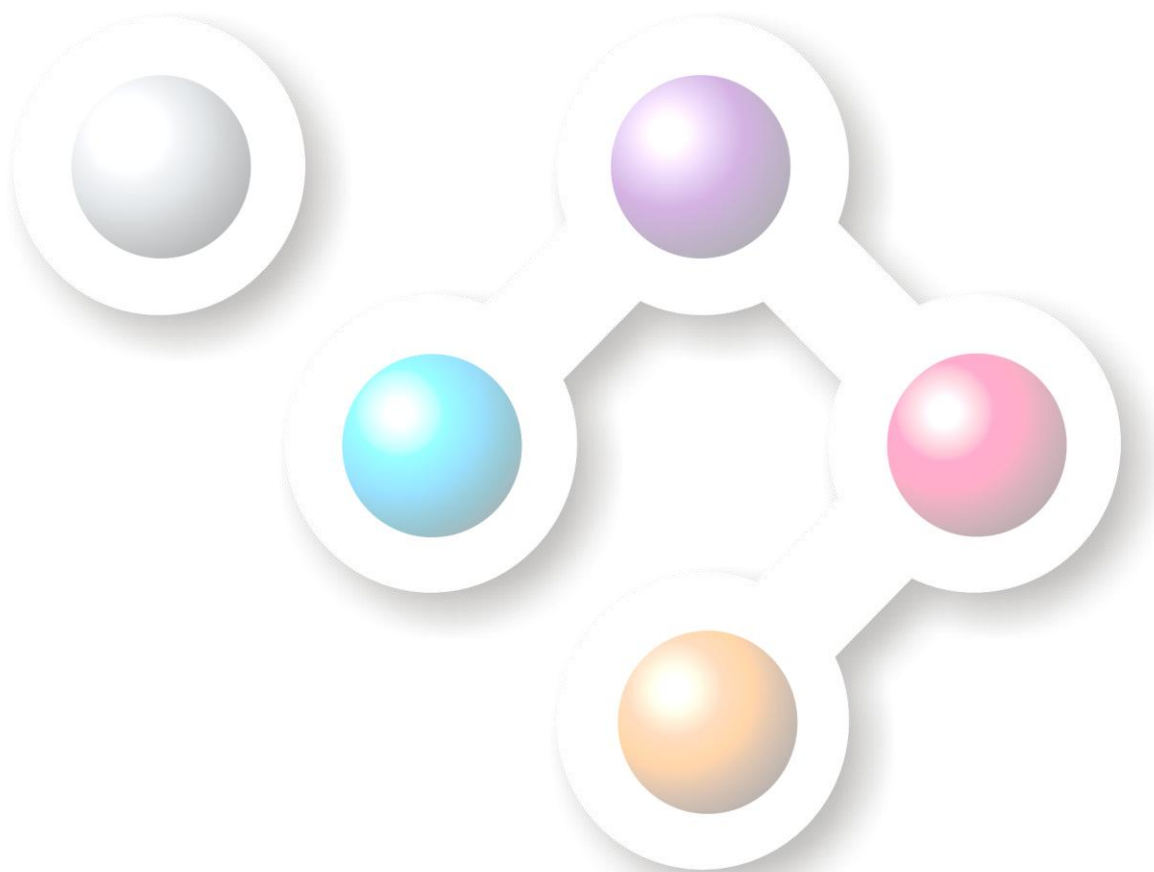


'Hydra4GL'™ Development Suite



**'Hydra4GL' Connecting to Informix
Version 4.3 – May 2007**



Connecting to an Informix Database

This section will guide you through the process of connecting to an Informix Dynamic Server/Online database using the 'HydraStudio' IDE.

Installing Informix

For each platform, install Informix as per instructed in the Informix Dynamic Server/Online documentation.

Connection Information

The following information is needed to make a connection with a database using Informix Dynamic Server/Online. The information stated here is for use in both Windows and UNIX/Linux.

IBM Informix Server

This is the instance of the Informix Server to connect to. This is not to be confused with the machine that the database is running on, which may be called something different.

Host Name

The host name refers to the actual machine that is hosting the database to be connected to.

Protocol

The protocol to be used to communicate with the Informix database depends on your setup. You must select an 8-digit protocol, which is split into 3 sections:

- The first two digits specify the type of Informix database
 - se – Standard Engine
 - on/ol – online/dynamic server
- The next three digits refer to the style of the connection, for example soc for a socket connection or ipc for inter-process communication
- The final three digits refer to specific information about the connection, such as a tcp connection or a piped (pip) connection

Service Name

The final piece of information that you need to enter is the service name. If using shared memory, this will simply be the host name. If you are using a piped system though, this will be sqlexec. If using a socket connection this will either be Turbo or 1526.

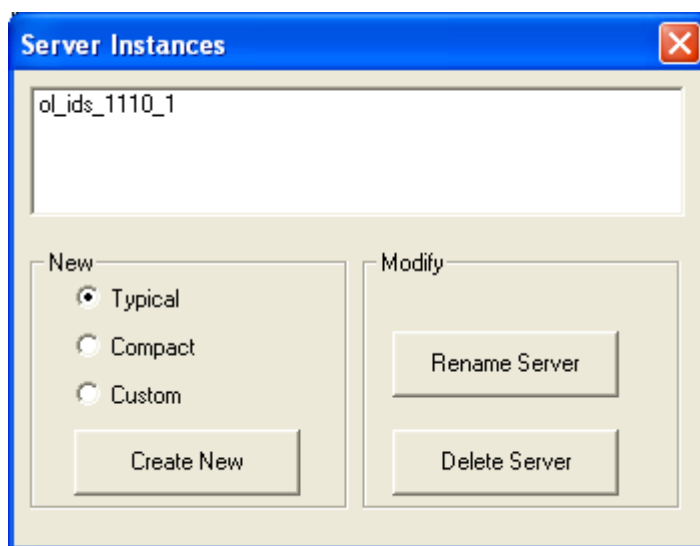
Configuring Server Information in Windows

The following steps will guide you through the configuration of the Server Information in Windows.

1. Once Informix is installed there will be an Informix Server Instance created automatically. To check the name of this Server Instance go to the Server Instance Manager located at:

```
All Programs -> Informix Dynamic Server version_number -> Server Instance Manager
```

Listed here will be all the Server Instances, and several options such as renaming, deleting and creating new Servers. Note the name of the required Server Instance.

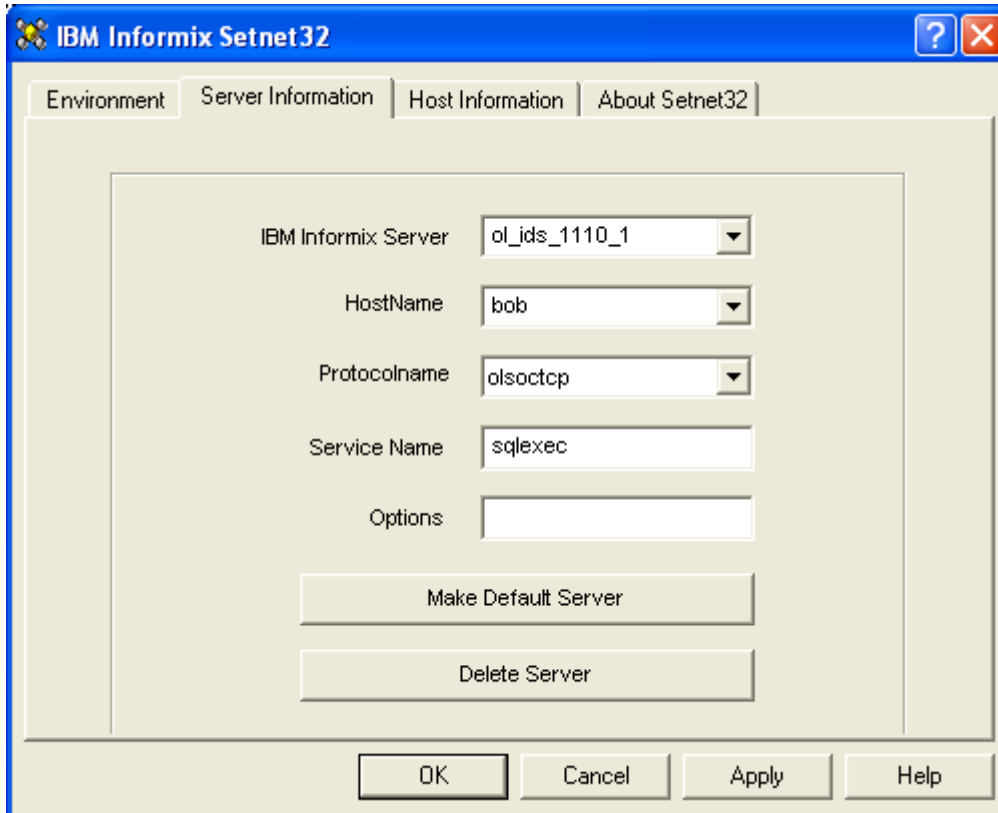


2. Next you will need to enter server information in order for Informix to connect to a database. To do this, open Setnet32 from the following location:

```
All Programs -> Informix Client-SDK version_number -> Setnet32
```

Now go to the Server Information tab and enter the Server Instance name into the IBM Informix Server field.

3. Next, enter the name of the machine on which the database will reside in the HostName field.
4. In the Protocolname field there will be several 8-digit options. You must choose the relevant option to suit your system.
5. Finally, enter the service name.



The image shows a Windows-style dialog box titled "IBM Informix Setnet32". It has a blue title bar with a question mark icon and a close button. Below the title bar are four tabs: "Environment", "Server Information", "Host Information", and "About Setnet32". The "Server Information" tab is selected. The main area contains several fields and buttons:

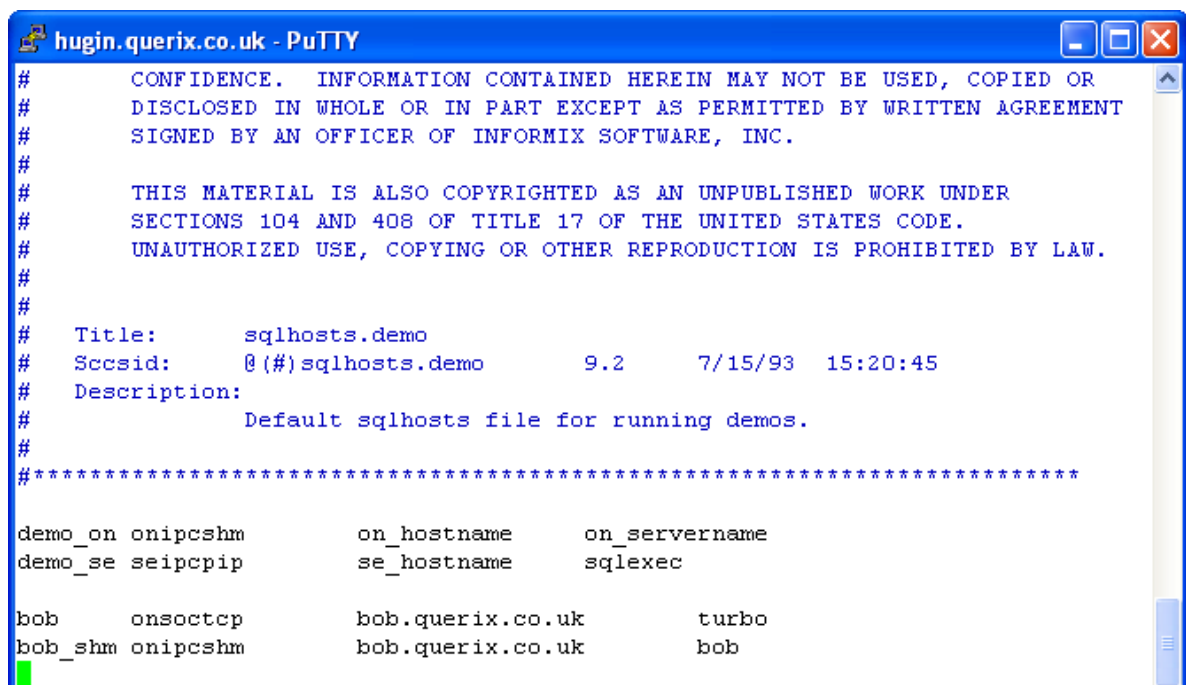
- "IBM Informix Server": A dropdown menu with "ol_ids_1110_1" selected.
- "HostName": A dropdown menu with "bob" selected.
- "Protocolname": A dropdown menu with "olsoc tcp" selected.
- "Service Name": A text input field containing "sqlxec".
- "Options": An empty text input field.
- "Make Default Server": A button.
- "Delete Server": A button.

At the bottom of the dialog are four buttons: "OK", "Cancel", "Apply", and "Help".

Configuring Server Information in UNIX/Linux

In UNIX/Linux you will have already set the Server Instance name when installing Informix, and possibly an associated alias. If you need to check this name/alias open the `onconfig` file found in the `$INFORMIXDIR/etc` directory and look up the `DBSERVERNAME` and the `DBSERVERALIASES`.

Configuring the server information is now simply a case of opening the `$INFORMIXDIR/etc` directory and opening the `sqlhosts` file for editing. This file requires the four pieces of information as discussed in the Connection Information section, namely Informix Server, Host Name, Protocol, and Service Name. This information can be found at the top of the file and changing the settings is simply a case of editing this line of information.

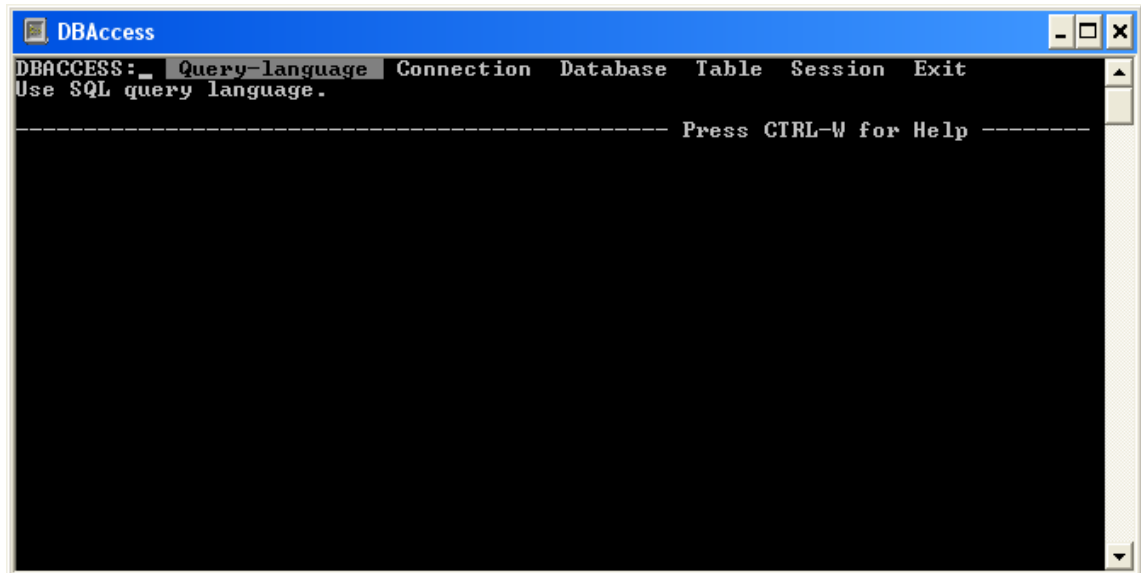


```
hugin.querix.co.uk - PuTTY
#      CONFIDENCE.  INFORMATION CONTAINED HEREIN MAY NOT BE USED, COPIED OR
#      DISCLOSED IN WHOLE OR IN PART EXCEPT AS PERMITTED BY WRITTEN AGREEMENT
#      SIGNED BY AN OFFICER OF INFORMIX SOFTWARE, INC.
#
#      THIS MATERIAL IS ALSO COPYRIGHTED AS AN UNPUBLISHED WORK UNDER
#      SECTIONS 104 AND 408 OF TITLE 17 OF THE UNITED STATES CODE.
#      UNAUTHORIZED USE, COPYING OR OTHER REPRODUCTION IS PROHIBITED BY LAW.
#
#      Title:      sqlhosts.demo
#      Sccsid:    @(#)sqlhosts.demo      9.2      7/15/93  15:20:45
#      Description:
#                Default sqlhosts file for running demos.
#
#*****
demo_on onipcshm      on_hostname      on_servername
demo_se seipcpip      se_hostname      sqlexec

bob      onsocketp      bob.querix.co.uk      turbo
bob_shm onipcshm      bob.querix.co.uk      bob
```

Creating a database

Once you are satisfied that this information is correct, you will then need to open the DBAccess tool in order to create your database. The creation of databases using DBAccess is identical whether using Windows or UNIX/Linux.



1. In the DBAccess tool you will be met with several options; scroll over to Database and select it with the Enter key.
2. In the following screen, choose Create.
3. Next, enter a name for your database and press Enter.
4. The following screen allows you to choose a dbspace for storing the database's data or to choose the type of transaction logging. Choose Dbspace.
5. You should see here the names of any server instances and the rootdbs. Choose the name of the server instance you selected earlier in the IBM Informix Server tab in Setnet32.
6. Next, go to Log and select the appropriate transaction logging. It is recommended that this option be set as there can be no transactions without some sort of transaction logging.
7. Select Exit and you are presented with two options: Create-new-database and Discard-new-database. Select Create-new-database and the database will be created.
8. To check that 'HydraStudio' can connect to this database open the testconn project located at:

C:\Program Files\Querix\Hydra\projects\demo\testconn

Build and run this project and enter the name of the database you created and you should be met with a screen containing "Connection Successful".

Configuring 'Hydra4GL'

For both Windows and UNIX/Linux you will need to select the GUI Servers tab and then for both ports (1689 and 1691) you should check the environment variables and make sure that both `INFORMIXDIR` and `INFORMIXSERVER` are present. A connection may be possible without these being set, but it is advisable to add them if they are absent.

To add these variables click on the Add button at the bottom of the environment variables screen and then enter the information in the new box that is created. `INFORMIXDIR` will be the directory in which Informix was installed, and `INFORMIXSERVER` will be the location of the server instance being used in this application.

You are now able to use this database in any 'Hydra4GL' application.

Informix Differences

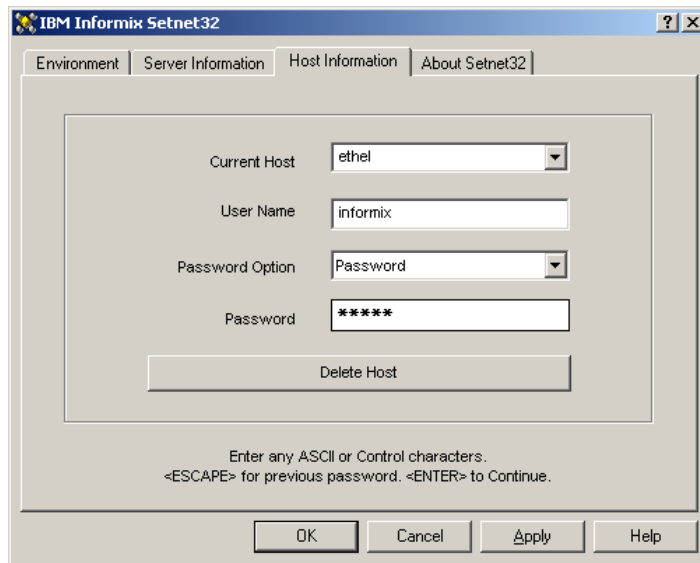
There are two main brands of Informix on the market – Standard Engine and Online/Dynamic Server. The intricate differences between these two Informix databases are beyond the scope of this manual; however the differences in connecting to these databases and the key differences will be discussed.

The absolute key difference between Standard Engine Informix and Online/Dynamic Server is that Standard Engine will look for a specified database in the local directory. If the database is not there, then it will check the contents of the DBPATH file for database locations. Online/Dynamic Server, however, does not need to look up the database location as it will always be managed by the server instance.

MORE DIFFERENCES

Host Information Removed From Getting Started

- 1) Select the Host Information tab.



The IBM Informix Setnet32 Host Information tab

- 2) In the Current Host field, select or type the name of the host.

This should be the same as the previously defined IBM Informix Server name.

- 3) In the User Name field, type the username with which you want to connect to the database.
- 4) In the Password Option field, select the password method needed to access your database.

For Windows environments this is usually 'Password'. This should be confirmed with your database administrator.

- 5) In the Password field, type the password for the username being used to access the database.
- 6) Click the Apply button.

If the information just entered is new a dialog box is displayed, which asks if you want to define a new host. Click the OK button.

- 7) Click the OK button, to close the Setnet 32 window.

SQL Server connection

Installing SQL Server

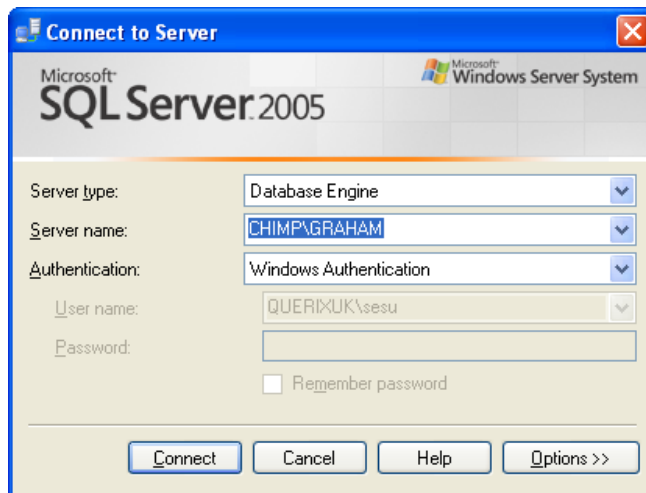
Install as instructed in the SQL Server documentation, at the stage where it asks for an instance name, either choose default or name your own. Make a note of the chosen name.

Adding a database

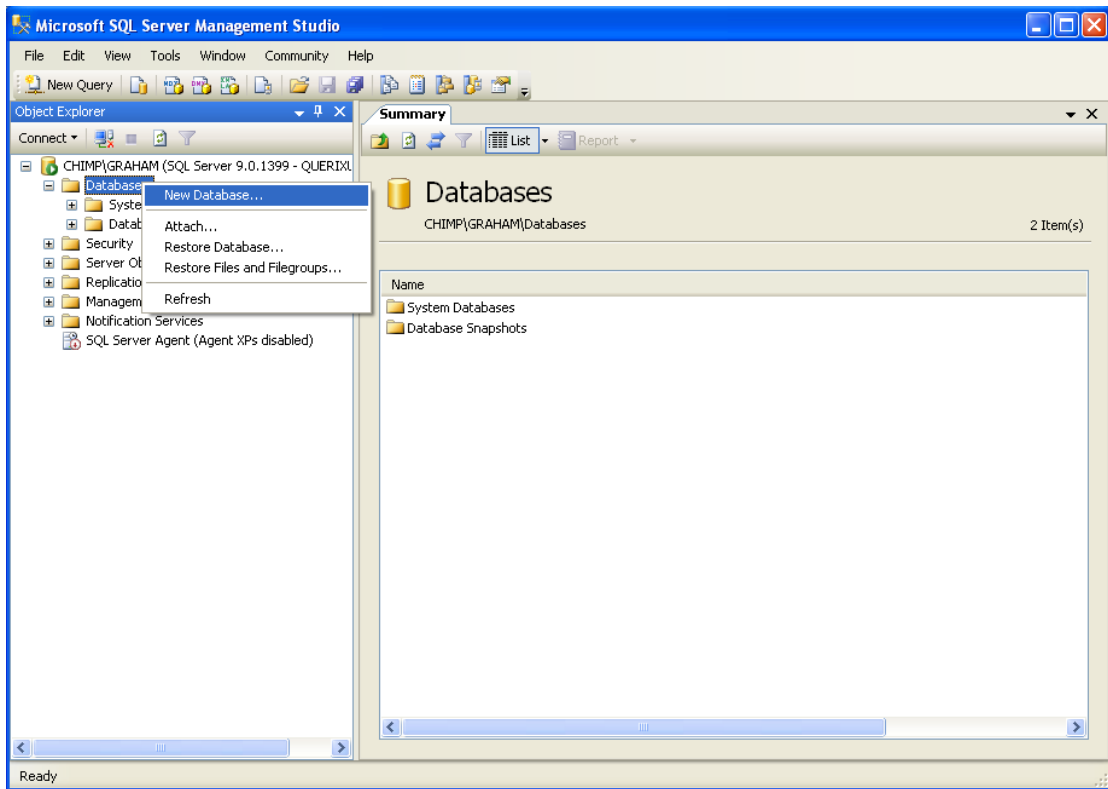
1. Go to the SQL Server Management Studio, found at:

All Programs -> Microsoft SQL Server version_number -> SQL Server Management Studio

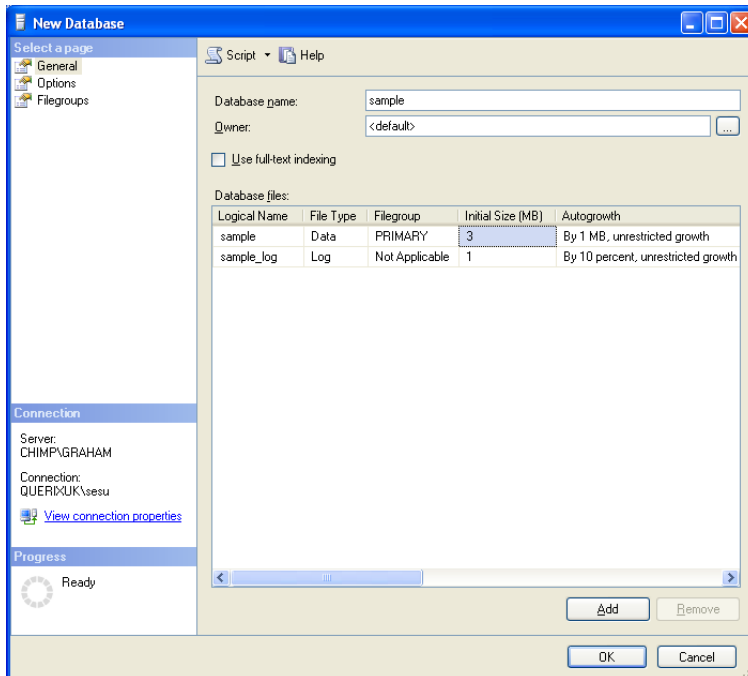
You will be asked to select a Server Type, Server Name and Authentication method. Select the relevant options, with Server Name being the name entered during installation. The other setting should also mirror those chosen during installation. Click on Connect to attempt a connection to the specified server.



2. On the following screen you will see an object explorer on the left-hand side of the screen. Right-click on Databases and select New Database.



3. Next, enter a Database name and press OK



Connecting to PostgreSQL

Installing PostgreSQL

For the installation of PostgreSQL see <http://www.postgresql.org/>. Here, you will find all the necessary downloads and extensive documentation.

Adding a database

Once installed, go to the pgAdmin tool, found at:

```
All Programs -> PostgreSQL version_number -> pgAdmin III
```

There should be the name of the server you specified during installation in the left hand explorer window. Under this server there should also be a Databases group; right-click on the word Databases and select New Database. In the box that opens, enter the database name and any other details as necessary and press OK.

Connecting to 'HydraStudio'

Firstly you will need to set up a DSN in the ODBC Data Source Administrator, found in:

```
Control Panel -> Administrative Tools -> Data Sources (ODBC)
```

Click on the System DSN tab and then click on Add. In the list that follows, scroll down and select the required PostgreSQL version (ANSI is recommended) then click on Finish. In the screen that follows you will be asked to enter details of the ANSI ODBC Driver:

- Data Source
 - This is the location the data that is to be used in the connection
- Description
 - Use this field to describe the data being used, e.g., Student Names
- Database
 - This is the name of the database that you intend to work with
- SSL Mode
 - Can be set to either Disable, Prefer, Allow or Require.
- Server

- If being run on the host machine, this will be localhost, otherwise this is the name of the server on which the database resides
- Port
 - ??? Defaults to 5432?
- User Name
 - Enter the user name here that was used when adding the database
- Password
 - If password protected, enter the password here

With this information correct, click Save to save the settings.

Next, the environment variable needs to be added in the GUI Servers. Click on the GUI Servers tab near the Files tree and double click Environment. Below the Variables window you will see Add, click on it and enter into the Variable field SQLSERVER, with Value being the PostgreSQL server name (database name?).

When the server name is set in the environment variables, any attempt to connect to a database will succeed as the data source is specified in the ODBC driver, which also has the name of the database to connect to if the database specified in the 4GL does not exist.