Connect to MySQL Databases online

How can you connect to a MySQL database

that is available online?

**Icetips
Software**

Table of contents

Welcome

Welcome to this short documentation on how to connect to MySQL databases remotely. The purpose of this document is to make it easier for developers to set up the ODBC connection to the database and access it from a Clarion application.

This article is only about MySQL, but we would welcome any additional information about how to do this from other SQL platforms.
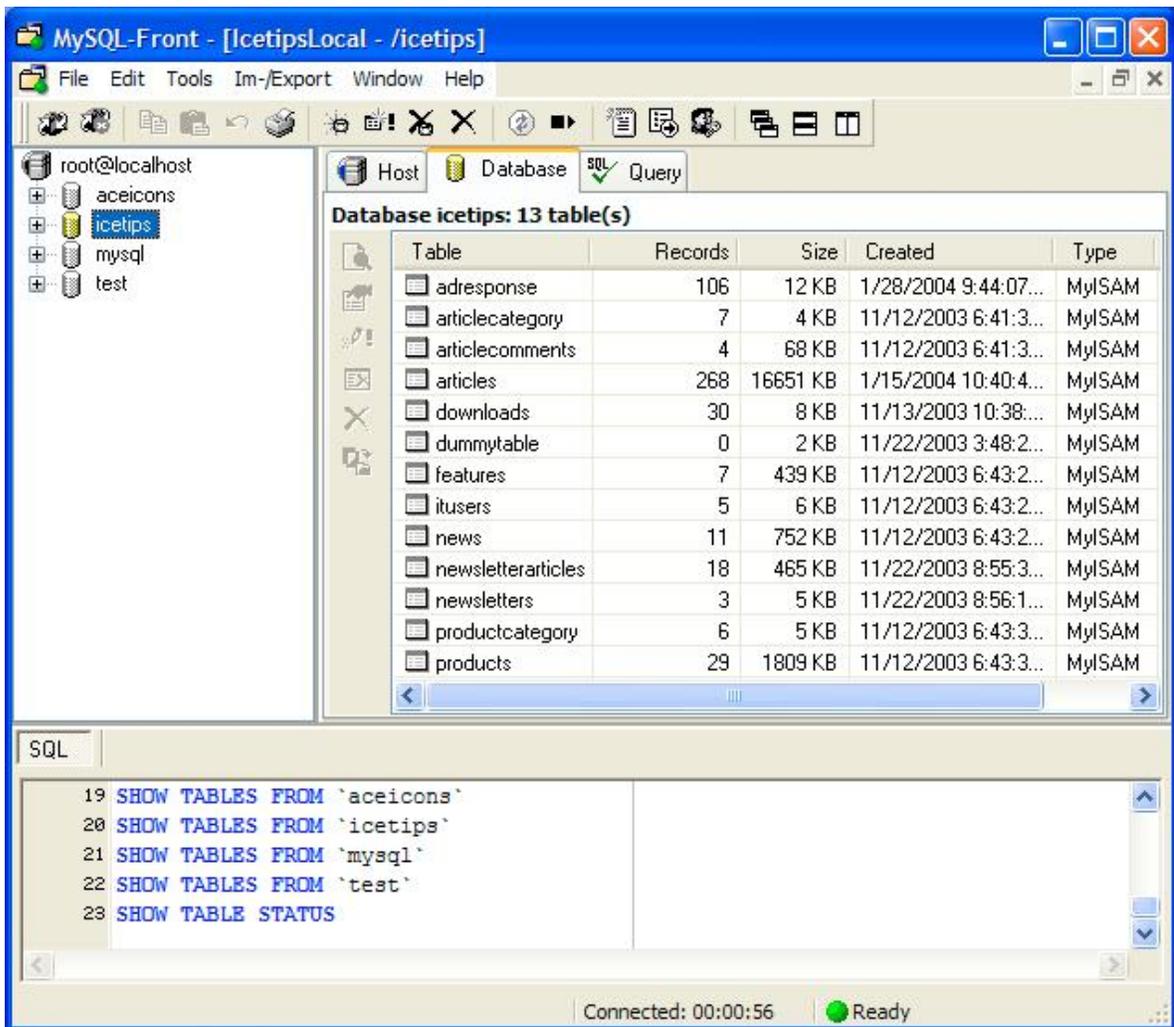
This is the tool that we highly recommend for anyone working with MySQL. It is called MySQLFront and is available for free download from http://www.mysqlfront.de It allows multiple connections, copying data and/or structures from one connection to another, or to a file. It can also export data into comma separated files, html and xml files.

Setting up the ODBC

This document demonstrates how to set up an ODBC connection to access MySQL database on line. It's possible to do this without setting up an ODBC connection, so called DSN less connection, but this document will not go into that option – that is the scope of another document.

In this document we use the MyODBC 2.5 and MyODBC 3.5 drivers. There are differences in the ODBC interface window for those two drivers, but the basics are exactly the same. The main difference is that most of the checkbox options that are on the main window in version 2.5, are on a separate "Options" window in MyODBC 3.5.

Create an ODBC connection

First thing to do is to open the Data Sources window, ODBC. Under XP, this is in the "Administrative Tools" section of the Control Panel. You may need to switch to Classic View for the Control Panel for it to show up under XP. In other versions of windows it is usually as "ODBC manager" or something like that in the Control Panel.
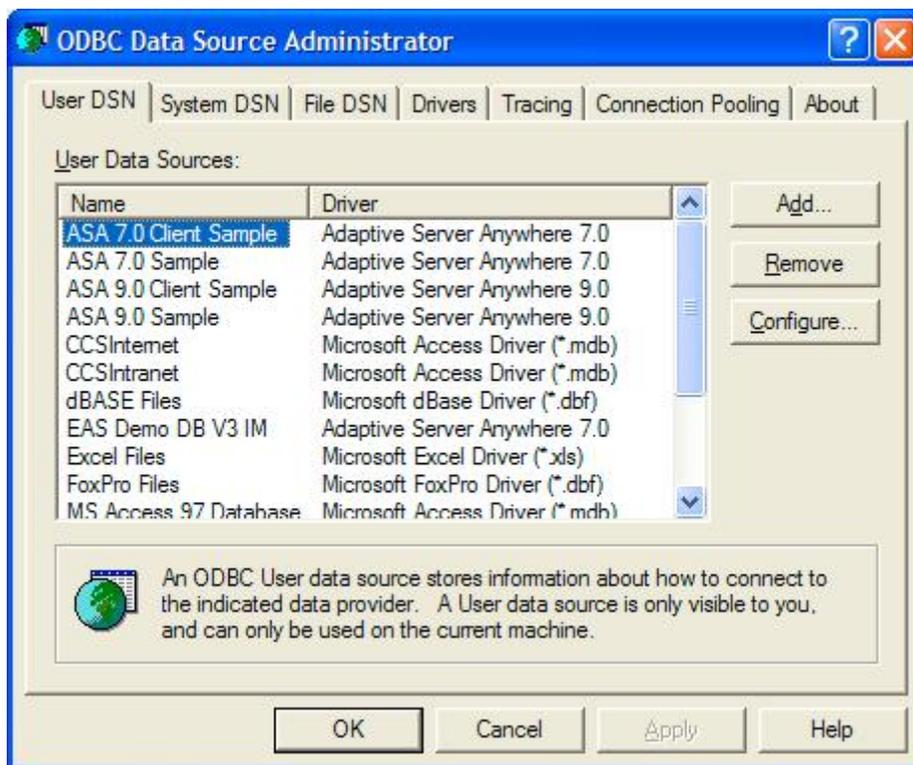
Where you create the DSN depends on what you want. User DNS are only available for the user that is logged in. System DSN is available to all users. To create a new connection, click the "Add" button and you will see the window below.
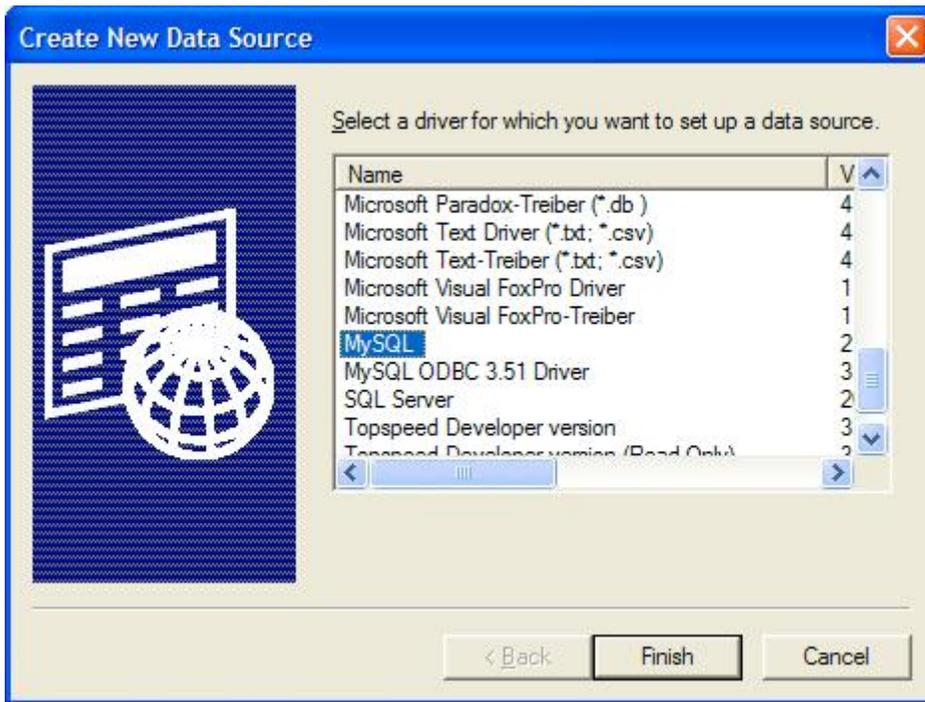
This allows you to select for all the available ODBC drivers that are installed on your machine. Microsoft distributes quite a few ODBC drivers (at least with Windows-XP) that you can use if you need to convert data from one database to another, but that's a different subject.
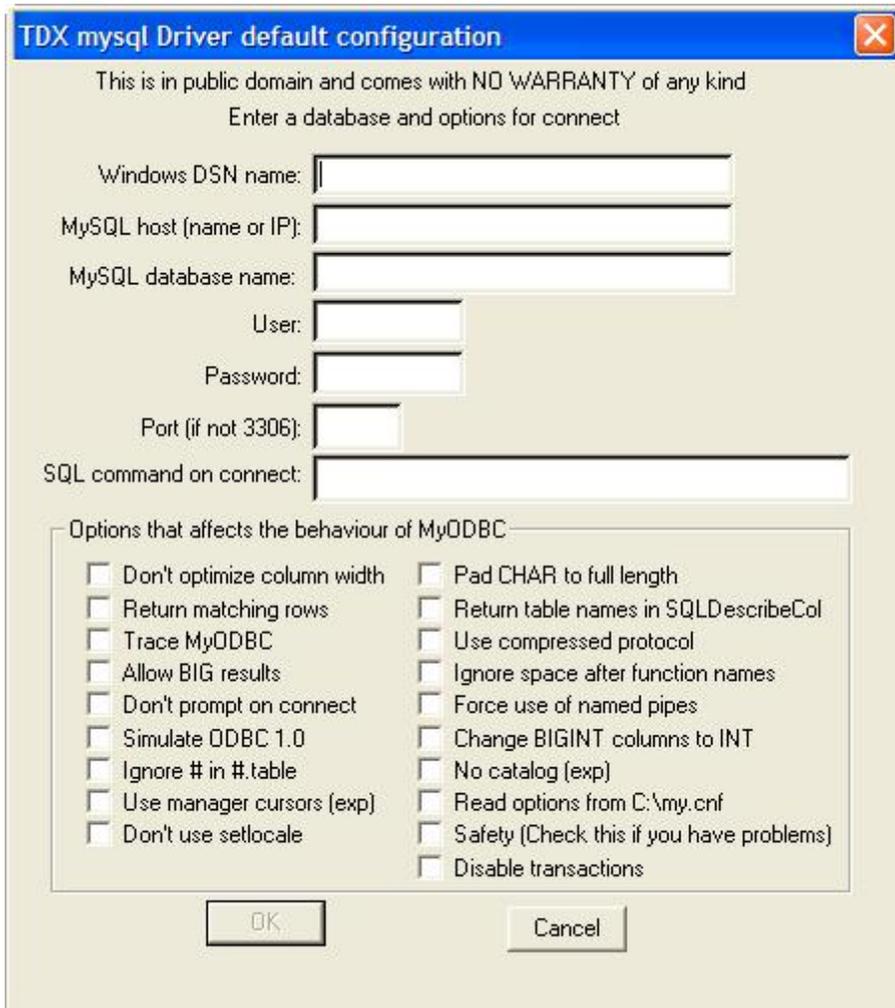
This is the MyODBC 2.5 window
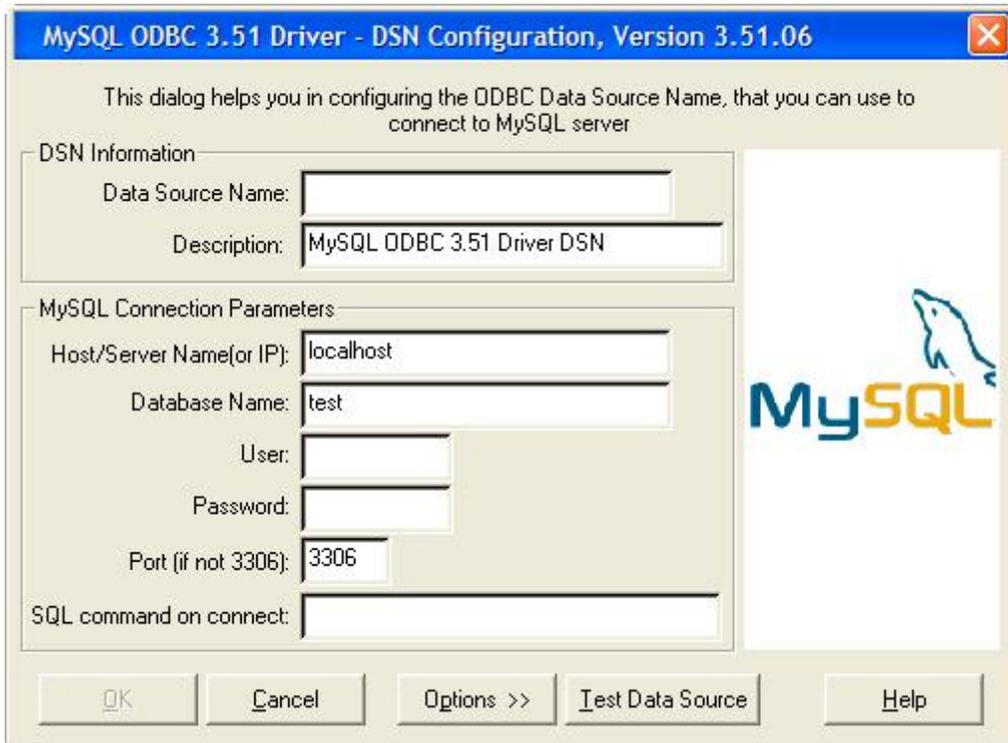
This is the MyODBC 3.5 window with a simple connection to a local database.
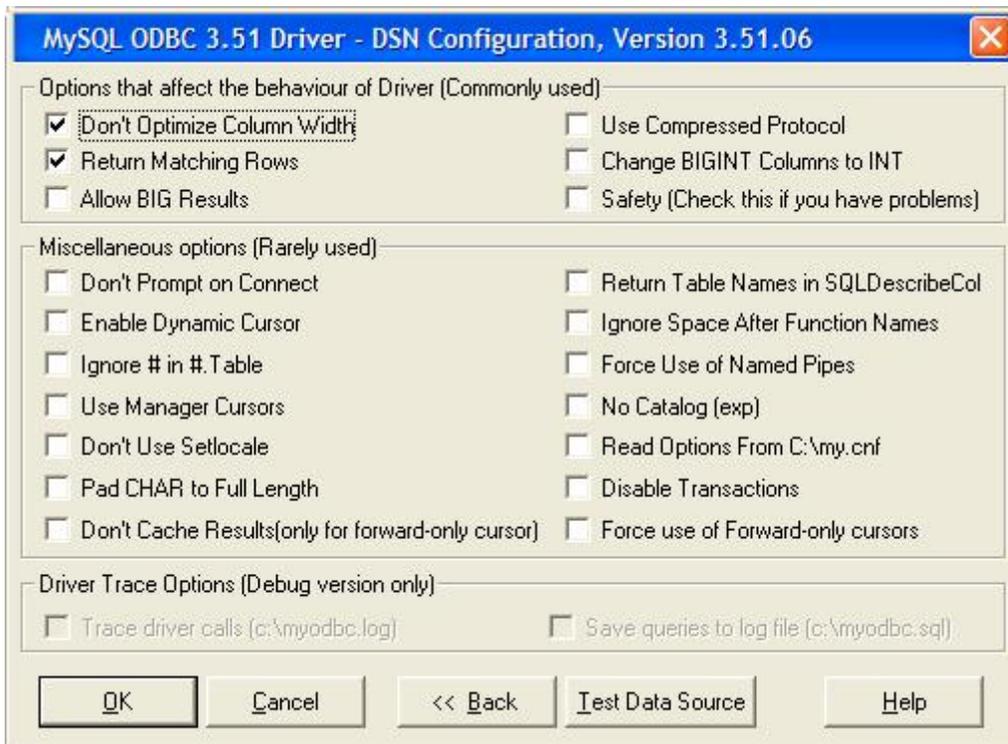
This is the MyODBC 3.5 Options window.
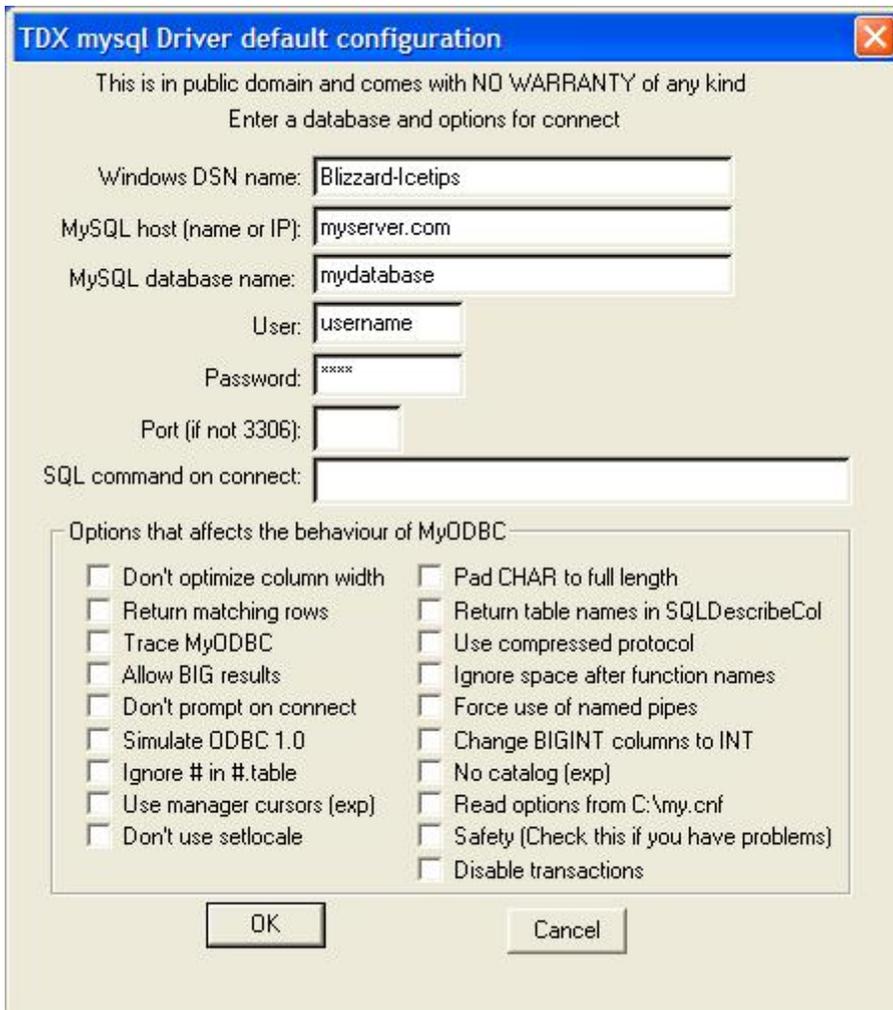
Here is a window with a setup for a remote database, running on MyServer.com. This means that MyServer.com must have a DNS (Dynamic Name Server) server running and a DNS entry. However you can just as well use an IP address and then you do not need a DNS.

The advantage of the MyODBC 3.5 is that it has a "Test Datasource" button. You can click it when you are setting up the ODBC connection to test if you can connect to the database or not. For this only I would strongly recommend that you download version 3.5 even if you are using 2.5. It makes it much easier to troubleshoot the connection and if you can't connect to it from your Clarion application, then you know the problem is in Clarion, not in the ODBC setup.

You can access and download the MyODBC drivers from http://www.mysql.com/products/myodbc/index.html There are currently 3 versions available, 2.50, 3.51 and 3.52.

I also strongly recommend that you download the latest version of MySQLFront from http://www.mysqlfront.de/ This is an excellent tool to work with MySQL databases. It can keep multiple connections open and allows you to copy data structures and/or data from one connection to another. Best of all it is completely free! There are other tools available too, but so far I have been extremely happy with MySQLFront and highly recommend it to anyone seriously using MySQL for online database storage.

Setting up the Dictionary in Clarion

Once you have set up the ODBC connection, you are half way done already!

Setting up a dictionary to use ODBC is simple. Since you now have a ODBC connection you can import the tables from the database into your Clarion dictionary using the "File|Import Table" from the Clarion menu. You can also use the Synhronizer, but that tool has never liked me and the feeling is mutual so I have never used it much;)

You are then prompted to select the data source. Clarion 5.5 still has the ability to connect to 16bit data sources, so these are enumerated.
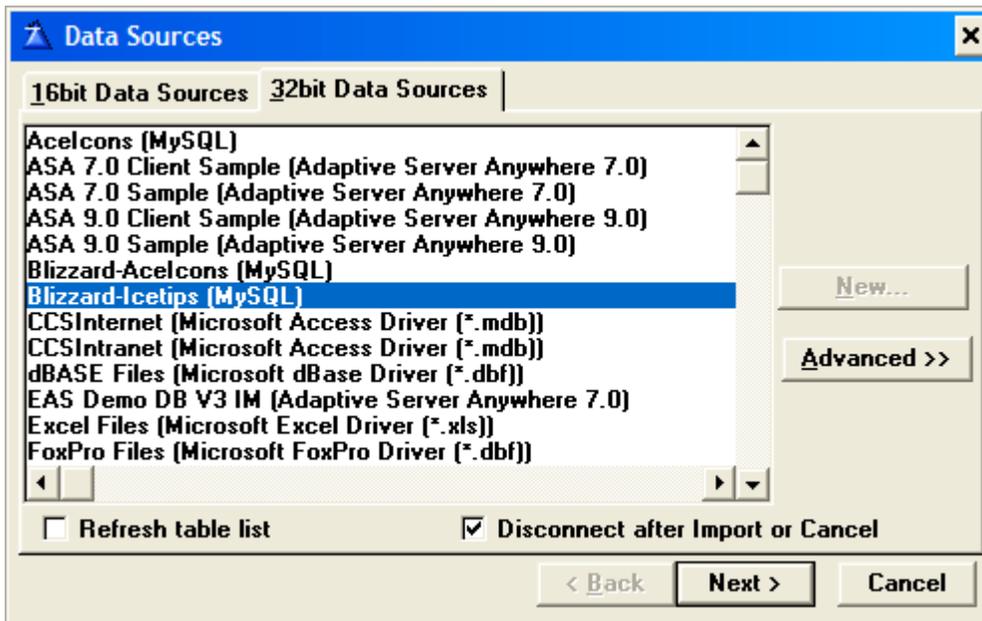
Clarion 6.0 will show a different dialog as we show here below.

File Import

Datasource:

ASA 7.0 Sample
ASA 7.0 Client Sample
EAS Demo DB V3 IM
sample-MySQL
myodbc3-test
ASA 9.0 Client Sample
ASA 9.0 Sample
UltraLite 9.0 Sample

User ID:

Password:

○ Include System Files

⦿ Exclude System Files

< Previous   Next >   Finish   Cancel   Help
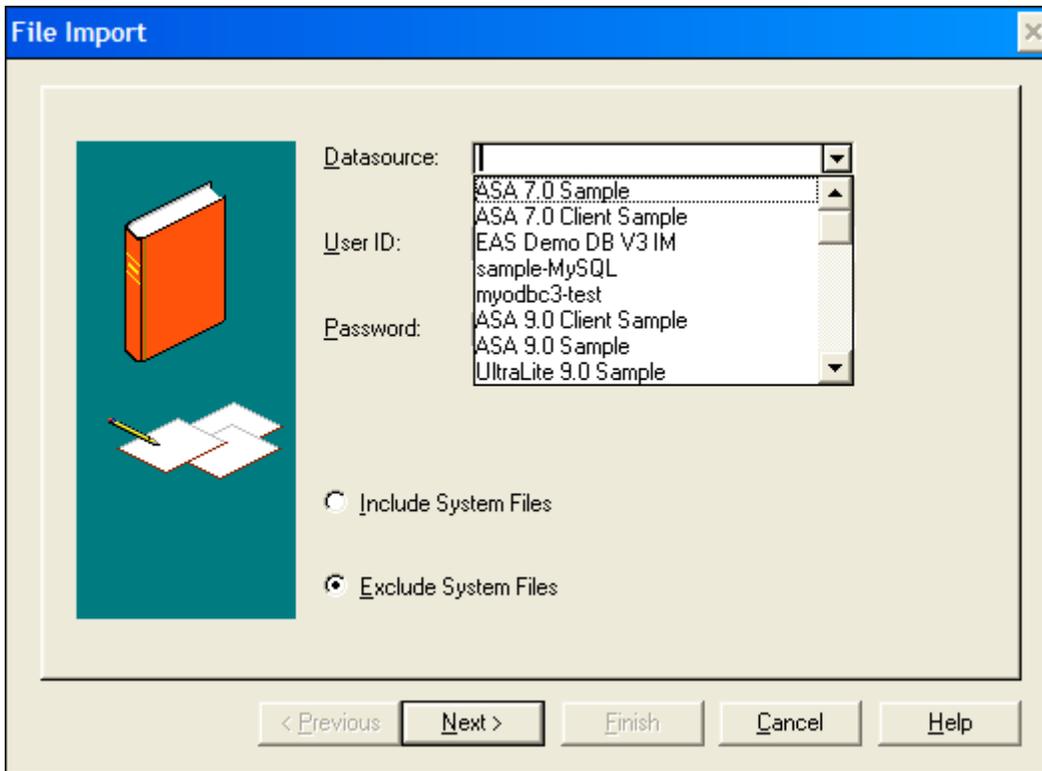
In both cases, you select the correct data source and click the Next button. You are then presented with a list of tables to pick from:

Tables for Blizzard-Icetips

Tables

adresponse
articlecategory
articlecomments
articles
downloads
dummytable
features
itusers
news
newsletterarticles
newsletters
productcategory
products

< Back   Finish   Cancel

Once you select the table, the structure of that table is retrieved and a Clarion file structure created and you get the File properties dialog window in Clarion
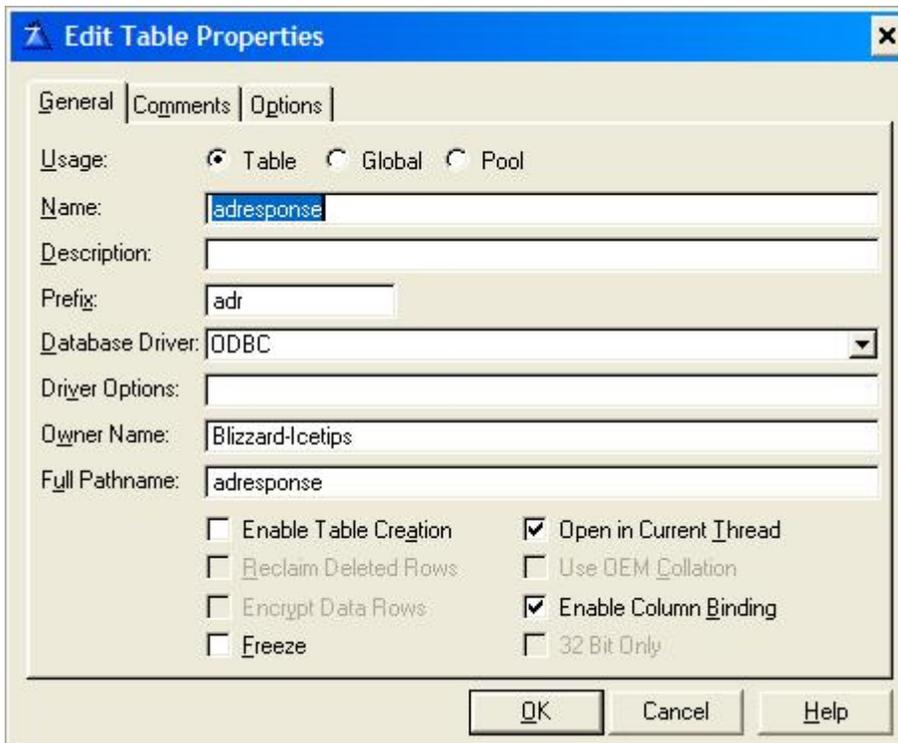
As you can see the name and full path name are filled in with the table name. The Full Pathname should always match the tablename as it is on the server and make sure that it is exactly like the name on the server if the server is a Linux server because then the table names are case sensitive. If the server is a windows server it usually doesn't matter, but to be on the safe side if the database was moved to a linux server, make sure that the names match.

If you are using our SQL templates, you should make the Prefix all upper case, in this case it should be changed to ADR from adr.

The next thing you need to do is to replace the Owner Name with a variable. That makes it easier to change the settings if needed as then you only need to do it once in your application and don't need to go through the dictionary to change each table. The Owner Name is the actual connection string to the database and contains the ODBC entry name, username and password.

So in this case, replace the Owner Name with !Glo:OwnerName and make sure that you create the Glo:OwnerName as a global variable – easiest way to do that is in the Global variable area in the Dictionary, that way you have it all in the same place.
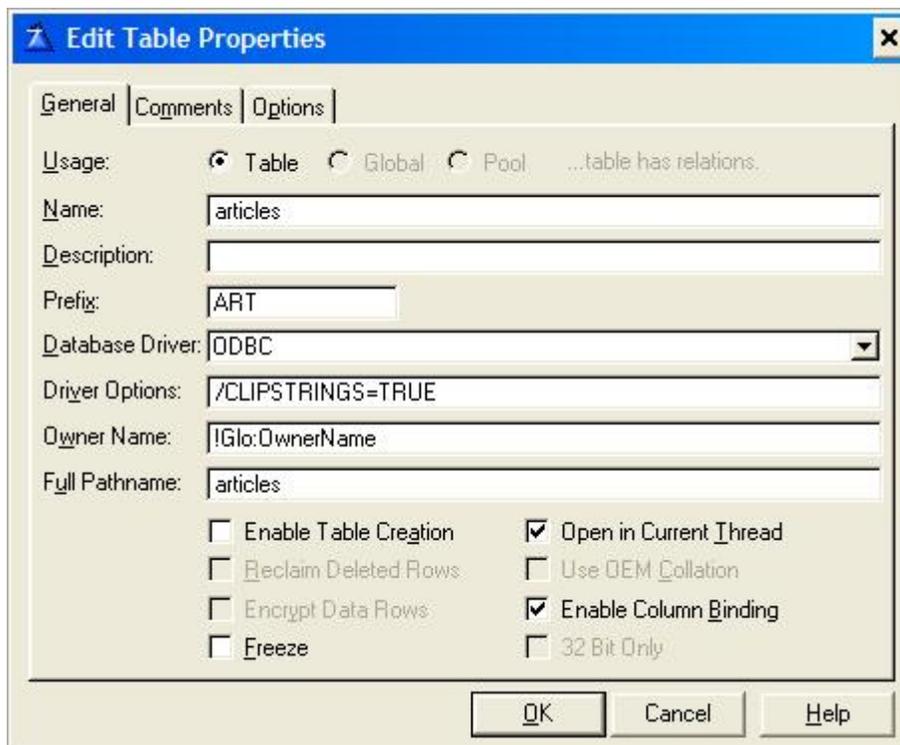
This shows a finished set up for another table. The /CLIPSTRINGS=TRUE option can make sending long strings that are basically empty over to the server. Unfortunately it does not help with retrieving which in most cases seems to send the whole string, memo or blob over without regards to how much data is actually in structure. You should also use /VERIFYVIASELECT=TRUE with MySQL databases. So your Driver option line should look like this:

/CLIPSTRINGS=TRUE /VERIFYVIASELECT=TRUE

Aditionally you should make sure that the External Name for fields/columns is filled out. This prevents any ambiguity on case sensitive servers.
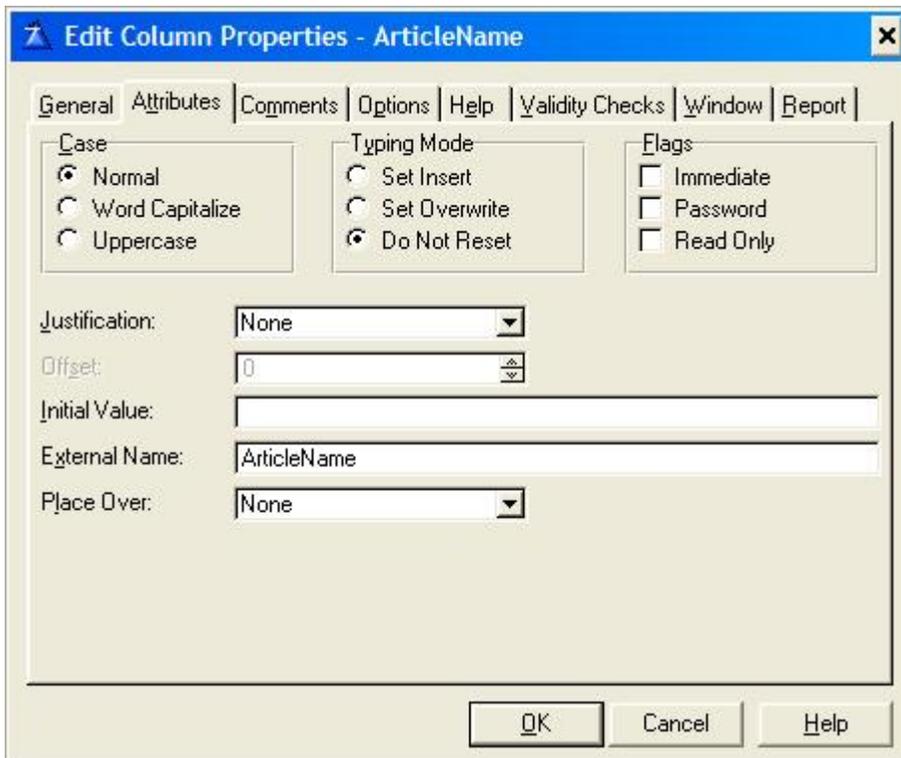
When you import the table, the External Name is already set for you. But if you add columns to the table later on and need to update the dictionary you need to remember the External Name. If you forget, you will most likely et error 47 when opening the file.

Connecting from your application

Making the connection from your application should now be relatively painless. All you need to do, before you open any tables on the database is to set the Glo:OwnerName variable to it's appropriate values:

```
Glo:OwnerName = 'ODBC DNS Name,username,password'
```

Examples:
```
Glo:OwnerName = 'Blizzard-Icetips,user1,user1password'
Glo:OwnerName = 'MyServer,user2,user2password'
Glo:OwnerName = 'OtherServer,user3,user3password'
```

The best place to put this is very early in the ThisWindow.Init method on the application frame. This has to be in place before any tables are opened on the server or you are going to get errors.

That is pretty much all there is to it. Other servers have different ways to set up remote connections, but this document deals with MySQL only so we will not get into that here. Please let us know if you have any additions or comments on this document by reporting it to us at http://www.icetips.com/supportentry.php.

This document was created with Microsoft Word and printed to PDF using PDF-Xchange 3.0 driver from http://www.docu-track.com - excellent PDF driver that is currently in use by over 80,000 users world wide.