CPR BROKER

Installation and setup

MAGENTA s

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INTRODUCTION

This document will describe how to install CPR Broker.

CPR Broker includes two parts, the CPR Broker and the Event Broker. The installation package installs both.

Before you begin, please make sure you have the requirement listed in the chapter System Requirements and also the information in chapter Needed information

Next, you can see the chapter Installing CPR Brokerfor details.

After the installation finishes, some configuration steps are necessary. See the chapter *Configuring CPR Broker* for details.

1SYSTEM REQUIREMENTS

Windows 2003 or Windows 2008 with IIS installed. Windows XP/Vista/7 with IIS installed will work for demonstration purposes but not for production due to the 10 concurrent connections limit these operating system impose.

For Windows 2008 you need to make sure that you have the *IIS 6 Management Compatibility* Role Service for *Web Server (IIS)* Role installed, as well as - of course - the *Web Server (IIS)* Role itself. You should also install the *.NET 3.5.1* Feature via *Server Manager.*

SQL Server 2005 (or SQL Server 2008).

.NET Framework version 3.5 SP1.

Any computer capable of running the above software will also be capable of running CPR Broker.

2NEEDED INFORMATION

You will need to have some information before you install CPR Broker. You will also need to make a few decisions for the names of database and web server entries.

2.1Windows

You will need a windows account that have administrative rights on the machine you are installing on.

2.2Web

CPR Broker can be installed as a root site (on Windows 2003 and 2008 only) or as a virtual directory to an existing root site. You need to decide on names for CPR Broker and Event Broker web sites (or virtual directories).

If you want to install CPR Broker as a root site (which is what is recommended) you must prepare a DNS record to point to the web server before beginning the installation. The installation program does not create this DNS record for you. You can do that locally by editing the hosts file, usually located at *c:\WINDOWS\system32\drivers\etc\hosts*

2.3Database

You need to know the machine name and server instance of the SQL Server instance that you plan to use for the broker. You need to have access to instance. The account you use must be a member of the sysadmin role (used only during the installation to create the database).

You need to decide the database names that you plan to use. The suggestion is CprBroker and EventBroker, but you can use whatever names you want.

You should also determine the login information that you want the broker to use in order to access the database. The installer can create it for you.

2.4Data providers

To configure CPR Broker after installation, you need information about how to connect to its data providers. Please refer to the section Data Providers for more details.

3INSTALLING CPR BROKER

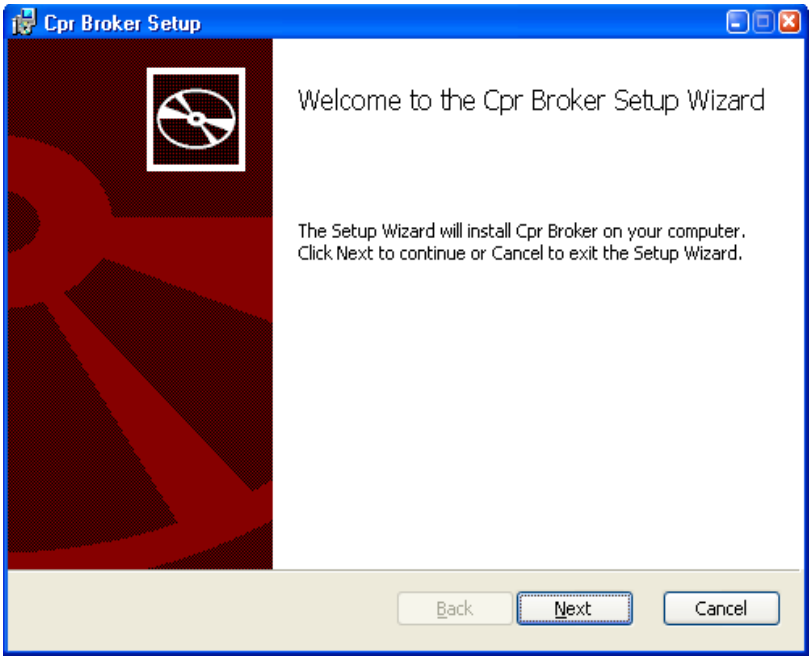
Copy the installer zip package to the computer with *IIS* installed. Unzip the package.

You can install CPR Broker using a wizard, or -if you know what you are doing- by a silent installation via the command line.

3.1Using the installation wizard

Double-click InstallCprBrokerWix.msi to launch and click *Next*.

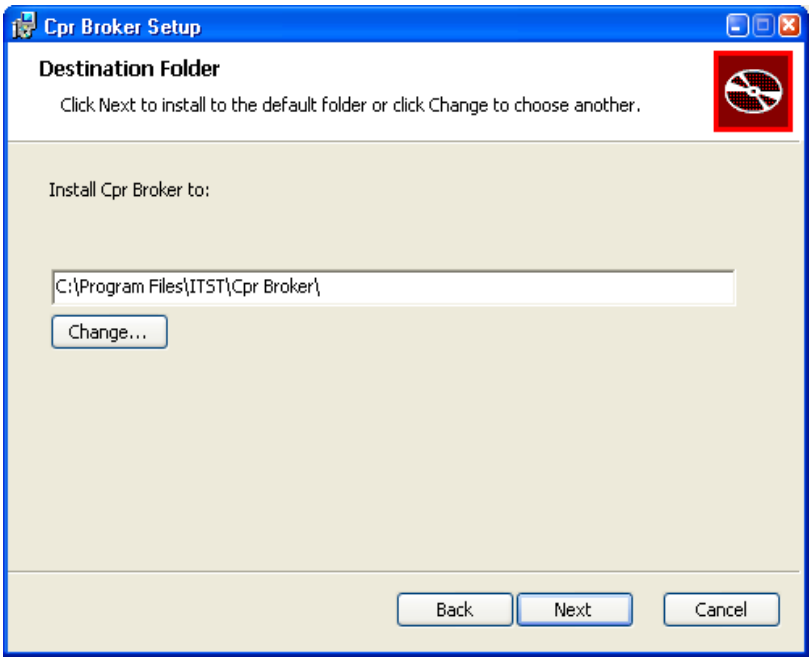
Please note: On a computer with *User Account Control (Vista/2008/ 7)* please right click and select '*Run As Administrator'*



Click *Next* to continue.

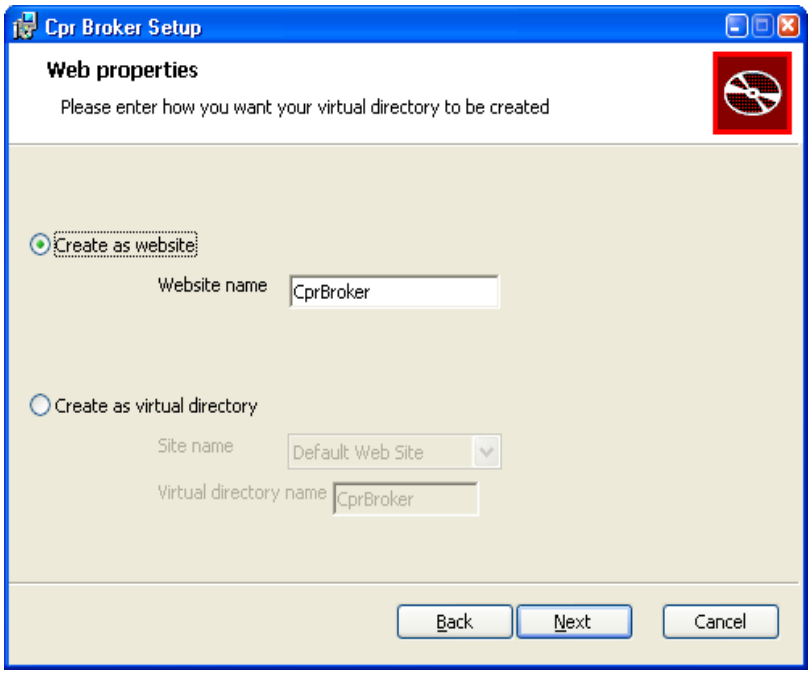
The next screen will show the license terms. Accept and click *Next*.

Now you will see this screen.



Choose where to install the files for CPR Broker. The default selection will most likely be a perfect fit. Click *Next*.

The installer now needs information on the CPR Broker web site should be installed



If your IIS can have multiple sites (on e.g. Windows 2003 and 2008), type the name of the website to be created. The default name is fine.

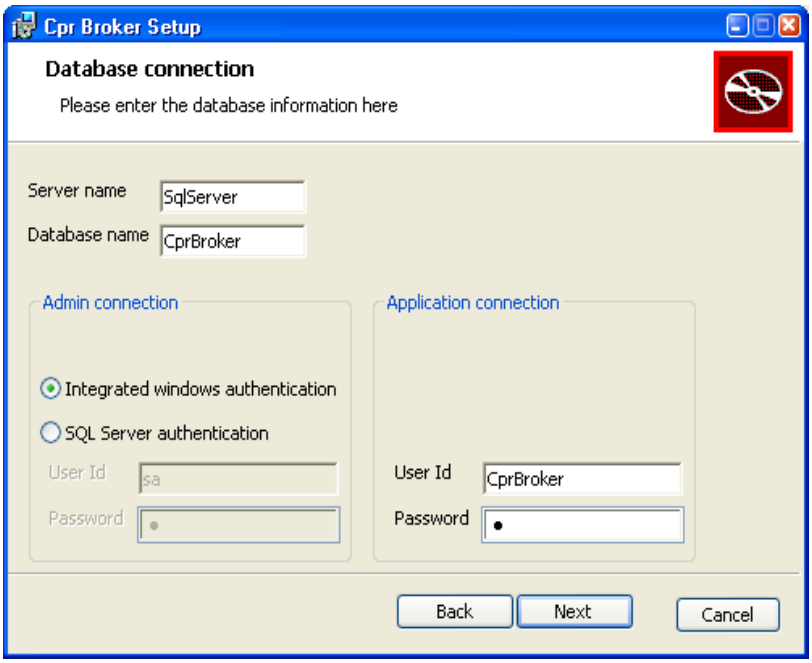
You can also choose to install as a virtual directory in an existing website. Choose the website from the list and type the name for the virtual directory. Default name is fine.

If you are installing on e.g. Windows XP you only have the option of installing as a virtual directory to the Default Web Site. The *CprBroker* application name will be okay for most purposes.

Click *Next*.

The installer now needs information necessary to create the database in which it stores copies of CPR -information.

The *Server name* is the name or IP-address of the computer on which the SQL Server resides. It could be *localhost* if the SQL Server resides on the same computer as the web site. If the server has multiple instances, type [ServerName]\[InstanceName]. Example is localhost\SQLEXPRESS



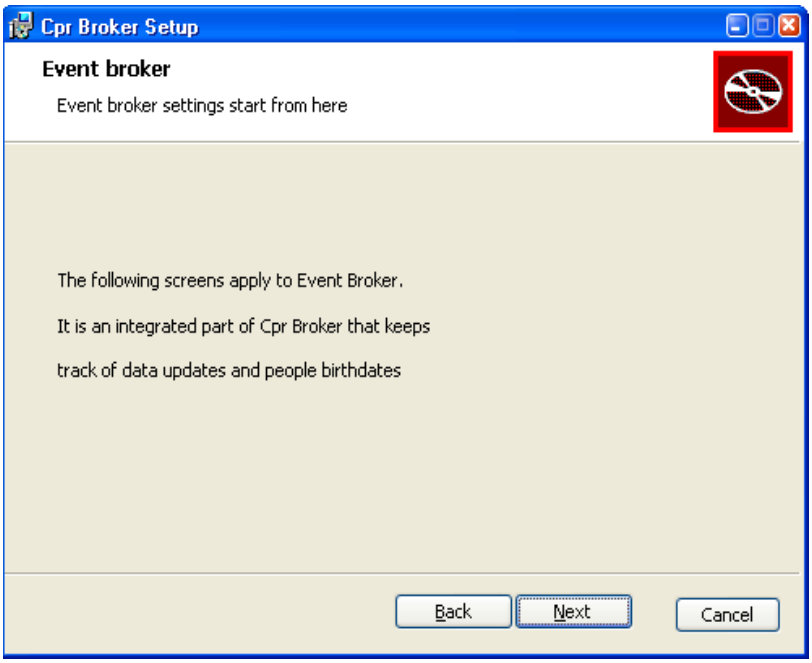
Database name is the name of the database. *CprBroker* would be a well chosen default name. If the database already exists, you will be given a warning message. If you accept it, the database will be used as it is. Please note that you will have to re configure the data providers because of encryption issues. Refer to the section “Data Providers” for details on how to do that.

Admin login is used for logging into the SQL Server and creating the database with the necessary tables etc. Whether you should use *Windows authentication* or *SQL Server authentication* depends very much on your setup. If the SQL Server is on the same computer as the web site you should most likely use *Windows authentication*.

Application login is used by the web site and services to connect with the database. The credentials needed for this purpose do not need to have as many privileges as the *Admin login*. Type the *User Id* and *Password* that you want the broker to use. If the user exists as a login, the password has to be the correct user's password. If not, the installer will create a new SQL login for you. In all cases, the user will be added to the db_owner role in the database.

When you are satisfied with your settings, click *Next*. The installer will test the information you have provided. You will see an error message if the information is invalid. Please check the information and click Next again in this case.

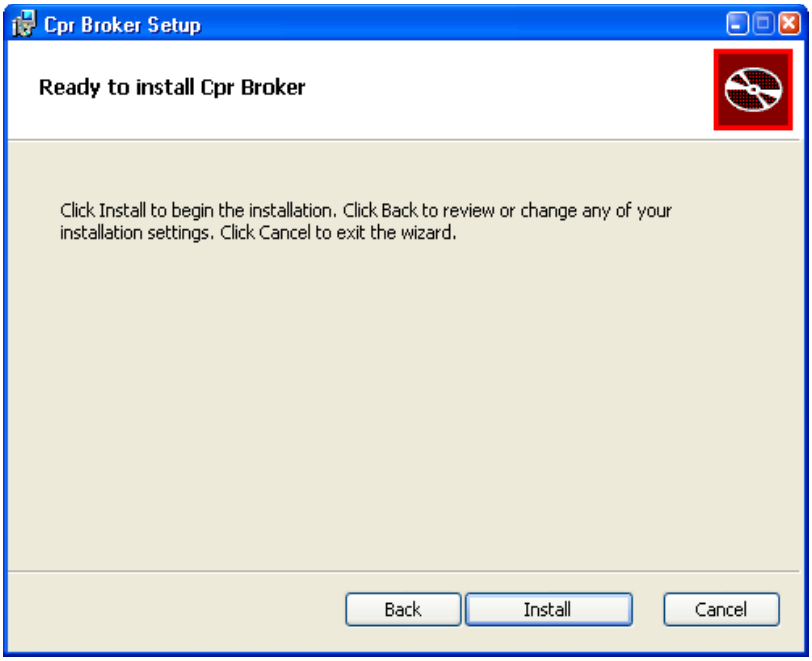
Now we have configured the web and database for the CPR Broker feature of the CPR Broker product. From this point, we will start entering the information for the Event Broker feature. The next screen will give you a warning.



Click *Next*.

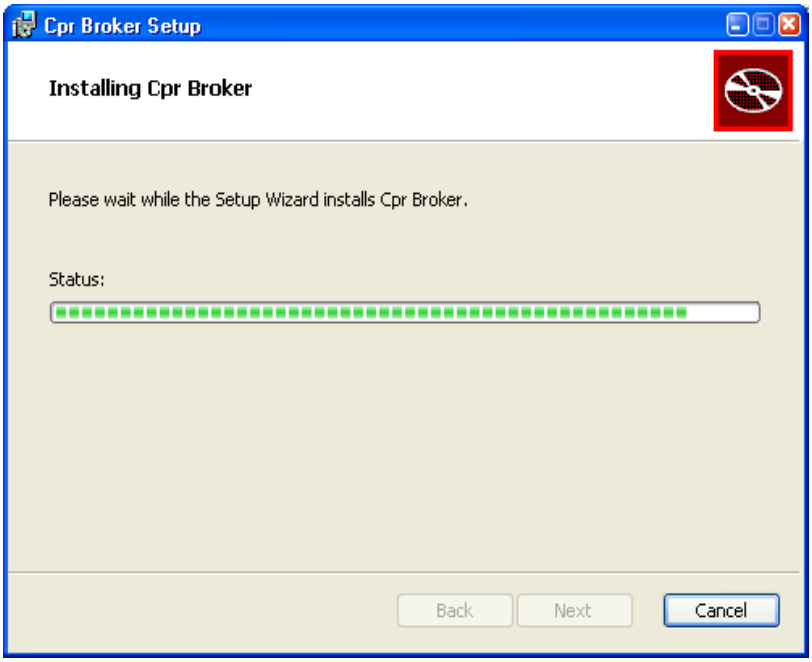
Now you will be prompted to enter the information for the web site and database of Event Broker. Please fill them as you did previously. Please make sure the web/database names you enter here are different from what you entered previously (for the CPR Broker feature).

After you are finished, you will see this screen.

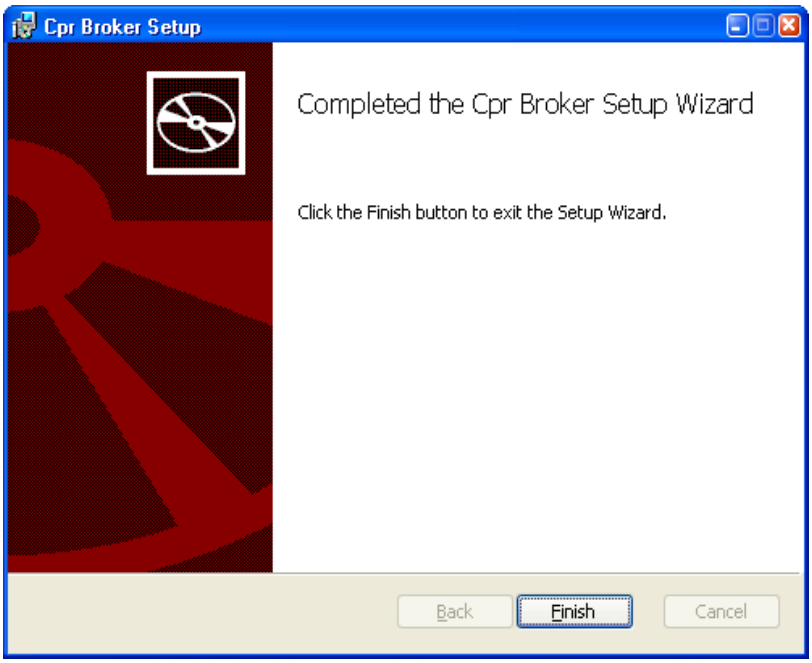


Now click Install to start the installation process.

You will see the progress screen



Wait until the process is finished. Then you will see this screen



Now everything is OK. Click *Finish* to close the wizard.

Done!!

3.2Silent installation

If you are the type of people who prefer to use command line interfaces, then you can also do a (semi) silent installation of CPR Broker.

If you are installing on an operating system that has user account control, please make sure you run the command as *Administrator*.

The command to use is

msiexec /qb /i InstallCprBrokerWix.msi /lv* SilentInstall.log [PROPERTY=VALUE,.....]

The following tables describes the parameters in details.

3.2.1Parameters belonging to windows installer

<table>
<tr><th>Parameter</th><th>Description</th><th>Example</th></tr>
<tr><td>/qb</td><td>Specifies user interface level. Could be<table><tr><td>/qn</td><td>Completely silent installation</td></tr><tr><td>/qb</td><td>Basic user interface. With progress dialogs</td></tr><tr><td>/qr</td><td>Reduced user interface</td></tr></table></td><td>/qb</td></tr>
<tr><td>/i</td><td>Path to msi package</td><td>/i InstallCprBrokerWix.msi</td></tr>
<tr><td>/lv*</td><td>File to use as a log (optional)</td><td>/lv* SilentInstall.Log</td></tr>
</table>

3.2.2Parameters specific to CPR Broker

These parameters are used to pass values for public properties. They are used in the form PROPERTYNAME=value

If the value contains a space, you need to enclose it in double quotations

PROPERTYNAME=”value with space”

Property	Description	Example value
WEB_CREATEASWEBSITE_CPR	To create CPR Broker feature as a website. ”True” means create as website, anything else means ”False”	True
WEB_SITENAME_CPR	Name of CPR Broker website. If WEB_CREATEASWEBSITE_CPR = True, this property has to be the name of an existing IIS website.	CprBroker
WEB_VIRTUALDIRECTORYNAME_CPR	Name of CPR Broker virtual directory. Only needed if WEB_CREATEASWEBSITE_CPR is false	CprBroker
DB_SERVERNAME_CPR	Name or IP address of database server on which to install CPR Broker database	SqlServer
DB_DATABASENAME_CPR	Database name for CPR Broker	CprBroker
DB_ADMININTEGRATEDSECURITY_CPR	If admin connection to SQL server uses integrated windows authentication. True or False.	True
DB_ADMINUSERNAME_CPR	User Id for admin connection (only if DB_ADMININTEGRATEDSECURITY_CPR <> True)	sa
DB_ADMINPASSWORD_CPR	Password for admin connection (only if DB_ADMININTEGRATEDSECURITY_CPR <> True)	<SqlPassword>
DB_APPSAMEASADMIN_CPR	Whether to use the same admin info for application login. Always set to False	False
DB_APPUSERNAME_CPR	User Id to be used by CPR Broker to connect to the database	CprBroker
DB_APPPASSWORD_CPR	Password for above user	<password>
WEB_CREATEASWEBSITE_EVENT	To create Event Broker feature as a website. ”True” means create as website, anything else means ”False”	True
WEB_SITENAME_EVENT	Name of CPR Broker website. If WEB_CREATEASWEBSITE_EVENT = True, this property has to be the name of an existing IIS website.	EventBroker
WEB_VIRTUALDIRECTORYNAME_EVENT	Name of Event Broker virtual directory. Only needed if WEB_CREATEASWEBSITE_EVENT is false	EventBroker
DB_SERVERNAME_EVENT	Name or IP address of database server on which to install Event Broker database	SqlServer
DB_DATABASENAME_EVENT	Database name for Event Broker	EventBroker
DB_ADMININTEGRATEDSECURITY_EVENT	If admin connection to SQL server uses integrated windows authentication. True or False.	True

DB_ADMINUSERNAME_EVENT	User Id for admin connection (only if DB_ADMININTEGRATEDSECURITY_EVENT <> True)	sa
DB_ADMINPASSWORD_EVENT	Password for admin connection (only if DB_ADMININTEGRATEDSECURITY_EVENT <> True)	<SqlPassword>
DB_APPSAMEASADMIN_EVENT	Whether to use the same admin info for application login. Always set to False	False
DB_APPUSERNAME_EVENT	User Id to be used by Event Broker to connect to the database	CprBroker
DB_APPPASSWORD_EVENT	Password for above user	<password>

For example, this command will install CPR Broker to CprBroker and EventBroker websites, create CprBroker and EventBroker databases on SQL server SqlServer, using integrated windows authentication, and the installed sites will use CprBroker and EventBroker users to connect to the databases.

msiexec /qb /lv* SilentInstall.log /i InstallCprBrokerWix.msi WEB_CREATEASWEBSITE_CPR=True WEB_SITENAME_CPR=CprBroker DB_SERVERNAME_CPR=SqlServer DB_DATABASENAME_CPR=CprBroker DB_ADMININTEGRATEDSECURITY_CPR=True DB_APPSAMEASADMIN_CPR=False DB_APPUSERNAME_CPR=CprBroker DB_APPPASSWORD_CPR=pwd WEB_CREATEASWEBSITE_EVENT=True WEB_SITENAME_EVENT=EventBroker DB_SERVERNAME_EVENT=SqlServer DB_DATABASENAME_EVENT=EventBroker DB_ADMININTEGRATEDSECURITY_EVENT=True DB_APPSAMEASADMIN_EVENT=False DB_APPUSERNAME_EVENT=EventBroker DB_APPPASSWORD_EVENT=pwd

4INSTALLING PERSON MASTER

Person master is an essential data provider for CPR Broker. CPR Broker relies on it to map CPR numbers to UUID's. This makes CPR Broker useless unless it is connected to at least one Person Master instance.

The installation procedure for Person Master is similar to CPR Broker. However, it is more simple. The differences are

- Person Master has only one database and one website.
- It can only be installed as a website (This means it must be installed on IIS 6 or higher)

4.1Needed information

As you did we CPR Broker, we need to prepare similar stuff. The difference is that the DNS record and database name are now for Person Master

In addition, you need to prepare

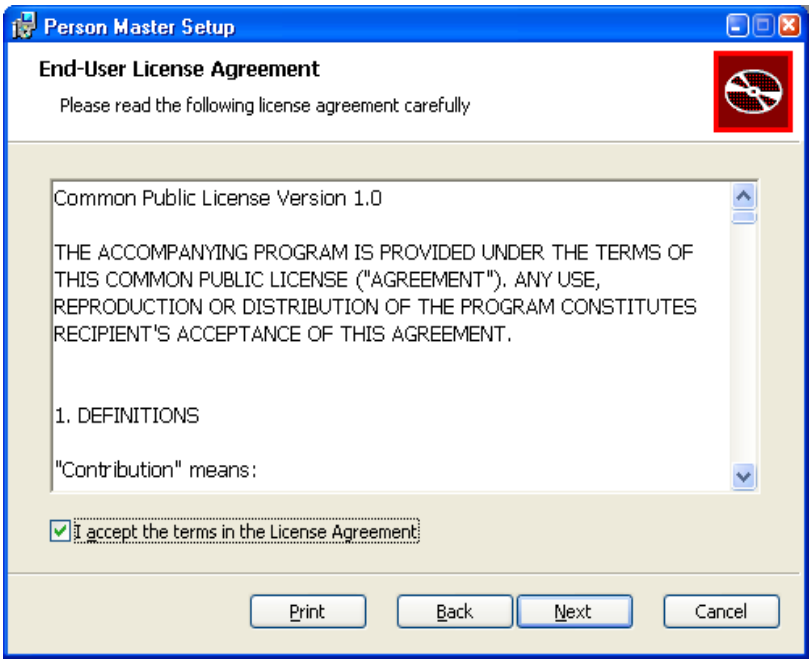
- A strong encryption key to be used by Person Master. It should be at least 8 characters long, contain lower and upper case characters, contain at least one digit and at least one non alphanumeric character.
- A domain name to be used in the database. Any string like “pm” (without quotes) would work.

4.2Using the installation wizard

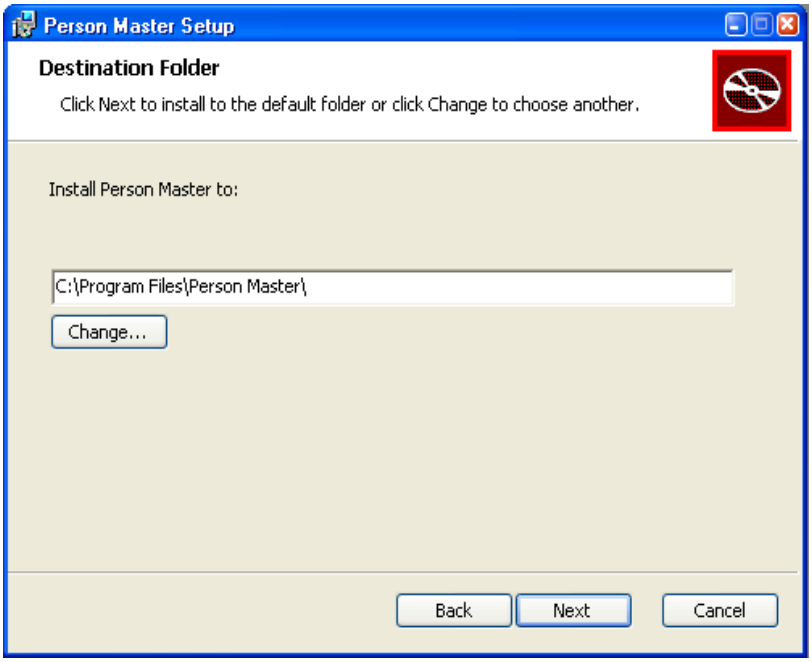
Double click the file PersonMasterInstaller.msi. If you are installing on an operating system with *User Account Control*, right click and select *Run As Administrator*.

You will see this screen

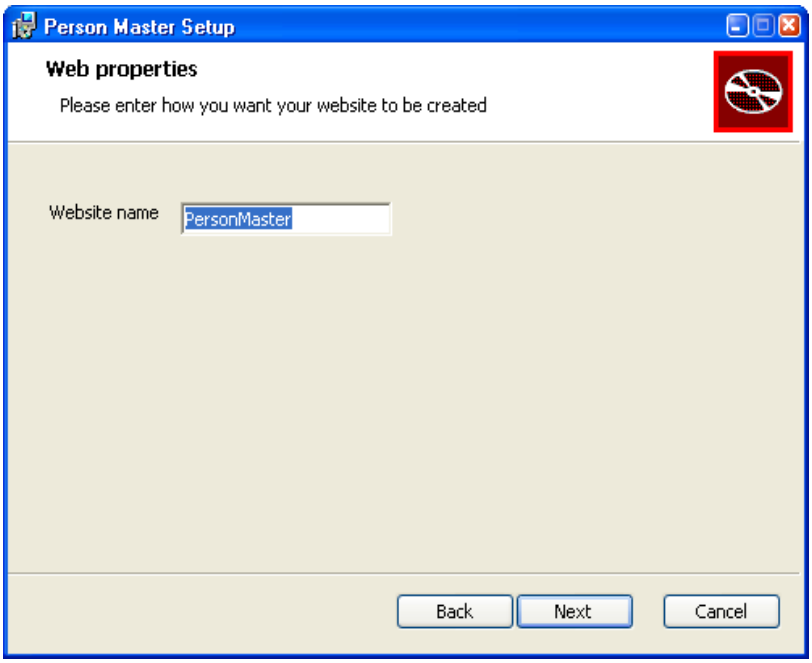
Click *Next*.



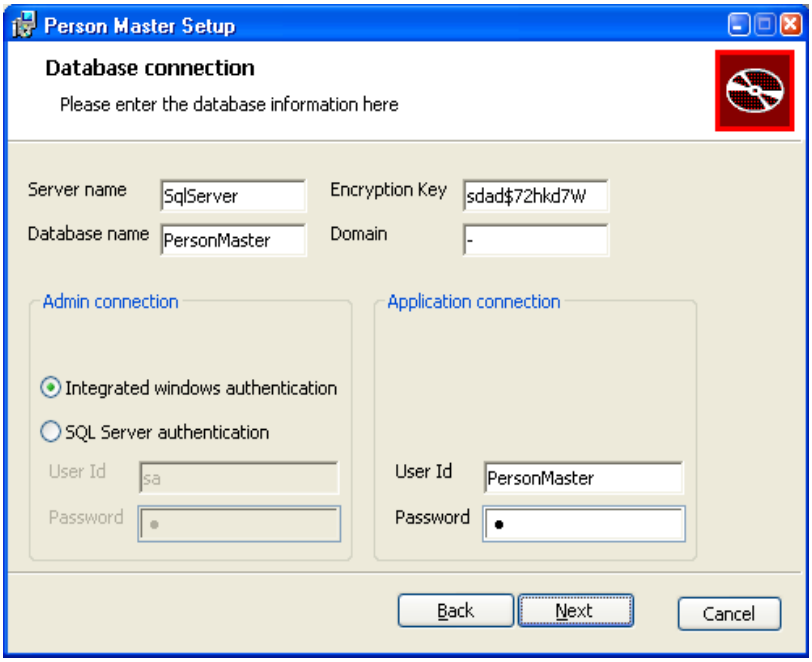
Accept the license terms and click *Next*.



Select the destination folder –the default value is OK- and then click *Next*.

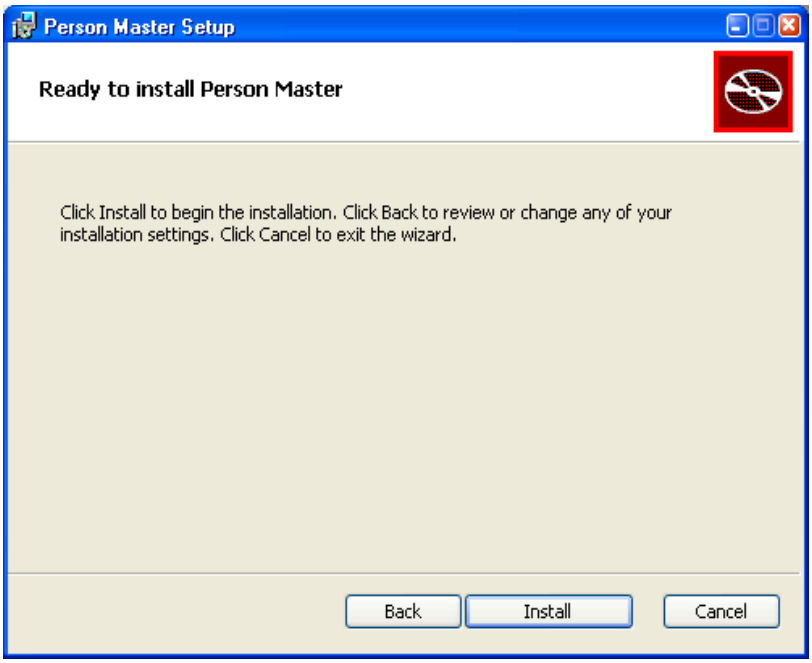


Type the name you want for the created website and click *Next*.

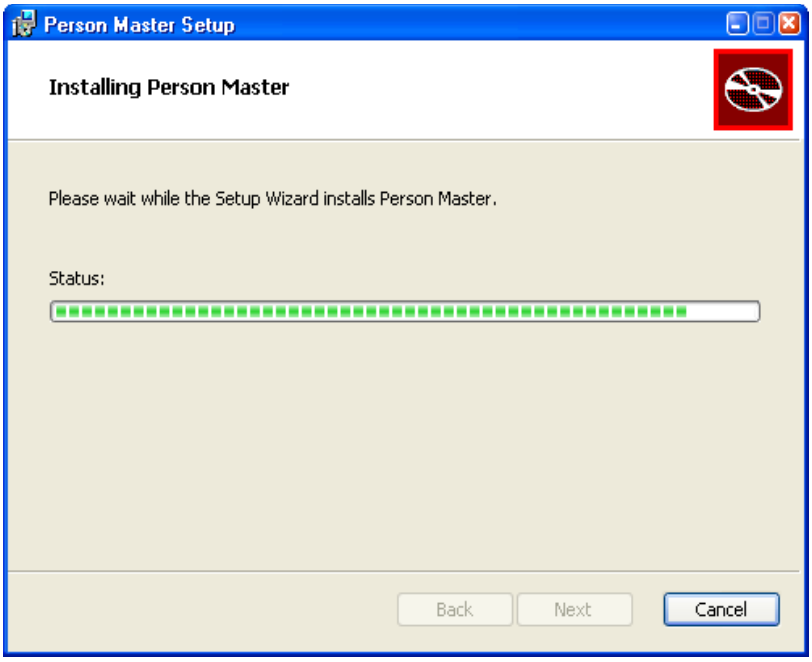


Type how you want to create the database. You can also use an existing database (in case you have previously installed PersonMaster manually). The installer will only guarantee access to the database, but will not create any database objects.

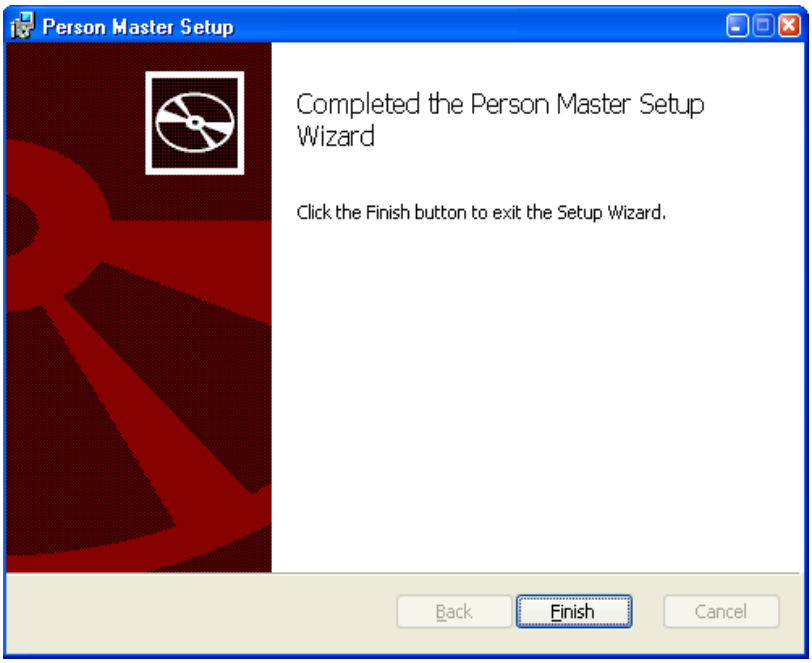
Click *Next*.



Now you have finished input of the needed information. Click *Install* to start the installation process. You will see the following window.



Wait until the installation is complete, and then you will see this:



Click *Finish* to close the wizard.

Done !!

4.3Silent installation

Just like CPR Broker, Person Master can be installed from the command line.

Again, if you are installing on a system with user account control, run the command prompt as *Administrator*.

The command to use is

msiexec /qb /i PersonMasterInstaller.msi /lv* SilentInstall.log [PROPERTY=VALUE,.....]

The properties are similar to CPR Broker, Except

- Installation must be as a website
- The property suffix is _PM (not _CPR or _EVENT). Since we have only one database and one website, we can skip the _PM suffix and just something like

  DB_SERVERNAME=SqlServer

4.3.1Parameters specific to Person Master

The following table gives more details

Property	Description	Example value
WEB_SITENAME	Name of CPR Broker website.	PersonMaster
DB_SERVERNAME	Name or IP address of database server on which to install Person Master database	SqlServer
DB_DATABASENAME	Database name for Person Master	PersonMaster
DB_ENCRYPTIONKEY	The symmetric key to be created and used to encrypt data. Enclose this in double quotes because the command line interprets non alphanumeric characters as a word separator.	“hdgueS^22”
DB_DOMAIN	String value that identifies the system.	pm
DB_ADMININTEGRATEDSECURITY	If admin connection to SQL server uses integrated windows authentication. True or False.	True
DB_ADMINUSERNAME	User Id for admin connection (only if DB_ADMININTEGRATEDSECURITY <> True)	sa
DB_ADMINPASSWORD	Password for admin connection (only if DB_ADMININTEGRATEDSECURITY <> True)	<SqlPassword>
DB_APPUSERNAME	User Id to be used by Person Master to connect to the database	PersonMaster
DB_APPPASSWORD	Password for above user	<password>

For example, this command will install Person Master to PersonMaster website, create PersonMaster database on SQL server SqlServer, using integrated windows authentication, and the installed site will use PersonMaster user to connect to the databases.

msiexec /qb /lv* SilentInstall.log /i PersonMasterInstaller.msi
WEB_SITENAME=PersonMaster DB_SERVERNAME=SqlServer
DB_DATABASENAME=PersonMaster DB_ENCRYPTIONKEY=<key>
DB_DOMAIN=”<domain>” DB_ADMININTEGRATEDSECURITY=True
DB_APPUSERNAME=PersonMaster DB_APPPASSWORD=pwd

4.4Uninstalling Person Master

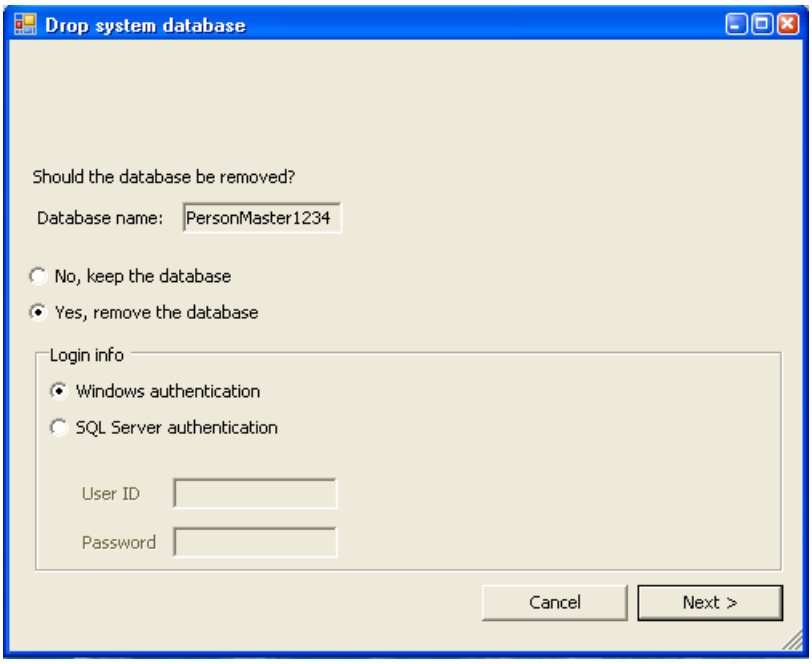
To Uninstall Person Master, run this command as an **administrator**:

msiexec /x PersonMasterInstaller.msi /lv* Uninstall.log

Alternatively, if you know the product code

msiexec /x {<product code>} /lv* Uninstall.log

You will be asked if you want to drop the database. If yes, you may need to provide a user account that is a member of sysadmin role in order to delete the database.

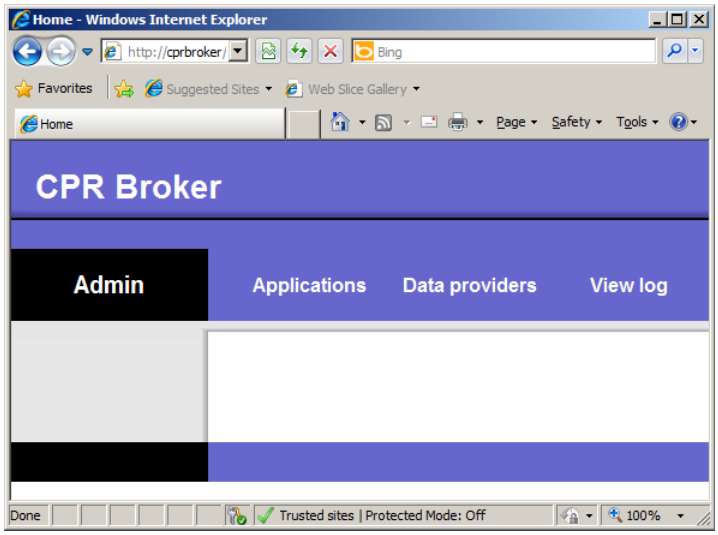


Click *Next*.

Now wait for the wizard to end, and Person Master is removed from your system.

5CONFIGURING CPR BROKER

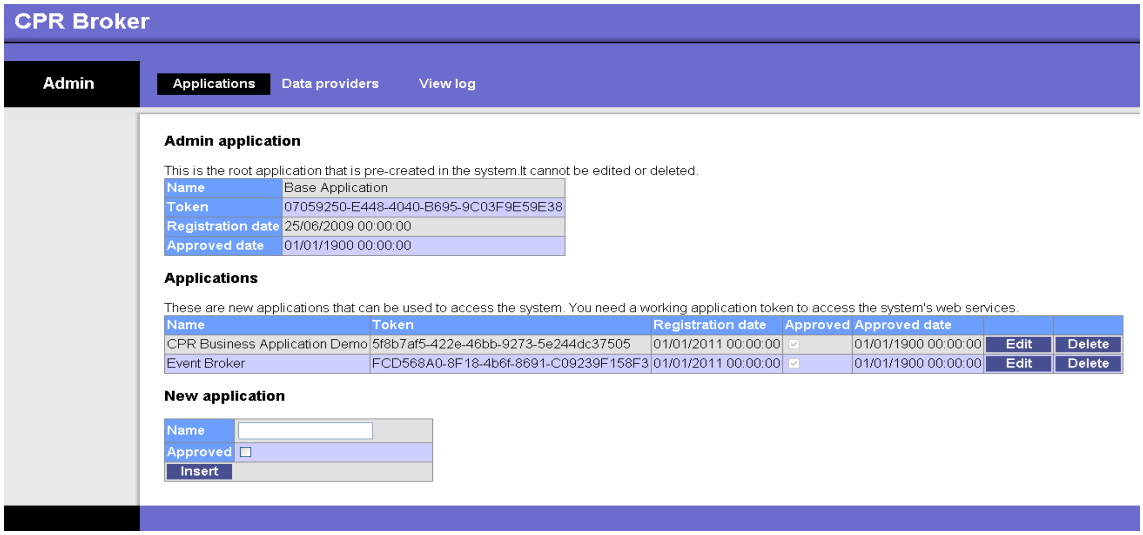
Open up a browser and point it to *http://localhost/CprBroker/Pages/default.aspx* (or wherever you chose to install it) to see whether your installation was successful



This is a basic interface but it does get the job done.

5.1Applications

Now click *Applications*:



For a client application to be able to use the broker, it needs to use an application token that uniquely identifies the application. This is modelled by the concept of *Application* in the broker.

An application has a unique name and a unique token. The name is a user friendly string

that can be seen in with the log entries identifying relevant log entries. The token is a unique key sent with all web service requests to tell the broker which application is making the call. The token is an auto generated GUID (Globally Unique Identifier) by default, but it can be changed to be any string that uniquely identifies the application. The application needs to be approved before it can be used.

Applications can be created through the Applications page and also through web services. Name and token can be changed through the user interface (only), but they still have to be unique.

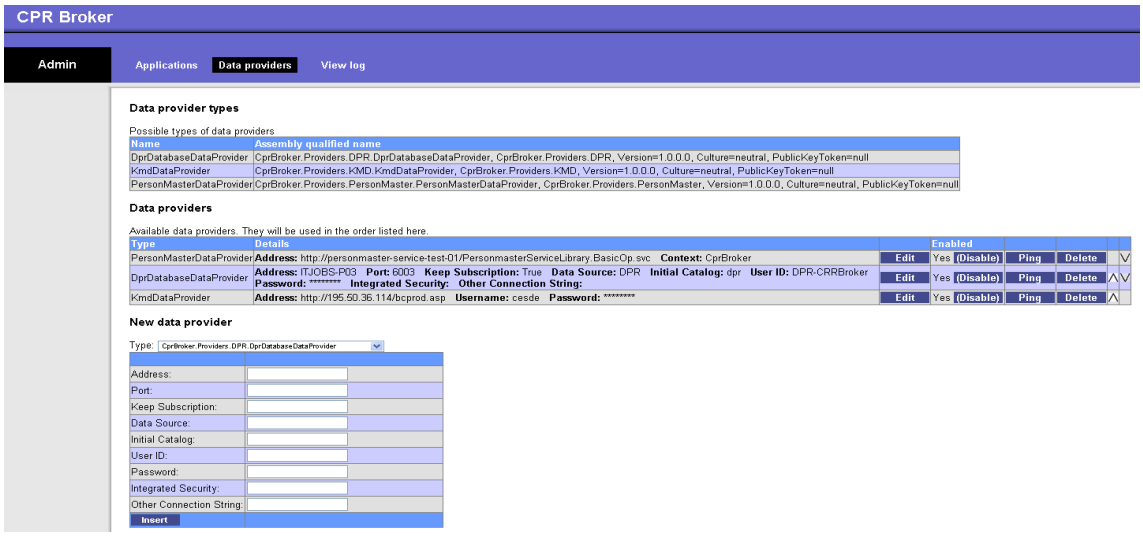
The system comes with three pre approved applications. The *Admin application* is a built-in name for an application that is allowed to work with the administrative parts of the CPR Broker. The other two applications are the event broker and the demo application. Please leave these two applications untouched.

To approve an application, simply click *Edit* for the application in question and check the *Approved* check box. Then click *Update* (only shown after *Edit*).

To create an application, simply give it a *Name* and whether it should be initially approved (it probably should). Then click *Insert*. The application is now listed under *Applications*.

5.2Data Providers

Now click *Data Providers*:



A *Data Provider* is a connector that provides the broker with information. CPR Broker itself does not produce data, but rather queries other systems for data.

To setup any of these connections you need an account and connection information from the provider. Then choose the appropriate provider type, enter the information and click *Insert*. You now have a Data Provider.

In order for the broker to be usable, it must be told where to get people's data from. There

are two groups of data providers :

5.2.1Person master data providers

Used to assign UUID's to CPR Numbers. It gets UUIDs from the specified person master service.

Address is the address of the service (http://.../PersonmasterServiceLibrary.BasicOp.svc). *Context* is any arbitrary string that identifies the broker instance. *Spn name* is a parameter used by the service that you should get from the administrator, or by checking the WSDL file of the actual service instance.

5.2.2CPR data providers

These data providers are the ones that retrieve the detailed information of persons. There are currently two data providers that are implemented; DPR and KMD

DPR

Address and *Port* are TCP address and port of the DPR forwarding (DPR Viderestilling) service.

Keep Subscription tells the instance to whether to set a subscription when requesting data from DPR forwarding in case data is not already in DPR. It can be either *True* or *False*.

Disable Diversion disables the usage of DPR forwarding altogether (in case you want to save money).

The rest of the parameters are used to build a *SQL Server* connection string that points to the DPR database.

P-Data (KMD)

Address is the web service base address (http://their.domain/kmd/pData). The broker will add the parameter zservice=AN08002 (or whatever service) when actually calling the web services.

Username and *Password* are sent with the requests.

E&M

The configuration properties are used to connect to the E&M database. It is preferable not to use integrated windows authentication.

6SETTING UP LOGGING

CPR Broker can log to file, Windows Event Log, to the Database and to email.

There place to setup logging: In the *loggingConfiguration.config* file for CPR Broker web service. The default position for this is *C:\Program Files\ITST\CPR Broker(Event Broker)\Web\Config*

Additional location for Event Broker: in *the CprBroker.EventBroker.Backend.exe.config* file for the Backend service. The default position for this is *C:\Program Files\ITST\Event Broker\Web\bin*.

The procedure is the same for both files. Locate the `< loggingConfiguration>` tag in the specific config file. Under the `<listeners>` tag you will find four `<add` tags. The `"CprDatabase"` as well as the `"EventLog"` should be left untouched in all cases.

In `"FlatFile"` you should look for the `fileName` attribute. This should be set to the full path and name of the where to put the log file. By default, the path is"[InstallDir]CprBroker\Website\CPR Broker.log". The installer will create the file and give CPR Broker the necessary permissions to write to it.

In `name="Email"` there are more settings. The ones most likely to be adjusted are: `toAddress`, `fromAddress`, `smtpServer` and perhaps `smtpPort`.

Please note: If you change FlatFile, you need to make sure that the 'NT AUTHORITY\NETWORK SERVICE' account has sufficient access rights to the destination.

You have now adjusted the settings for each type of logging, but you have yet to set what types of logging are *active*. You now look for the `<specialSources>/ <allEvents>` tag. In this you will another `<listeners>` tag. Per default `"CprDatabase"` is active, which can be seen from the fact that it is not commented out like e.g. `<!--add name="EventLog" /-->` is.

To enable a specific listener simply remove the `<!--` and `-->` characters from the line. And to disable a listener simply put them back in.

7UNINSTALLING CPR BROKER

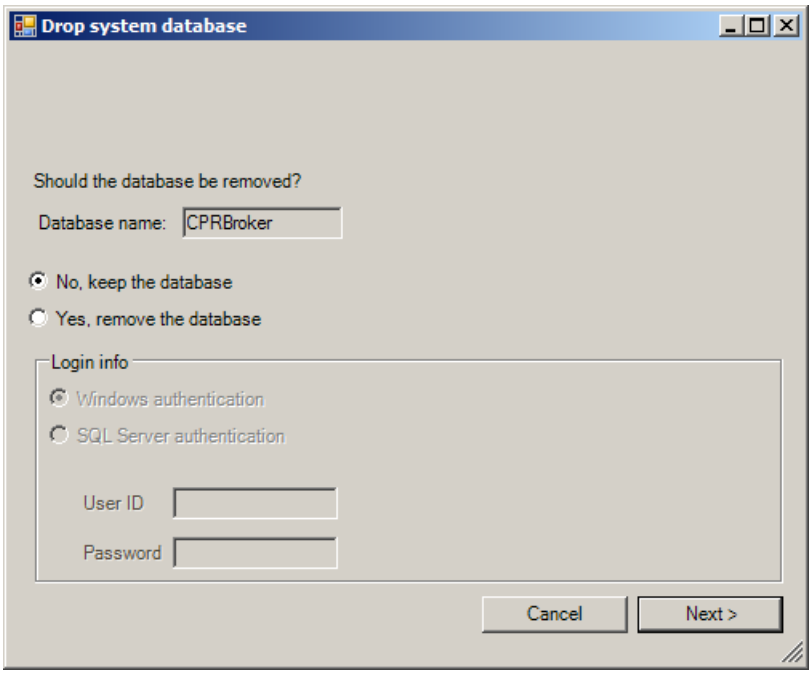
To Uninstall CPR Broker, run this command as an **administrator**:

msiexec /x InstallCprBrokerWix.msi /lv* Uninstall.log

Alternatively, if you know the product code

msiexec /x {<product code>} /lv* Uninstall.log

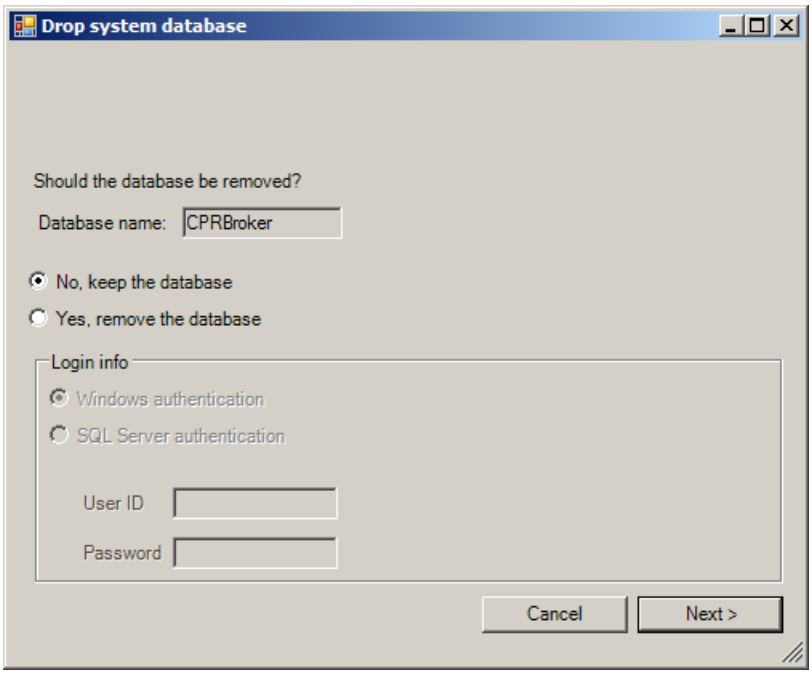
You will be asked if you want to drop the database twice. First time is about CPR Broker database and second is about Event Broker database.



If you choose to drop the database(s), you may need to provide a user account that is a member of sysadmin role in order to delete the database(s).

Click *Next*.

Now wait for the wizard to finish, and then CPR Broker is removed from your system.


Drop system database
Should the database be removed?
Database name:
CPRBroker
No, keep the database
Yes, remove the database
Login info
Windows authentication
SQL Server authentication
User ID
Password
Cancel
Next >

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