will copy the database from the EntraPass Server to the Card Gateway application. Once the transfer is complete the following window will close. (See Fig. 2)

Files to be copied	Source file	
25%	Card XG2	
Data to be transferred	Destination file	
93%	Card.XG2	

Figure 2

When the MS-SQL and Oracle Interface state is: *Database is ready;* it means that the Database is ready to be used. (See Fig. 3)

System Help			
System configuration			
Database type	MS-SQL		
Server name	BR02wKD082		
Database name	KANCARD1		
EntraPass Server state	Connected		
Database			
Database state	Database is ready		0
Transaction report			
Data received from the EntraPass Server	U		
Data updated on server	10		
Card record sent to EntraPass Server	3		
24/05/2006 5:38 PM kantech4		10.38.193.62	
	Figure 3		
	-		

Please note that the below information is to be used for MS-SQL software or a third-party software.

• In order to view the tables in the MS-SQL, Server open the Enterprise Manager located at: *Start/Programs/Microsoft SQL/*.

File Action View Tools Window Hel	p			
← → 🗈 🗷 🖁 🕹 🗡 🗃 🔂 🖆	2 米 \land 🖢 🛭 🖸 🔂			
Console Root	Tables 27 Items			
😑 🏢 Microsoft SQL Servers	Name /	vetom Tohlos do not e	hanna	reate Date
🖻 🕣 SQL Server Group	dtproperties	dbo S	ivstem	24/05/2006 4:35:191
🖃 🍈 (local) (Windows NT)	syscolumns	dho S	vstem	06/08/2000 1:29:12
🖃 🧱 Databases	syscomments	dbo S	vstem	06/08/2000 1:29:12
	T sysdepends	dbo S	vstem	06/08/2000 1:29:12
E U KANCARD1	sysfilegroups	dbo S	vstem	06/08/2000 1:29:12
Ulagrams	I sysfiles	dbo S	ystem	06/08/2000 1:29:12
And Views	sysfiles1	dbo S	vstem	06/08/2000 1:29:12
Stored Procedures	sysforeignkeys	dbo S	vstem	06/08/2000 1:29:12
Users	sysfulltextcatalogs	dbo S	ystem	06/08/2000 1:29:12
Roles	sysfulltextnotify	dbo S	ystem	06/08/2000 1:29:12
Rules	i sysindexes	dbo S	ystem	06/08/2000 1:29:12
- E Defaults	sysindexkeys	dbo S	ystem	06/08/2000 1:29:12
🔤 🛃 User Defined Data Type	s sysmembers	dbo S	ystem	06/08/2000 1:29:12
Ser Defined Functions	sysobjects	dbo S	ystem	06/08/2000 1:29:12
🗷 🔰 master	syspermissions	dbo S	ystem	06/08/2000 1:29:12
🕀 📙 model	sysproperties	dbo S	ystem	06/08/2000 1:29:12
🖭 🚺 msdb	sysprotects	dbo S	ystem	06/08/2000 1:29:12
	sysreferences	dbo S	ystem	06/08/2000 1:29:12
H pubs	i systypes	dbo S	ystem	06/08/2000 1:29:12
Data Transformation Services	i sysusers	dbo S	ystem	06/08/2000 1:29:12
Mapagement	tbBadging	dbo L	lser	24/05/2006 4:29:24
	tbCard	dbo t	lser	24/05/2006 4:29:24
🗄 🧰 Security	tbCardAccessGroup	dbo L	lser	24/05/2006 4:29:24
🗉 🦲 Support Services	tbCardType	dbo L	lser	24/05/2006 4:29:24
😟 🧰 Meta Data Services	tbOperationIn	dbo L	lser	24/05/2006 4:19:54
	tbOperationOut	dbo L	lser	24/05/2006 4:29:24
	tbResult	dbo L	lser	24/05/2006 4:29:24 1

This is an example of how the MsSql database will look like.

# Figure 4

In order to prevent database corruption, the MS-SQL tables should not be modified directly; queries and third party software must be used to make changes.

- The table **TbOperationIn** will always be empty if everything is communicating and this table will be constantly be scanned by the Card Gateway.
- The table **TbOperationOut** will list the valid create/modify/delete of the cards. This information is sent by the server. The table is emptied every time the MS-SQL/Oracle application or the EntraPass Server are communicating with each other.
- The table **TbCard** holds all the card information. This table is not scanned by the Card gateway, it is only updated.
- The table tbResult holds a description of all the valid and invalid commands. The table is emptied every time the MS-SQL/Oracle application or the EntraPass Server are communicating with each other.



Note that if the communication fails, the data in the table **tbOperationIn** will be buffered until the communication is restored. Please note that the **pkIn** field MUST be incremental Duplicate **pkIn** rows will not be accepted in the table, thus causing the information to be lost.

#### Insertion commands

In order to make a modification to the cards using the MS-SQL/Oracle database, we must use "insert commands" to insert new rows in the **tbOperationIn** table. This table will be scanned and then will update the EntraPass database. One of the most important fields is the *CardOperation* field. This field will determine what action the card gateway will perform on the card.

Possible *CardOperation* values:

Value	Description
0	This request will allow creating a new card if the card does not exist or to modify the card if the card exists. In the two cases, at the end of the transaction, the card will contain only Information specified in the request .All the previous information will be deleted.
1	This request will allow erasing a card if this it exists. If it does not exist the system will add a log to indicate that the request of deleting the card failed because the card does not exists.
2	This request will allow creating a new card if the card does not exist or to modify the card if the card exists. Only fields in the request are updated, the remaining fields are not erased. If the card does not exist then it will be created
3	This command will allow creating a card using the information of an existing one. Following the operation, the original card will be deleted. It will be therefore possible, to update fields using this operation. If the original card does not exist then no action will be taken and the system will generate an error.
4	This command will allow creating a card using the information of an existing one. Following the operation, the original card will not be deleted. It will be therefore possible, to update fields using this operation. If the original card does not exist then no action will be taken and the system will generate an error.



Note: We must assign a unique numeric value to the field pkIn. The value itself does not matter as long as the software is communicating.

#### Card Gateway Test application

There is a test application that can be used to enter, modify or delete cards. This application may be used to show the SQL query that is needed to perform the task. In order to start the *Test MS-SQL and Oracle application*, go to *Start/Programs/EntraPass Global Edition/ MS-SQL and Oracle Interface*/ for Global Edition or *Start/Programs/EntraPass Corporate Edition/ MS-SQL and Oracle Interface*/ for Corporate

- The Test Application requires to be logged with the settings as the MS-SQL/Oracle card gateway. The following settings should be entered:
  - The Driver name is the type of Database engine you will use. Note that if you are using the Oracle 9i or 10i, you need to choose Oracle 8.
  - The Server name is the PC where the MS-SQL/Oracle application is located
  - The Database name is the name of the database in the MS-SQL/Oracle.
  - The User name and Password is the EntraPass account used to login the Card Gateway.

Driver name	MS-SQL 💌
Server name	bro2wkd082
Database name	KANCARD1
User name	KANTECH3
Password	
🗸 ок	X Cancel

From the **Oracle/MS-SQL Interface Test program** we can create, delete and modify any card. We can also assign badges, access levels and card types but we cannot create new badges, access levels or card types. As in Figure 6, this is an example of Test Application

Oracle/MS-SQL Interface Test program	
Operation Select language Help	
Card number	Operation
General Access level Miscellaneous Comment Usage	Picture
Card information #1	Card information #6
Card information #2	Card information #7
Card information #3	Card information #8
Card information #4	Card information #9
Card information #5	Card information #10
New transaction	Save Scancel Refresh

Figure 6



Note: This application is for testing purposes only.

# Advanced query programming

The below program should be used as for troubleshooting only since there is no error checking. As long as the query's syntax is correct, MS-SQL will accept the command. This should be used at the user's discretion and with an IT person present.

We may also use the MS-SQL interface to insert cards. From the MS-SQL side, once the **Enterprise Manager** is open, make sure you highlight the proper database and then go to Tools/SQL Query analyzer. A new program will open. You must make sure the title bar of the text window says the proper database name otherwise you are working on the wrong database. (See Figure 7)



From this window we will be able to write SQL queries and execute them. Once the query is entered, press on the Play button on the main window. According to the amount of inserted commands, you typed you should see "(X row(s) affected)". (See Figure 8)

Eile Edit	Query <u>I</u> ools <u>W</u> indow <u>H</u> elp	ZWKDU8Z.	Execute o	uery button	·· [=][[ _
] <b>* ≥</b> [	1 🗊   X 🖻 🛍 🗹 🖊	<b>N</b>   🗖	• •	- 10	KANCAR
INSERT (pkIn, VALUES (1, 0,	INTO tbOperationIn cardOperation, card 'ff:12345','test')	number,	username)		
<					
(1 row(s)	affected)				
(1 row(s)	affected)				
(1 row(s)	affected) Messages	KANCARD1	0:00:00	0 rows	Lo 1. Col

Figure 8

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#### Additional information

# www.EntraPASS.com

Making compatible an SQL 2005 with card gateway

Voici tel que convenu les détails du RDP 9600 qui explique comment faire fonctionner SQL 2005 avec Card Gateway :

1- Installer MS SQL Server Express 2005

2- Installer EPGE et Card Gateway

3- Configurer l'application Card Gateway dans Workstation

4- Remarquer le 1er message d'erreur : "Vendor initialization failed. Cannot load an IDAPI service library. File : NTWDBLIB.DLL. AliasL MasterDB"

5- Copier manuellement le fichier "NTWDBLIB.DLL" (trouvé dans google) dans le dossier

C:\Windows\System32

6- Remarquer le 2e message d'erreur : "Cannot locate or connect to SQL server. Unable to connect : SQL Server is unavailable or does not exist. Unable to connect : SQL Server does not exist or network. General SQL error."

7- Modifier la BD Kancard et la mettre en mode compatible 2000

8- Voir que les tables se créent