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EntraPASS
Specifications Manual
Oracle / MS-SQL HR

Details and Function

In an access control systems context, the integrity of the database is a main concern. That is why the EntraPass Global and Corporate are not giving a direct access to the system's database. Added to this, the links between each component make it so hard to follow and understand that the concern would be almost impossible for an end-user to do any kind of modifications.
In order to makes things easier, we developed an external interface where the customer will be able to make modifications on the card's database through an Oracle or MS-SQL tables. The interface used is named the Card Gateway, that application may be installed and run on the server's computer.
Please find below the structure schematic.

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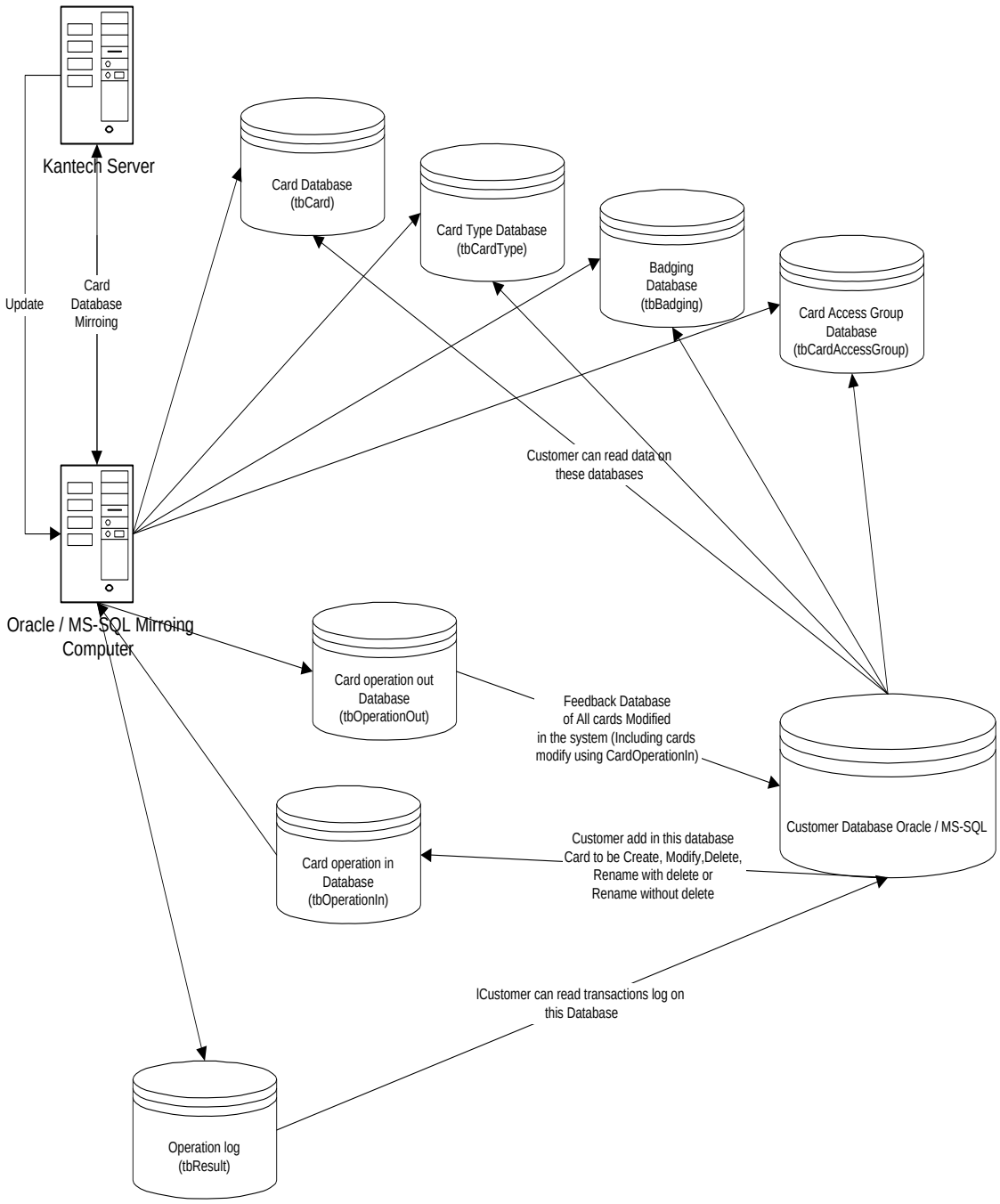
Structure schematic Of Oracle / MS-SQL CardGateway



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Relation between tables in the Database :

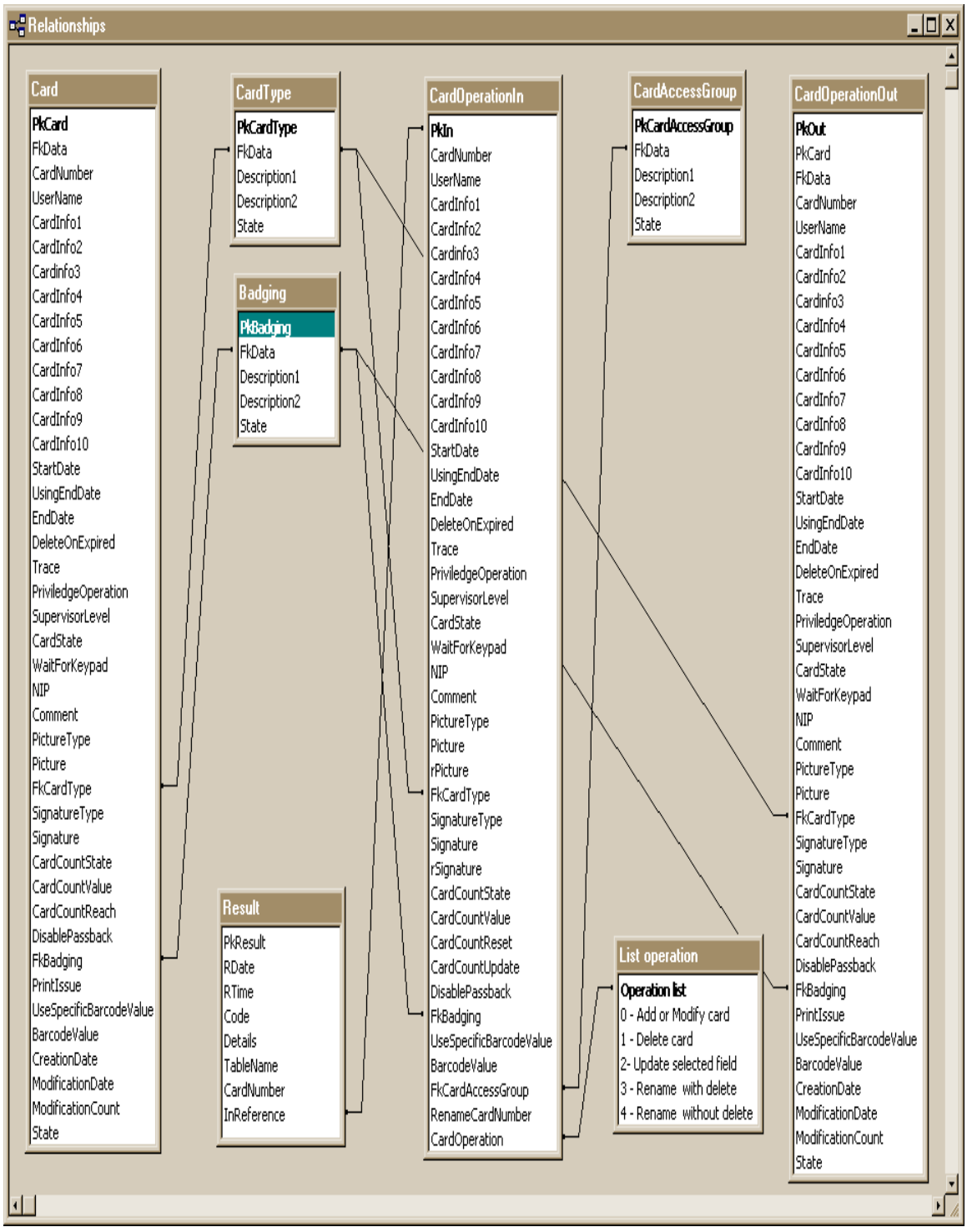

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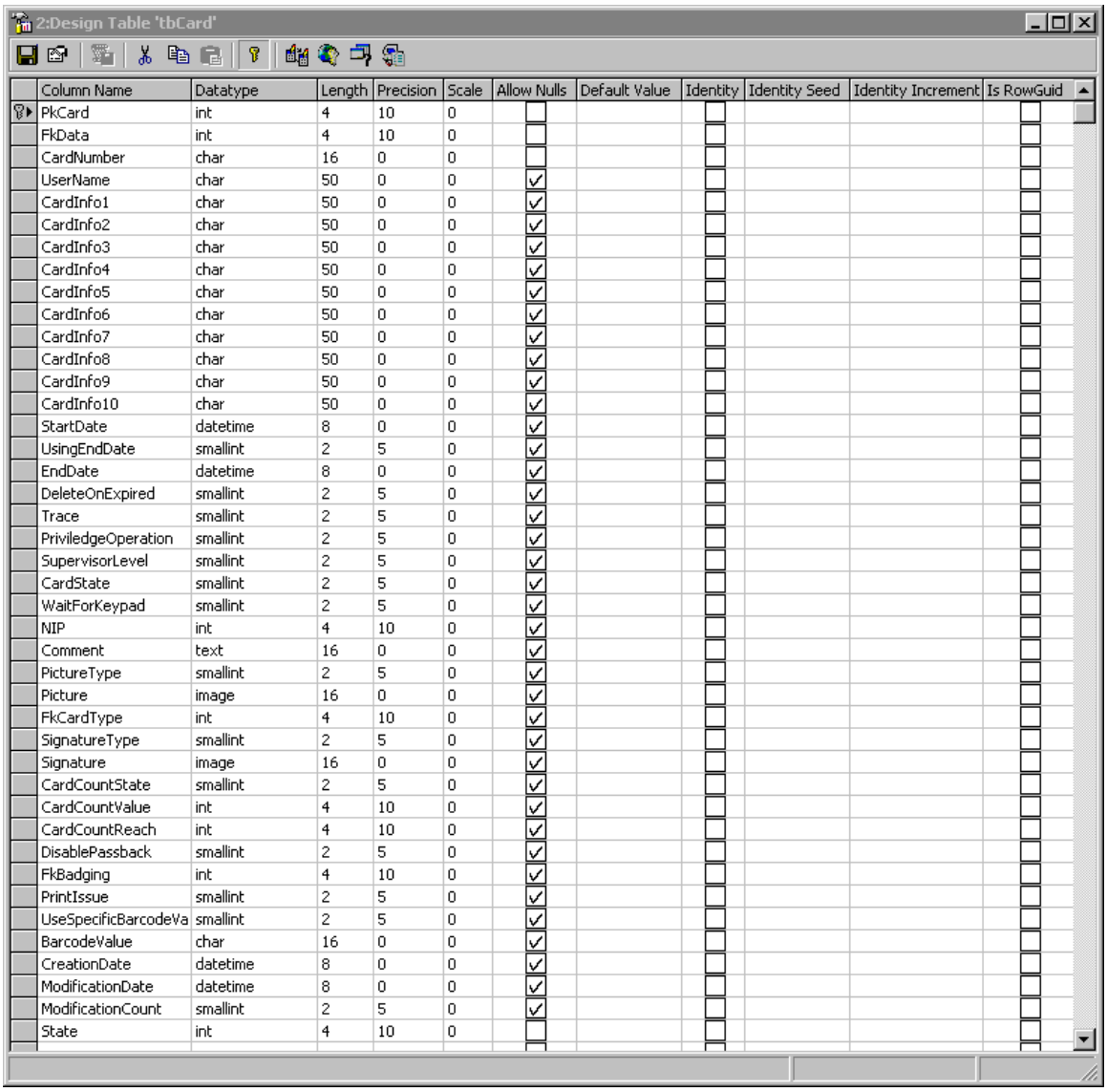
Table Structure

Structure : Card's table


2:Design Table 'tbCard'

Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkCard	int	4	10	0	☐		☐			☐
FkData	int	4	10	0	☐		☐			☐
CardNumber	char	16	0	0	☐		☐			☐
UserName	char	50	0	0	☑		☐			☐
CardInfo1	char	50	0	0	☑		☐			☐
CardInfo2	char	50	0	0	☑		☐			☐
CardInfo3	char	50	0	0	☑		☐			☐
CardInfo4	char	50	0	0	☑		☐			☐
CardInfo5	char	50	0	0	☑		☐			☐
CardInfo6	char	50	0	0	☑		☐			☐
CardInfo7	char	50	0	0	☑		☐			☐
CardInfo8	char	50	0	0	☑		☐			☐
CardInfo9	char	50	0	0	☑		☐			☐
CardInfo10	char	50	0	0	☑		☐			☐
StartDate	datetime	8	0	0	☑		☐			☐
UsingEndDate	smallint	2	5	0	☑		☐			☐
EndDate	datetime	8	0	0	☑		☐			☐
DeleteOnExpired	smallint	2	5	0	☑		☐			☐
Trace	smallint	2	5	0	☑		☐			☐
PriviledgeOperation	smallint	2	5	0	☑		☐			☐
SupervisorLevel	smallint	2	5	0	☑		☐			☐
CardState	smallint	2	5	0	☑		☐			☐
WaitForKeypad	smallint	2	5	0	☑		☐			☐
NIP	int	4	10	0	☑		☐			☐
Comment	text	16	0	0	☑		☐			☐
PictureType	smallint	2	5	0	☑		☐			☐
Picture	image	16	0	0	☑		☐			☐
FkCardType	int	4	10	0	☑		☐			☐
SignatureType	smallint	2	5	0	☑		☐			☐
Signature	image	16	0	0	☑		☐			☐
CardCountState	smallint	2	5	0	☑		☐			☐
CardCountValue	int	4	10	0	☑		☐			☐
CardCountReach	int	4	10	0	☑		☐			☐
DisablePassback	smallint	2	5	0	☑		☐			☐
FkBadging	int	4	10	0	☑		☐			☐
PrintIssue	smallint	2	5	0	☑		☐			☐
UseSpecificBarcodeVa	smallint	2	5	0	☑		☐			☐
BarcodeValue	char	16	0	0	☑		☐			☐
CreationDate	datetime	8	0	0	☑		☐			☐
ModificationDate	datetime	8	0	0	☑		☐			☐
ModificationCount	smallint	2	5	0	☑		☐			☐
State	int	4	10	0	☐		☐			☐

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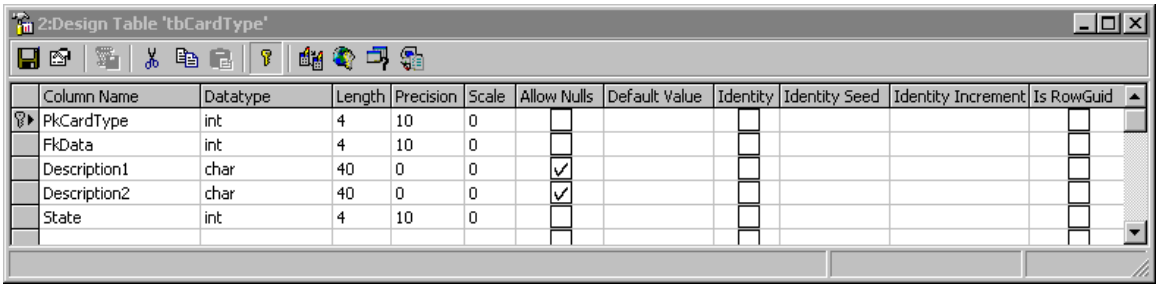
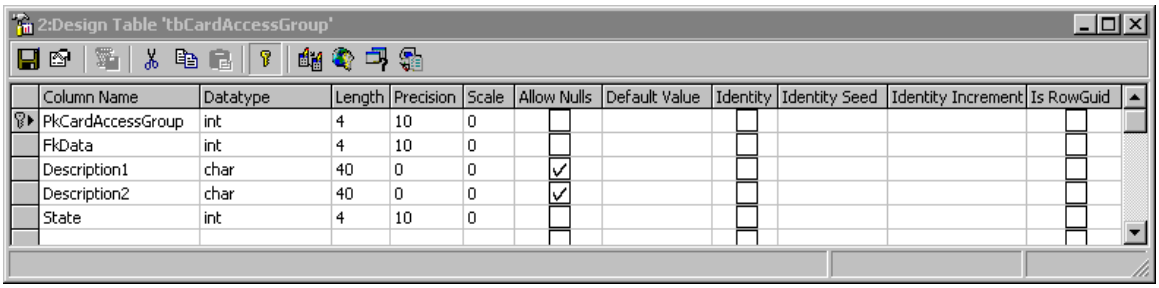
Structure : Card type table



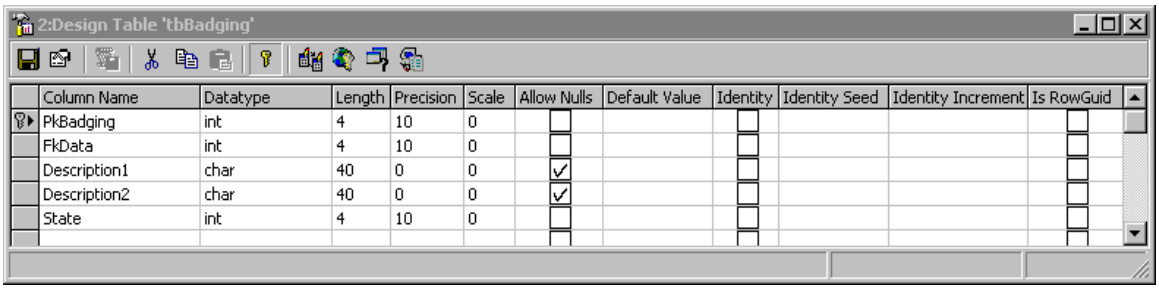
Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkCardType	int	4	10	0						
FkData	int	4	10	0						
Description1	char	40	0	0	✓					
Description2	char	40	0	0	✓					
State	int	4	10	0						

Structure : Access level group table



Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkCardAccessGroup	int	4	10	0						
FkData	int	4	10	0						
Description1	char	40	0	0	✓					
Description2	char	40	0	0	✓					
State	int	4	10	0						

Structure : Badging table



Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkBadging	int	4	10	0						
FkData	int	4	10	0						
Description1	char	40	0	0	✓					
Description2	char	40	0	0	✓					
State	int	4	10	0						

Those four tables are updated in real-time. They contain the same information as system tables.

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Structure : Table to add, delete or modify a card(Operation on cards)

2:Design Table 'tbOperationIn'

Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkIn	int	4	10	0						
CardNumber	char	16	0	0						
UserName	char	50	0	0	✓					
CardInfo1	char	50	0	0	✓					
CardInfo2	char	50	0	0	✓					
CardInfo3	char	50	0	0	✓					
CardInfo4	char	50	0	0	✓					
CardInfo5	char	50	0	0	✓					
CardInfo6	char	50	0	0	✓					
CardInfo7	char	50	0	0	✓					
CardInfo8	char	50	0	0	✓					
CardInfo9	char	50	0	0	✓					
CardInfo10	char	50	0	0	✓					
StartDate	datetime	8	0	0	✓					
UsingEndDate	smallint	2	5	0	✓					
EndDate	datetime	8	0	0	✓					
DeleteOnExpired	smallint	2	5	0	✓					
Trace	smallint	2	5	0	✓					
PriviledgeOperation	smallint	2	5	0	✓					
SupervisorLevel	smallint	2	5	0	✓					
CardState	smallint	2	5	0	✓					
WaitForKeypad	smallint	2	5	0	✓					
NIP	int	4	10	0	✓					
CardComment	text	16	0	0	✓					
PictureType	smallint	2	5	0	✓					
Picture	image	16	0	0	✓					
FkCardType	int	4	10	0	✓					
SignatureType	smallint	2	5	0	✓					
Signature	image	16	0	0	✓					
CardCountState	smallint	2	5	0	✓					
CardCountValue	int	4	10	0	✓					
CardCountReset	smallint	2	5	0	✓					
CardCountUpdate	smallint	2	5	0	✓					
DisablePassback	smallint	2	5	0	✓					
FkBadging	int	4	10	0	✓					
UseSpecificBarcodeVa	smallint	2	5	0	✓					
BarcodeValue	char	16	0	0	✓					
FkCardAccessGroup	int	4	10	0	✓					
RenameCardNumber	char	16	0	0	✓					
CardOperation	int	4	10	0						

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Structure : table that gives a return on any card modification

2:Design Table 'tbOperationOut'

Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
PkOut	int	4	10	0						
PkCard	int	4	10	0						
FkData	int	4	10	0						
CardNumber	char	16	0	0						
UserName	char	50	0	0	✓					
CardInfo1	char	50	0	0	✓					
CardInfo2	char	50	0	0	✓					
CardInfo3	char	50	0	0	✓					
CardInfo4	char	50	0	0	✓					
CardInfo5	char	50	0	0	✓					
CardInfo6	char	50	0	0	✓					
CardInfo7	char	50	0	0	✓					
CardInfo8	char	50	0	0	✓					
CardInfo9	char	50	0	0	✓					
CardInfo10	char	50	0	0	✓					
StartDate	datetime	8	0	0	✓					
UsingEndDate	smallint	2	5	0	✓					
EndDate	datetime	8	0	0	✓					
DeleteOnExpired	smallint	2	5	0	✓					
Trace	smallint	2	5	0	✓					
PriviledgeOperation	smallint	2	5	0	✓					
SupervisorLevel	smallint	2	5	0	✓					
CardState	smallint	2	5	0	✓					
WaitForKeypad	smallint	2	5	0	✓					
NIP	int	4	10	0	✓					
CardComment	text	16	0	0	✓					
PictureType	smallint	2	5	0	✓					
Picture	image	16	0	0	✓					
FkCardType	int	4	10	0	✓					
SignatureType	smallint	2	5	0	✓					
Signature	image	16	0	0	✓					
CardCountState	smallint	2	5	0	✓					
CardCountValue	int	4	10	0	✓					
CardCountReach	int	4	10	0	✓					
DisablePassback	smallint	2	5	0	✓					
FkBadging	int	4	10	0	✓					
PrintIssue	smallint	2	5	0	✓					
UseSpecificBarcodeVa	smallint	2	5	0	✓					
BarcodeValue	char	16	0	0	✓					
CreationDate	datetime	8	0	0	✓					
ModificationDate	datetime	8	0	0	✓					
ModificationCount	smallint	2	5	0	✓					
State	int	4	10	0						

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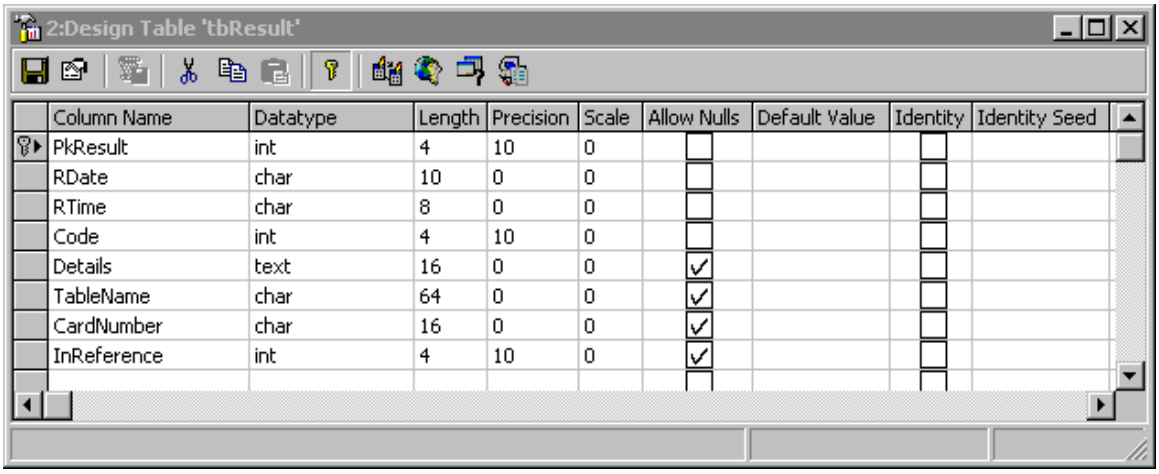
Structure : log Table



Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed
PkResult	int	4	10	0	☐		☐	
RDate	char	10	0	0	☐		☐	
RTime	char	8	0	0	☐		☐	
Code	int	4	10	0	☐		☐	
Details	text	16	0	0	☑		☐	
TableName	char	64	0	0	☑		☐	
CardNumber	char	16	0	0	☑		☐	
InReference	int	4	10	0	☑		☐	

This table will contain the result of all the transactions in the system. It will allow the system administrator to be sure that all transactions were executed correctly. The field InReference point to the fields PkIn in the operation table.

So when you do any operation in the tbOperationIn table or in the EntraPass Corporate Edition, the result is posted in tbresult.
If there is an error in the query result, you will get a number in the "code" field and the details about the error in the "detail" field , for example:

-Adding a card with a card number of "00:00000" will show you the error "Invalid card number" in the "detail" field and 1002 for the "code" field.

-Deleting a card that doesn't exist gives the error "warning card already deleted" with a code 1009 Adding or modifying a card with wrong cardtype gives error, "Invalid field component:FKcardType" and a Code 1000..

If there is no error in the query, the "code" field will be 0 and in "detail" you'll see the changes that you did in the system , for example : "Updating database entry", "Card modified"
The "tbOperationOut" table will show the changes that you are doing in the EntraPass Software and the tbOperationIn..
All those tables (tbOperationOut,tbOperationIn,tbResult) become empty on a new session.

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Updating the card table :

Updating cards using cardgateway is based on the field ***CardOperation*** in table **tbOperationIn**.
The possible values of the field ***CardOperation***:

0 : Updating all the fields of the card.

Example :
This operation is realized while specifying the value 0 for the field CardOperation

INSERT INTO tbOperationIn (PkIn, CardNumber, UserName, CardInfo1, CardOperation)
VALUES (9999, '11:00001', 'Gerald Lemieux', 'Montreal', 0)

This request will allow creating the card 11: 00001 if this one does not exist or to modify this one 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 informations will be deleted.

1 : Deleting existing card

Example :
This operation is realized while specifying the value 1 for the field CardOperation

INSERT INTO tbOperationIn (PkIn, CardNumber, CardOperation)
VALUES (12345, '11:00001', 1)

This request will allow erasing the card 11: 00001 if this one 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 : Selective update of card

Example :
This operation is realized while specifying the value 2 for the field CardOperation

INSERT INTO tbOperationIn (PkIn, CardNumber, CardInfo1, CardOperation)
VALUES (3333, '11:00001', 'Montreal, Quebec', 2)

This function is comparable with the option 0 with the only difference, fields having a container are updated. In this example only the field CardInfo1 will be changed. If the card does not exist then it will be created.

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3 : Changing card number and deletion of the original card.

Example :

This operation is realized while specifying the value 3 for the field CardOperation

INSERT INTO tbOperationIn (PkIn, CardNumber, RenameCardNumber, CardOperation)
VALUES (3312, '11:00001', '11:00002', 3)

This command will allow creating a card using the information of an existing one. Following the operation, the original card will be deleted. This function acts as the function 2. 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 : Changing card number without erasing the original card.

Example :

This operation is realized while specifying the value 4 for the field CardOperation

INSERT INTO tbOperationIn (PkIn, CardNumber, RenameCardNumber, CardOperation)
VALUES (3312, '11:00001', '11:00002', 4)

This command will allow creating a card using the information of an existing one. Following the operation, the original card will be preserved intact. This function acts as the function 2. It will be therefore possible, to update fields. If the original card does not exist then no action will be taken and the system will generate an error.

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Migration from version < 3.11 to version >=3.11

To execute an easy migration of the version #1 to the version 3 of MS-SQL/Oracle here is the list of the modifications that could have an impact on the application of the customer.

Table TransactionIn is now OperationIn

- The primary key of the table OperationIn is PkIn
- The PkIn is nomore an auto-incremental field, the customer has to be sure to put a valid value
- The column Allow Nulls specifies the fields that are nullable or not
- The new fields are identified in green.
- We should use the field RenameCardNumber instead of UserName when we want to make a SaveAs of a card.
- The CardTransaction field is replaced by the CardOperation field
- Functionality of the new fields
  - PriviledgeOperation, Value 0 (No), 1 (Yes), this will replace the functionality associated previously to the access level 16 (only EntraPass Global)
  - NIP, Value 0 to 999999, NIP programmable (Only EntraPass Corporate)
  - SignatureType, Value 0 (No signature), 1 (BMP), 2 (EPS), 3 (GIF), 4 (JPG), 5 (PCX), 6 (PNG), 7 (TGA), 8 (TIF), to identify the format of the signature file
  - Signature, BLOB, file containing picture in relation with the fields SignatureType
  - CardCountState, Value 0 (No), 1 (Yes)
  - CardCountValue, Value 0 to 999999
  - CardCountReset, Value 0 (No), 1 (Yes)
  - CardCountUpdate, Value 0 (No), 1 (Yes), modification or not of CardCountValue value
  - DisablePassback, Value 0 (No), 1 (Yes)
  - FkBadging, Pointer to the field FkData in the table Badging
  - UseSpecificBarcode, CardNumber (0), BarcodeValue (1), CardInfo1 (2), CardInfo2 (3), CardInfo3 (4), CardInfo4 (5), CardInfo5 (6), CardInfo6 (7), CardInfo7 (8), CardInfo8 (9), CardInfo9 (10), CardInfo10 (11)
  - BarcodeValue, character, used if UseSpecificBarcode = 1

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2:Design Table 'tbOperationIn'

	Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
▶	PkIn	int	4	10	0	☐		☐			☐
	CardNumber	char	16	0	0	☐		☐			☐
	UserName	char	50	0	0	☑		☐			☐
	CardInfo1	char	50	0	0	☑		☐			☐
	CardInfo2	char	50	0	0	☑		☐			☐
	CardInfo3	char	50	0	0	☑		☐			☐
	CardInfo4	char	50	0	0	☑		☐			☐
	CardInfo5	char	50	0	0	☑		☐			☐
	CardInfo6	char	50	0	0	☑		☐			☐
	CardInfo7	char	50	0	0	☑		☐			☐
	CardInfo8	char	50	0	0	☑		☐			☐
	CardInfo9	char	50	0	0	☑		☐			☐
	CardInfo10	char	50	0	0	☑		☐			☐
	StartDate	datetime	8	0	0	☑		☐			☐
	UsingEndDate	smallint	2	5	0	☑		☐			☐
	EndDate	datetime	8	0	0	☑		☐			☐
	DeleteOnExpired	smallint	2	5	0	☑		☐			☐
	Trace	smallint	2	5	0	☑		☐			☐
	PriviledgeOperation	smallint	2	5	0	☑		☐			☐
	SupervisorLevel	smallint	2	5	0	☑		☐			☐
	CardState	smallint	2	5	0	☑		☐			☐
	WaitForKeypad	smallint	2	5	0	☑		☐			☐
	NIP	int	4	10	0	☑		☐			☐
	CardComment	text	16	0	0	☑		☐			☐
	PictureType	smallint	2	5	0	☑		☐			☐
	Picture	image	16	0	0	☑		☐			☐
	FkCardType	int	4	10	0	☑		☐			☐
	SignatureType	smallint	2	5	0	☑		☐			☐
	Signature	image	16	0	0	☑		☐			☐
	CardCountState	smallint	2	5	0	☑		☐			☐
	CardCountValue	int	4	10	0	☑		☐			☐
	CardCountReset	smallint	2	5	0	☑		☐			☐
	CardCountUpdate	smallint	2	5	0	☑		☐			☐
	DisablePassback	smallint	2	5	0	☑		☐			☐
	FkBadging	int	4	10	0	☑		☐			☐
	UseSpecificBarcodeVa	smallint	2	5	0	☑		☐			☐
	BarcodeValue	char	16	0	0	☑		☐			☐
	FkCardAccessGroup	int	4	10	0	☑		☐			☐
	RenameCardNumber	char	16	0	0	☑		☐			☐
	CardOperation	int	4	10	0	☐		☐			☐
						☐		☐			☐

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Table TransactionOut is OperationOut

- The primary key of the OperationOut table is PkOut
- The field PkOut is nomore auto-incremental
- The column Allow Nulls specifies the fields are nullable or not
- The new fields are identified in green

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2:Design Table 'tbOperationOut'

	Column Name	Datatype	Length	Precision	Scale	Allow Nulls	Default Value	Identity	Identity Seed	Identity Increment	Is RowGuid
▶	PkOut	int	4	10	0	☐		☐			☐
	PkCard	int	4	10	0	☐		☐			☐
	FkData	int	4	10	0	☐		☐			☐
	CardNumber	char	16	0	0	☐		☐			☐
	UserName	char	50	0	0	☑		☐			☐
	CardInfo1	char	50	0	0	☑		☐			☐
	CardInfo2	char	50	0	0	☑		☐			☐
	CardInfo3	char	50	0	0	☑		☐			☐
	CardInfo4	char	50	0	0	☑		☐			☐
	CardInfo5	char	50	0	0	☑		☐			☐
	CardInfo6	char	50	0	0	☑		☐			☐
	CardInfo7	char	50	0	0	☑		☐			☐
	CardInfo8	char	50	0	0	☑		☐			☐
	CardInfo9	char	50	0	0	☑		☐			☐
	CardInfo10	char	50	0	0	☑		☐			☐
	StartDate	datetime	8	0	0	☑		☐			☐
	UsingEndDate	smallint	2	5	0	☑		☐			☐
	EndDate	datetime	8	0	0	☑		☐			☐
	DeleteOnExpired	smallint	2	5	0	☑		☐			☐
	Trace	smallint	2	5	0	☑		☐			☐
	PriviledgeOperation	smallint	2	5	0	☑		☐			☐
	SupervisorLevel	smallint	2	5	0	☑		☐			☐
	CardState	smallint	2	5	0	☑		☐			☐
	WaitForKeypad	smallint	2	5	0	☑		☐			☐
	NIP	int	4	10	0	☑		☐			☐
	CardComment	text	16	0	0	☑		☐			☐
	PictureType	smallint	2	5	0	☑		☐			☐
	Picture	image	16	0	0	☑		☐			☐
	FkCardType	int	4	10	0	☑		☐			☐
	SignatureType	smallint	2	5	0	☑		☐			☐
	Signature	image	16	0	0	☑		☐			☐
	CardCountState	smallint	2	5	0	☑		☐			☐
	CardCountValue	int	4	10	0	☑		☐			☐
	CardCountReach	int	4	10	0	☑		☐			☐
	DisablePassback	smallint	2	5	0	☑		☐			☐
	FkBadging	int	4	10	0	☑		☐			☐
	PrintIssue	smallint	2	5	0	☑		☐			☐
	UseSpecificBarcodeVa	smallint	2	5	0	☑		☐			☐
	BarcodeValue	char	16	0	0	☑		☐			☐
	CreationDate	datetime	8	0	0	☑		☐			☐
	ModificationDate	datetime	8	0	0	☑		☐			☐
	ModificationCount	smallint	2	5	0	☑		☐			☐
	State	int	4	10	0	☐		☐			☐

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Setting for the Card Gateway interface - MSSQL(ORACLE) – is done in 2 steps

1. The configuration of the card gaetway setting is done from a workstation.
   - We need to indicate the MS-SQL (oracle) server's name
   - We need to indicate in which manner we will access the MS-SQL (Oracle) server. If the field "Use the SQL administrator's password" is not checked, the customer needs to program a user name = "kantech with the password" = kantech in the SQL server. If it is checked, the customers needs to provide the user name and the password of an existing administrator that have access to the SQL server. This will enable the feature where the Kantech application will entered his own user name "KANTECH" and his own password "KANTECH" in the SQL server.

2. Configuring the MS-SQL server (ORACLE)
   - With the case where the field « use the SQL administrator 's password » is not checked, the customer will need to :
     1. Do a login (as administrator) on his server
     2. Create a database that have the « KANCARD » as a name.
     3. Create a user that have a KANTECH user name and a KANTECH password.
     4. Assign the OWNER user right to that user.

3. If you are using an Oracle database, make sure to select the correct server version from the workstation configuration (V7.3 or V8) as the BDE version will change. ***If the wrong version is selected the interface may not connect to the Oracle database.***

NB :
Once the user of the database is created , the checkbox « use the SQL administrator's password « is useless

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