

**In order to connect to databases you need to click on File -> Import Data -> SQL database.**

### **Configure MS-ACCESS and Import MS-ACCESS data into BlueSky Statistics**

Requirements:

<b>BlueSky Statistics</b>	<b>Uses R</b>	<b>Requires DSN (ODBC drivers)</b>
64-bit	64-bit	64-bit
32-bit	32-bit	32-bit

Table: 1

Example : BlueSky Statistics 64-bit application will use R 64-bit. And R 64-bit will only be able to use 64-bit MS-ACCESS DSN(Data Source Name).

### **Step 1. Determine whether you need to install 32/64 bit MS-Access Database Engine:**

<b>You Have</b>	<b>BlueSky Statistics</b>	<b>You Need</b>	<b>Install This</b>
MS-ACCESS (32-bit)	64-bit	You need 64-bit Access Drivers to create <b>64-bit ODBC Data Source Name</b> (in step 2 of “Creating Data Source Name (DSN) in Windows” section below).	AccessDatabaseEngine_x64.exe
	32-bit	You should already have drivers for 32-bit to create <b>32-bit ODBC Data Source Name</b> (go to step 2)	Not applicable
MS-ACCESS (64-bit)	32-bit	You need 32-bit Access Drivers to create <b>32 bit ODBC Data Source Name</b> (in step 2 of “Creating Data Source Name (DSN) in Windows” section below).	AccessDatabaseEngine.exe
	64-bit	You should already have drivers for 64-bit to create <b>64-bit ODBC Data Source Name</b> (go to step 2)	Not applicable

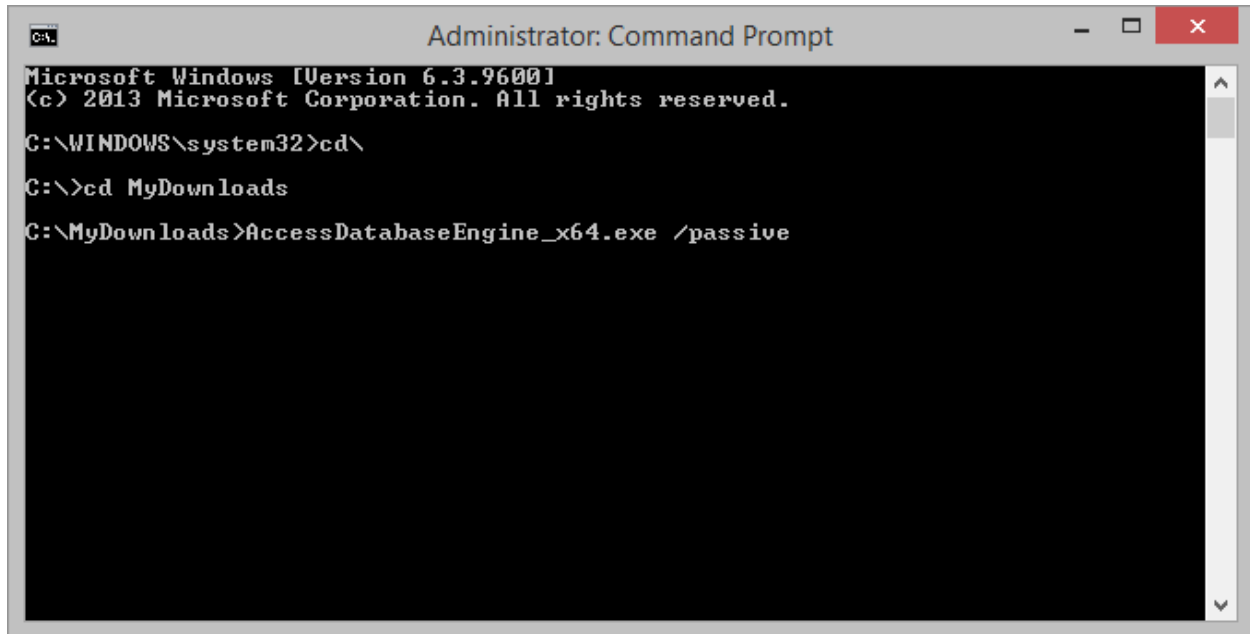
Table: 2

Visit following link and download “Microsoft Access Database Engine 2010 Redistributable”. It has both 32-bit and 64-bit drivers. Check the table above and see which one you require.

<http://www.microsoft.com/downloads/en/details.aspx?familyid=C06B8369-60DD-4B64-A44B-84B371EDE16D&displaylang=en>.

Suppose you need to install AccessDatabaseEngine\_x64.exe: Open a Command prompt (in a directory location where you have your downloaded files) and type the following command:

**AccessDatabaseEngine\_x64.exe /passive**

A screenshot of a Windows Command Prompt window titled "Administrator: Command Prompt". The window has a standard Windows title bar with minimize, maximize, and close buttons. The command prompt shows the following text:

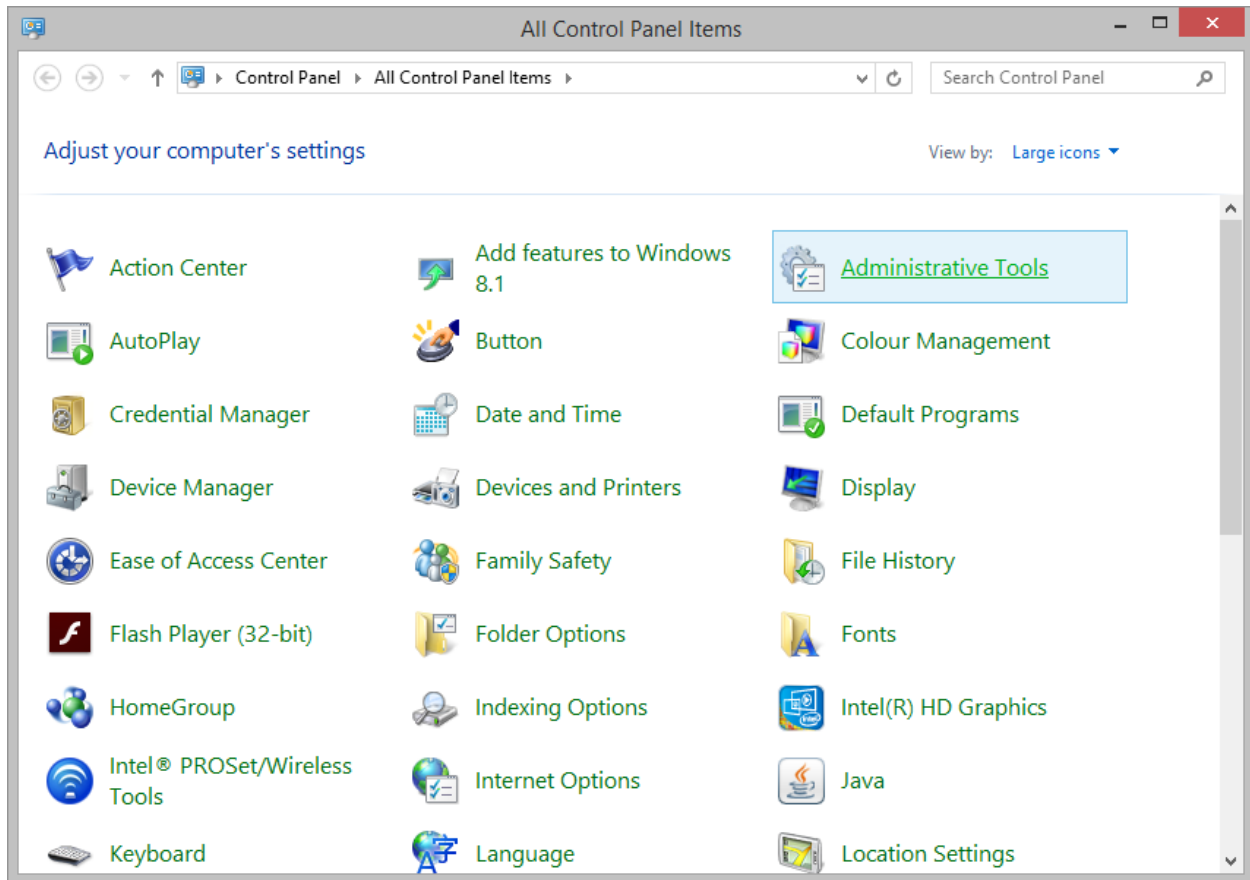
```
Microsoft Windows [Version 6.3.9600]
(c) 2013 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>cd\
C:\>cd MyDownloads
C:\MyDownloads>AccessDatabaseEngine_x64.exe /passive
```

Installing by double clicking that file may result in an error. So it is better use Command prompt with /passive option to avoid install errors.

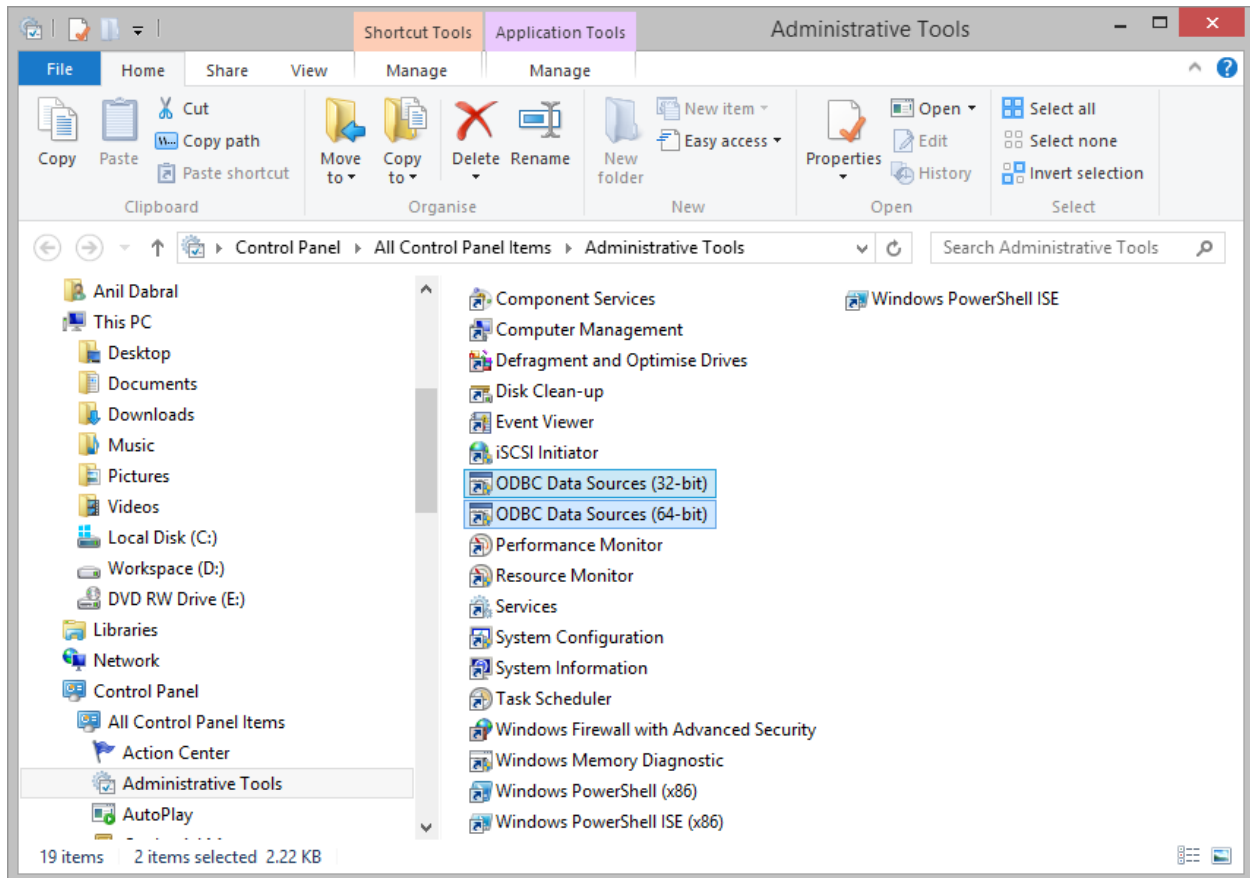
## Step 2. Creating Data Source Name (DSN) in Windows:

1. Open "Control Panel" in Windows. Click open "Administrative Tools"

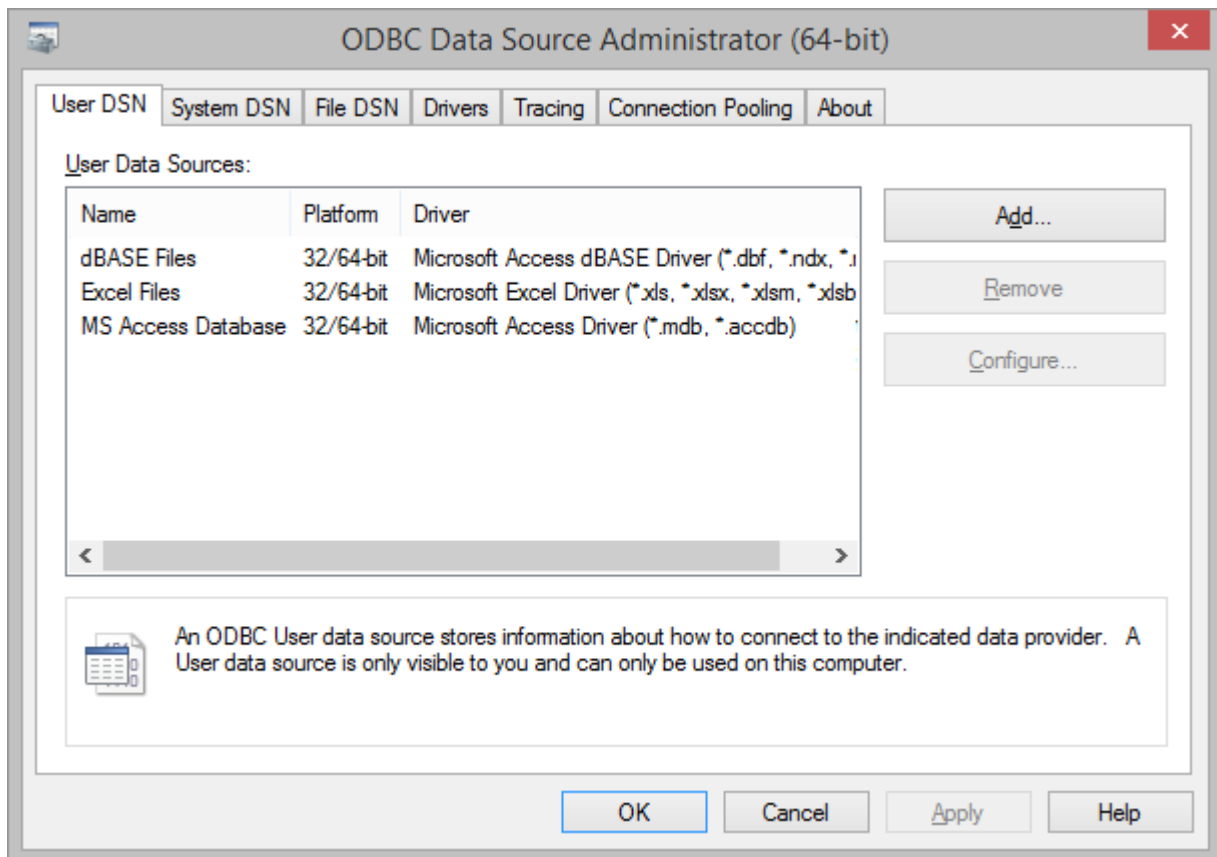


- In “Administrative Tools” window you should see “ODBC Data Source (32-bit)” and “ODBC Data Source (64-bit)”. You can create 32-bit Data Source Name using “ODBC Data Source (32-bit)” and 64-bit DSN using “ODBC Data Source (64-bit)”. Please refer to table 2, to determine whether you need 32 or 64-bit ODBC Data Source Name.

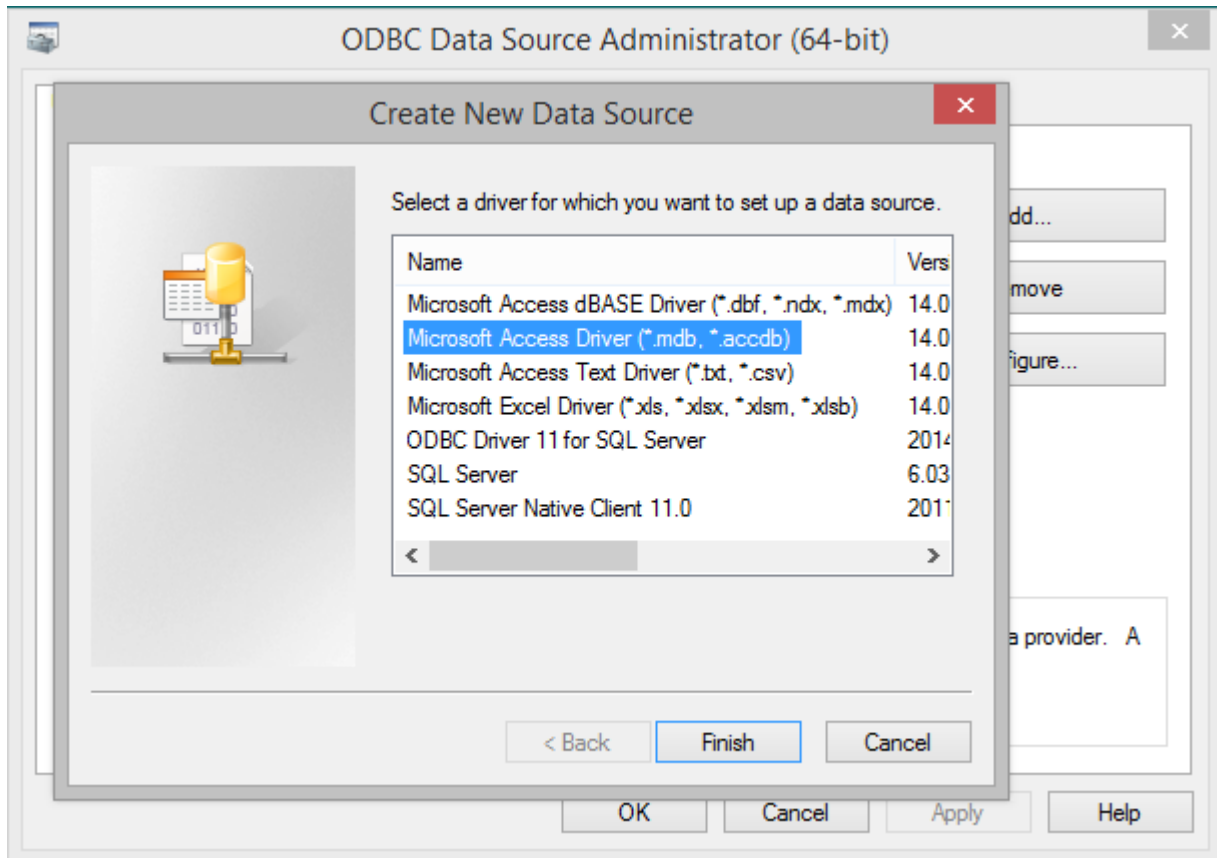
However in our example we will create 64-bit DSN (steps for creating a 32-bit DSN are similar). So we will click open “ODBC Data Source (64-bit)”.



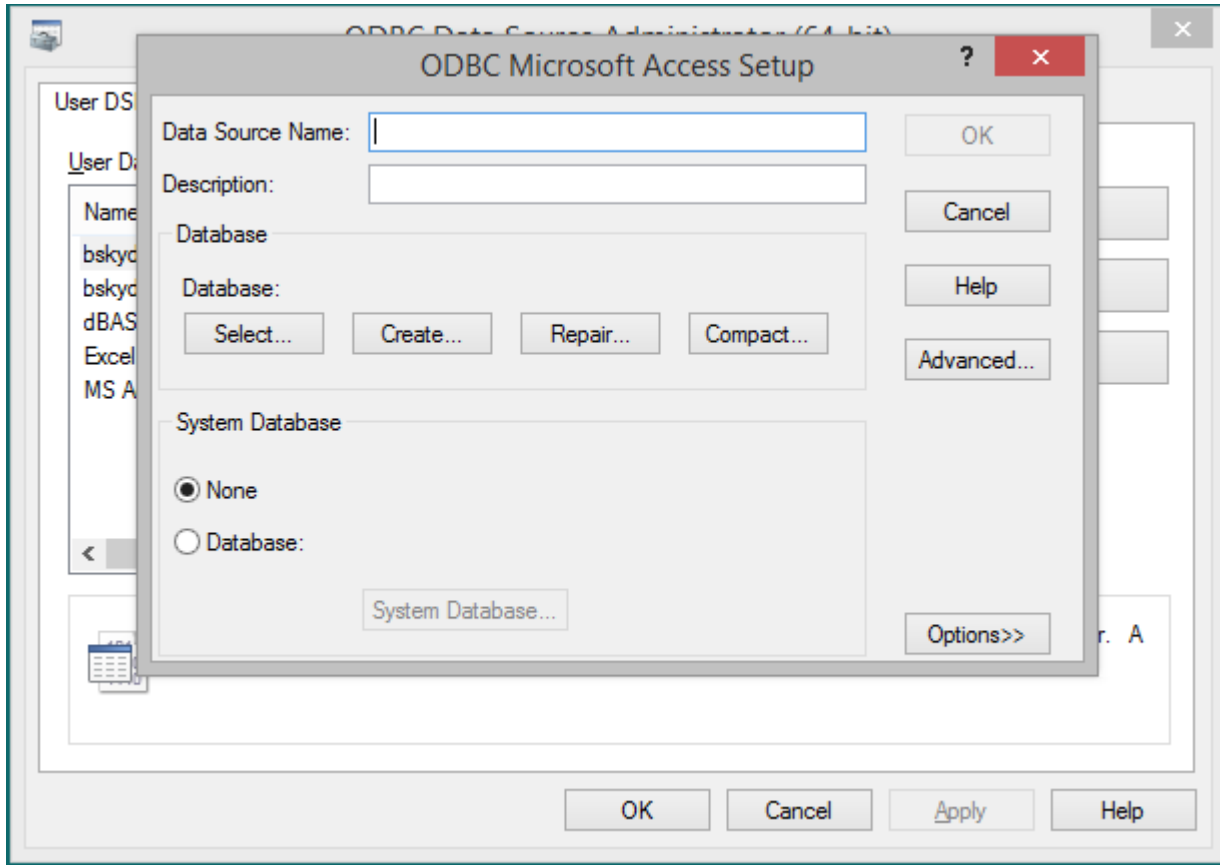
- Following window will appear when you click open “ODBC Data Source (64-bit)”. In this window you need to be on “User DSN” tab. Now click on “Add” button to create a new User DSN (64-bit).



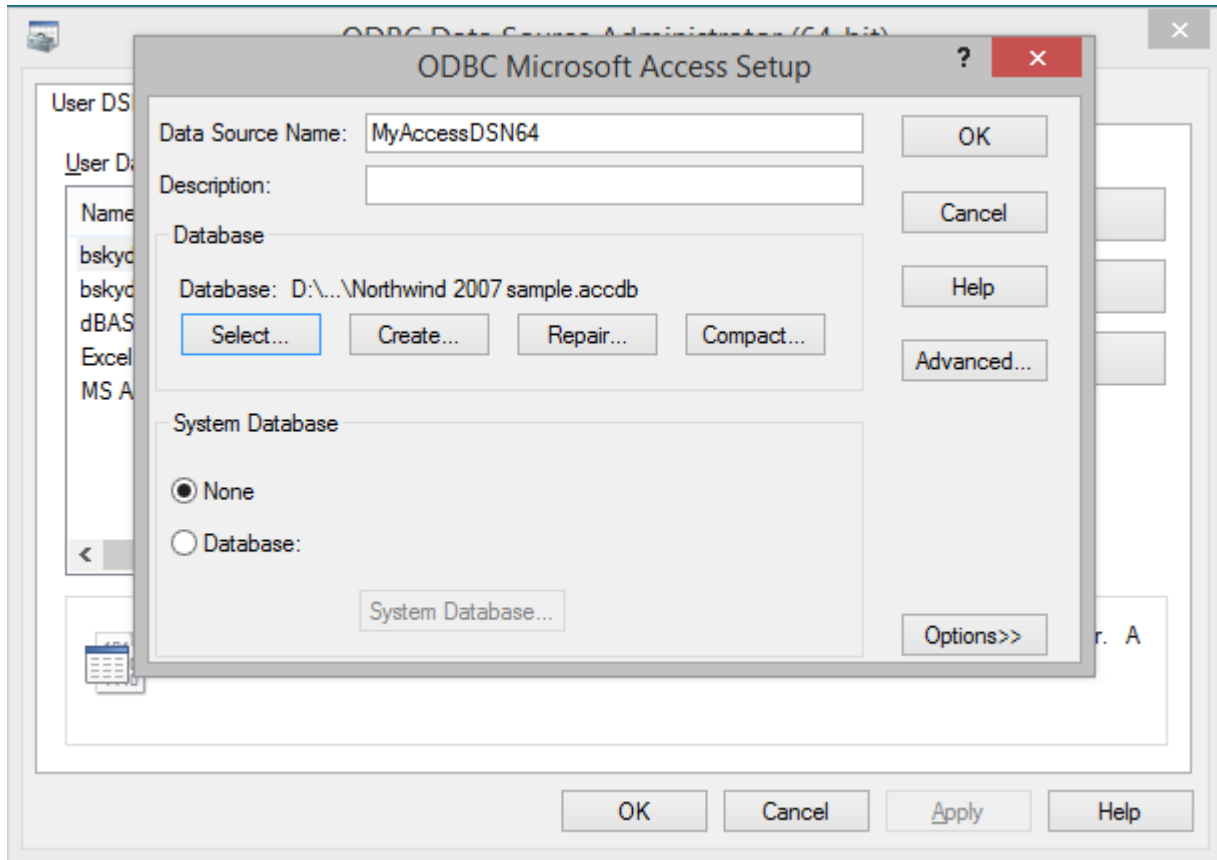
Following window will appear. In this window you need to select “**Microsoft Access Driver (\*.mdb, \*.accdb)**”. If you do not see this item in your list, that means you do not have Access driver installed for 64-bit DSN. You need to follow the instructions provided in the “**Determine whether you need to install 32/64 bit MS-Access Database Engine**” section above.



4. After selecting “Microsoft Access Driver (\*.mdb, \*.accdb)”, click on “Finish” button. You will get following window.

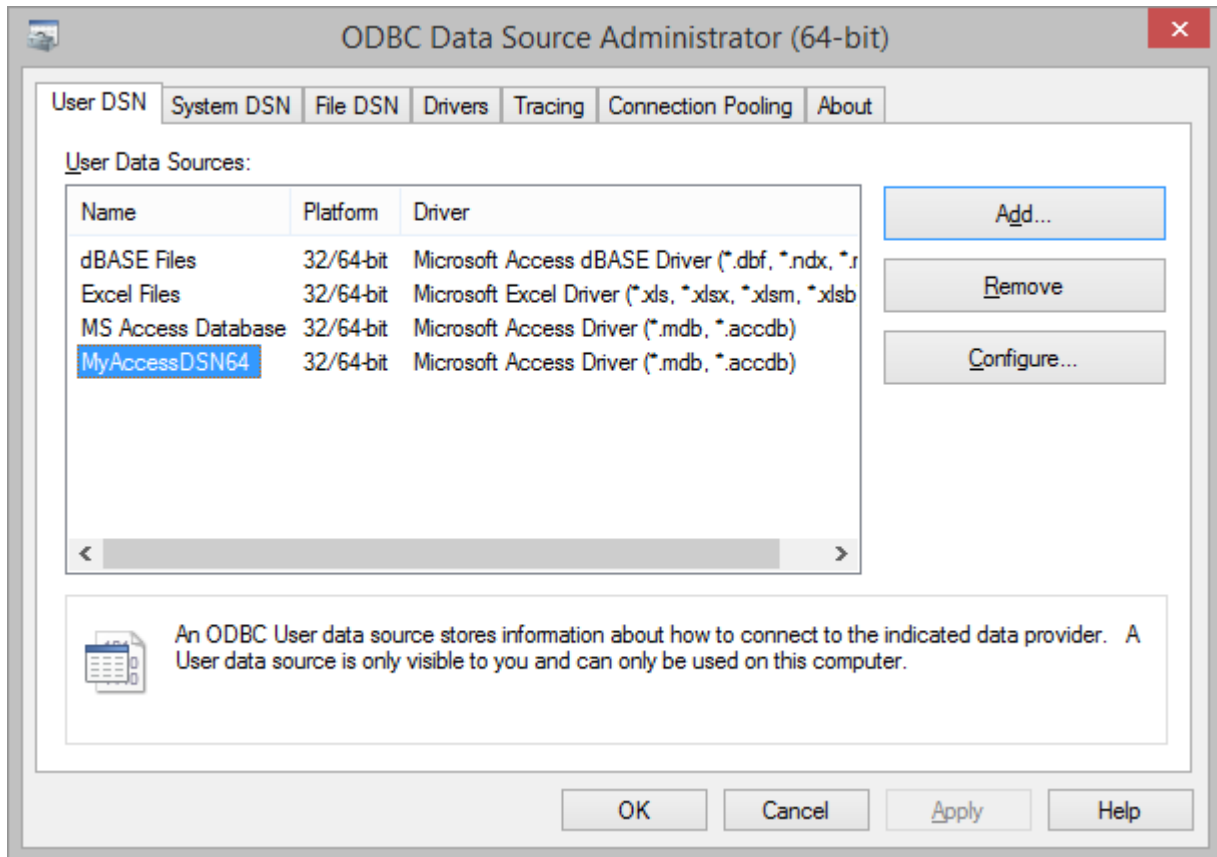


5. In this window you need to provide Data Source Name of your choice. Then click on the “Select” button to locate your Microsoft Access file (\*.mdb or \*.accdb). If you want to assign a User ID and Password (this is not common), then click on the “Advanced” button. Finally click “OK”.





- In the “ODBC Data Source Administration (64-bit)” window below, you will see your DSN that you just created. Now you are ready to use your DSN with the BlueSky Statistics application to load the data from your Access database which is referenced by your DSN.



7. Now from BlueSky Statistics application go to **File -> Import Data... -> SQL Database** a window will appear as shown below. First select "MS-ACCESS" from the list. Now you need to fill in the name of your DSN (this is the name of the DSN you just created and optionally the user/password. In our example we do not have user id and password so we leave those fields blank. Now click "Connect".

The screenshot shows a dialog box titled "Data Source Selector Window". It has a standard Windows window border with a close button (red X) in the top right corner. The main content area is divided into two sections. The first section, "Select Data Source:", contains a list box with the following items: MSSQL, PostgreSQL, Oracle, MySQL, SQLite, and MS-ACCESS. The MS-ACCESS item is highlighted with a grey background. The second section, "Specify Connection Parameters:", contains three text input fields. The first field is labeled "Data Source Name:" and contains the text "MyAccessDSN64". The second field is labeled "User ID:" and is empty. The third field is labeled "Password:" and is empty. At the bottom of the dialog box, there are two buttons: "Cancel" and "Connect".

8. If all the fields are correctly filled, clicking “Connect” will pop open following window. In this window first you need to “Select a database” from drop down. Then you can click on “Tables” “Views” checkboxes depending on your choice, what you want to see in the list box below, on the left. Once the Table/Views list box is filled with Table/View names, you can click any one of those to see its column names in the list box, on the right. Finally, in the text box below, you can write your select query or sub query with join etc. and the results of the query will be loaded in the data grid of the BlueSky Statistics application.

The screenshot shows a window titled "Table and Column(s) Selector Window". At the top, there is a dropdown menu for "Select a database:" with "MyAccessDSN64" selected. Below this, there are two checkboxes: "Tables" (checked) and "Views" (unchecked). To the right of these checkboxes, there is a text label: "Displays the columns of the selected table." Below the checkboxes, there are two list boxes. The left list box, titled "Tables/Views:", contains a list of database objects including MSysQueries, MSysRelationships, Customers (highlighted), Employee Privileges, Employees, Inventory Transaction Types, Inventory Transactions, Invoices, Order Details, Order Details Status, and Orders. The right list box, titled "Columns:", contains a list of column names for the selected table: ID, Company, Last Name, First Name, E-mail Address, Job Title, Business Phone, Home Phone, Mobile Phone, Fax Number, and Address. Below the list boxes, there is a text area for writing a SQL query. It contains the text: "Write your 'SELECT' query in the textbox below. You can enter complex queries, sub-queries, joins as supported by your SQL server." followed by two examples: "1. MS-SQL Example: SELECT \* FROM Owner.TABLE-NAME" and "2. MySQL / Postgres / MS-ACCESS Example: SELECT \* FROM TABLE-NAME". The text area contains the query "select \* from Customers". At the bottom right of the window, there are two buttons: "Back" and "OK".

9. Click 'OK' to load the result of select query in the BlueSky Statistics grid.

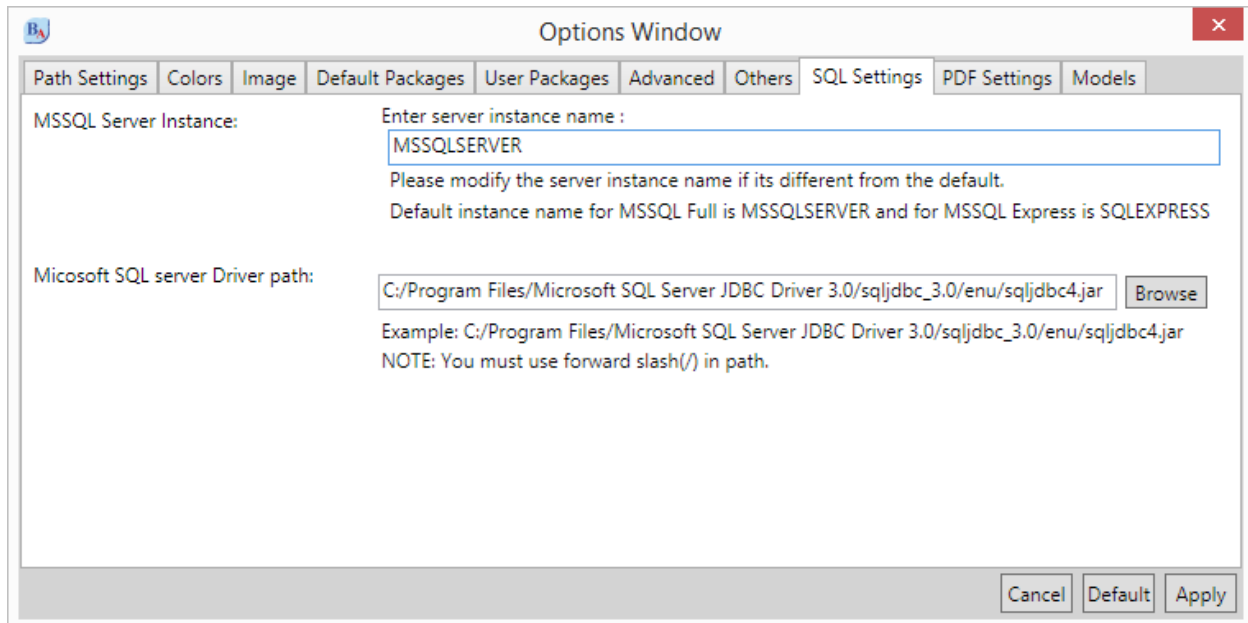
## Configure Microsoft-SQL Server (MS-SQL server) and Import MS-SQL data into BlueSky Statistics

To import data from Microsoft-SQL server you must have Microsoft SQL Server JDBC driver installed on your system. You can download this driver from Microsoft's website (<https://www.microsoft.com/en-us/download/details.aspx?id=55539>). It has been found the matching Java version is necessary for the JDBC driver to work properly. Please check 'System Requirements' and 'Install Instructions' sections on the download page carefully. By default it installs to 'C:/Program Files'. Do not install it in any other location.

### Other requirements:

- 1) **RJDBC** R package must be present. For this you can execute a dialog from the BlueSky Statistics application ( go to **Installation** → **Install All required R package from CRAN** ).
- 2) Install Java and set **JAVA\_HOME** environment variable to point to Java install location (eg. C:\Program Files\Java\jdk1.8.0\_112)
- 3) Using **SQL server agent** make sure that **SQL server browser** is running.

From **BlueSky Statistics** application, go to **Options** -> **Configuration Settings** now switch to **SQL settings** tab. Enter MSSQL server instance name . Also specify the path to the driver jar file. The path must defined using forward slashes, as shown below.



To connect to a remote MS-SQL server that is maintained by your admin, you need to get the SQL server name ('host' address), user id and password from the admin.

1. From BlueSky Statistics main window, click **File** -> **Import Data...** -> **SQL Database**. Following window will pop open. Select MSSQL from the list by clicking on it. Enter SQL server name, user id and password.

Data Source Selector Window

Select Data Source:

- MSSQL
- PostgreSQL
- Oracle
- MySQL
- SQLite
- MS-ACCESS

Specify Connection Parameters:

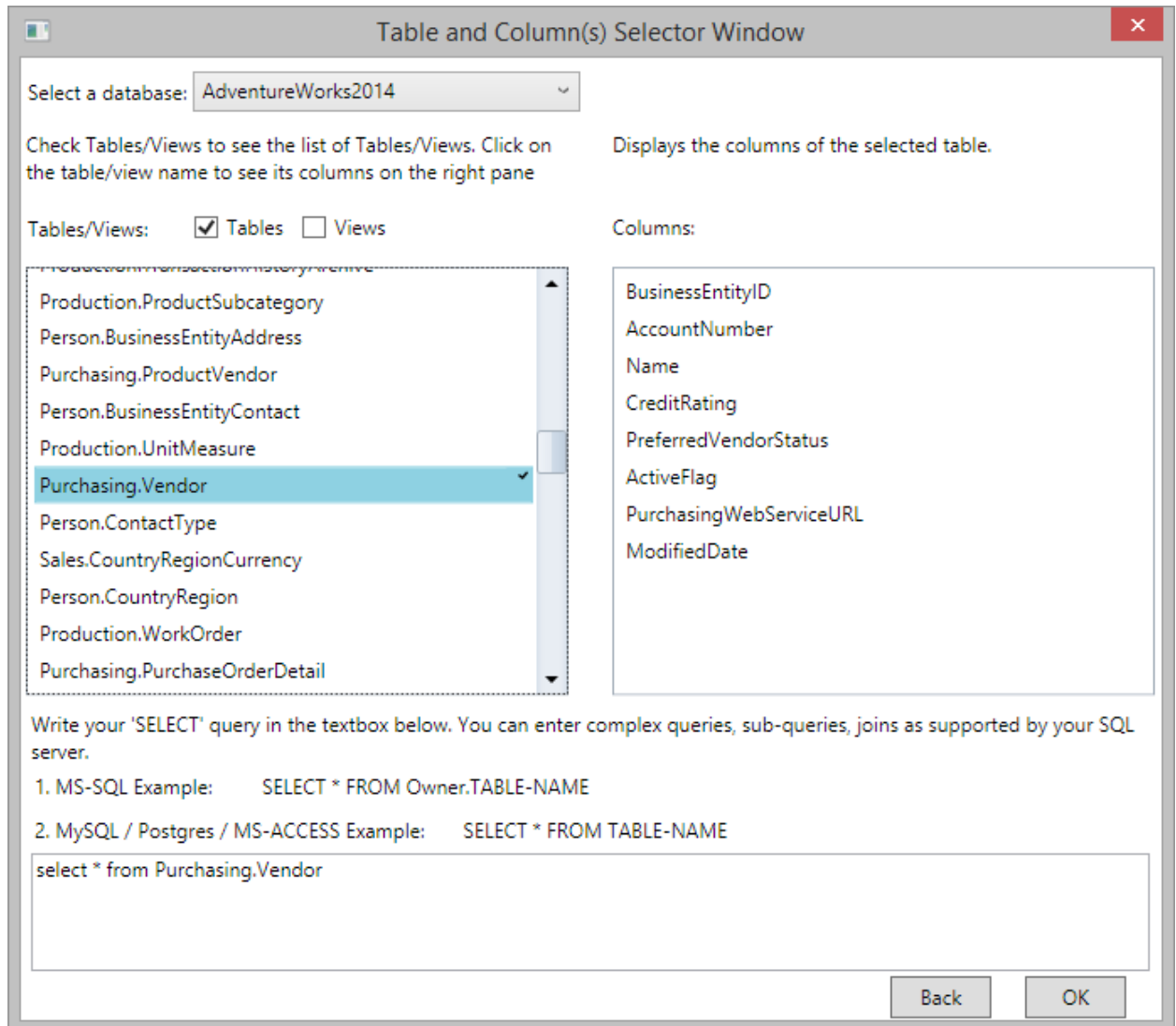
Host / Server: localhost

User ID: sa

Password: ●●●●●●

Cancel Connect

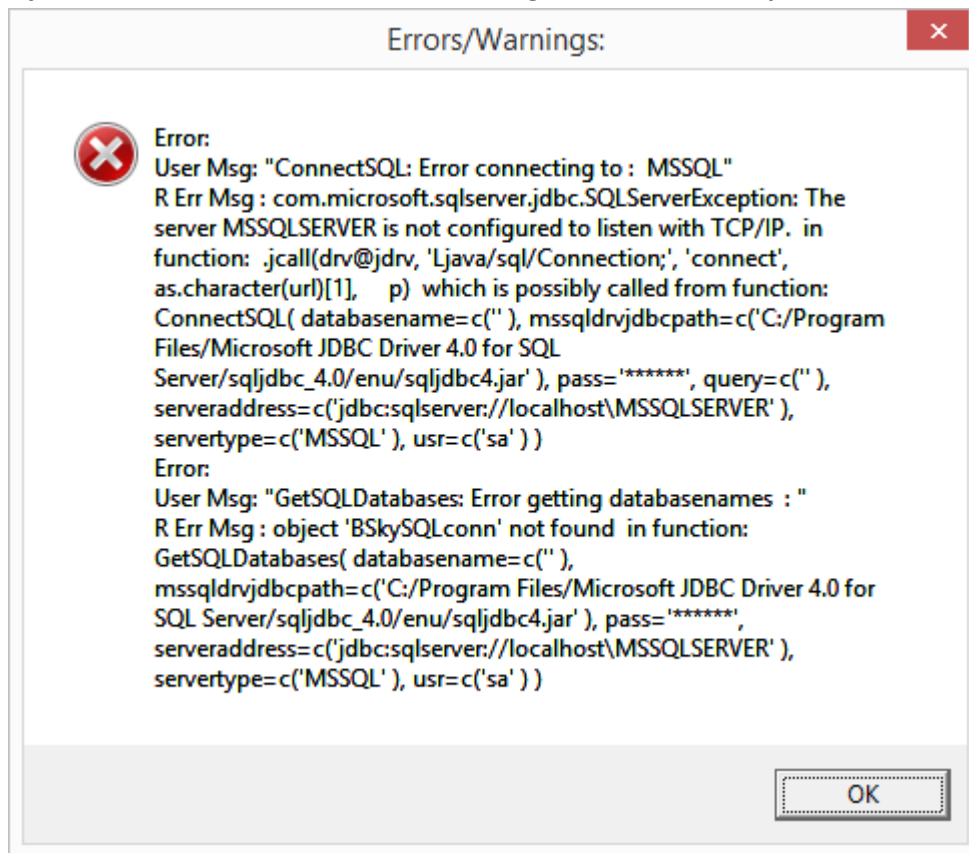
2. Click "Connect" button and you will see following window. In this window you need to select a database name from the dropdown and then based on choice you can check "Table" and/or "Views" checkbox to see tables and/or views in the list box below, on the left. If you click any table or view name in the left table, you will see its column names in the list box, on the right. Finally, in the text box below, you can write your select query or sub query with join etc. and the results of the query will be loaded in the data grid of the BlueSky Statistics application.



3. Click 'OK' to load the result of select query in the BlueSky Statistics grid.

## Troubleshooting Connection issues

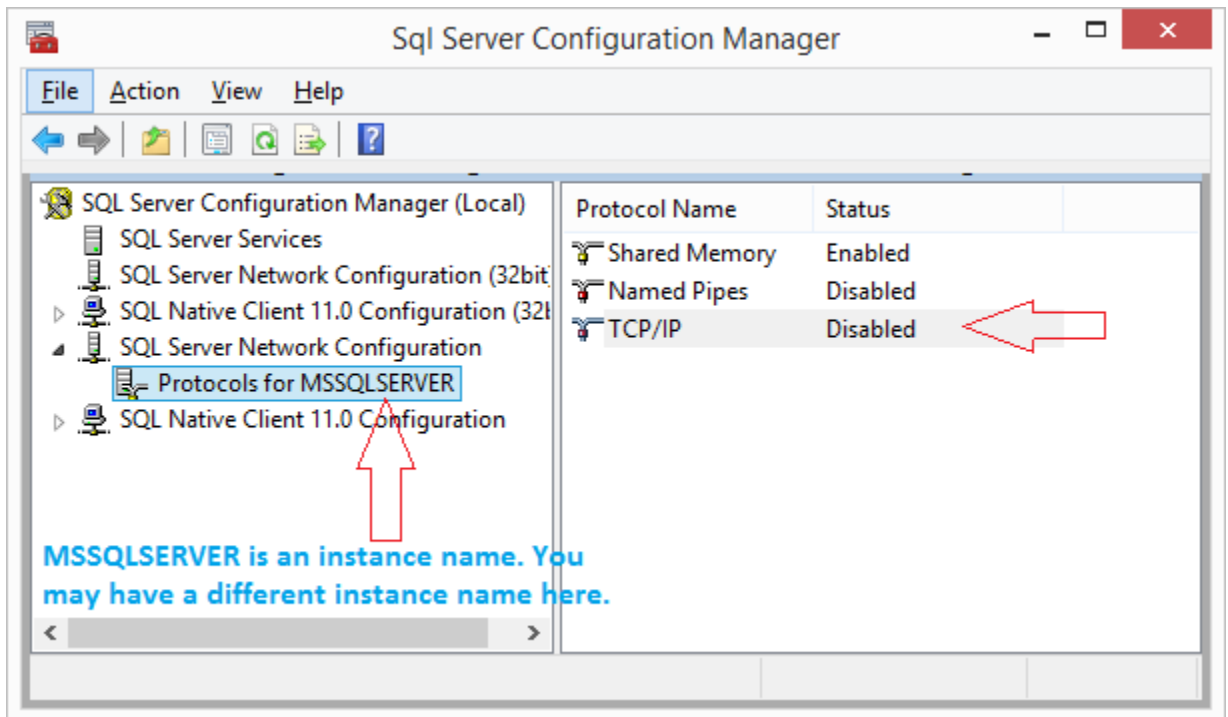
- 1) If you see TCP/IP related error like following and follow the steps to resolve it.



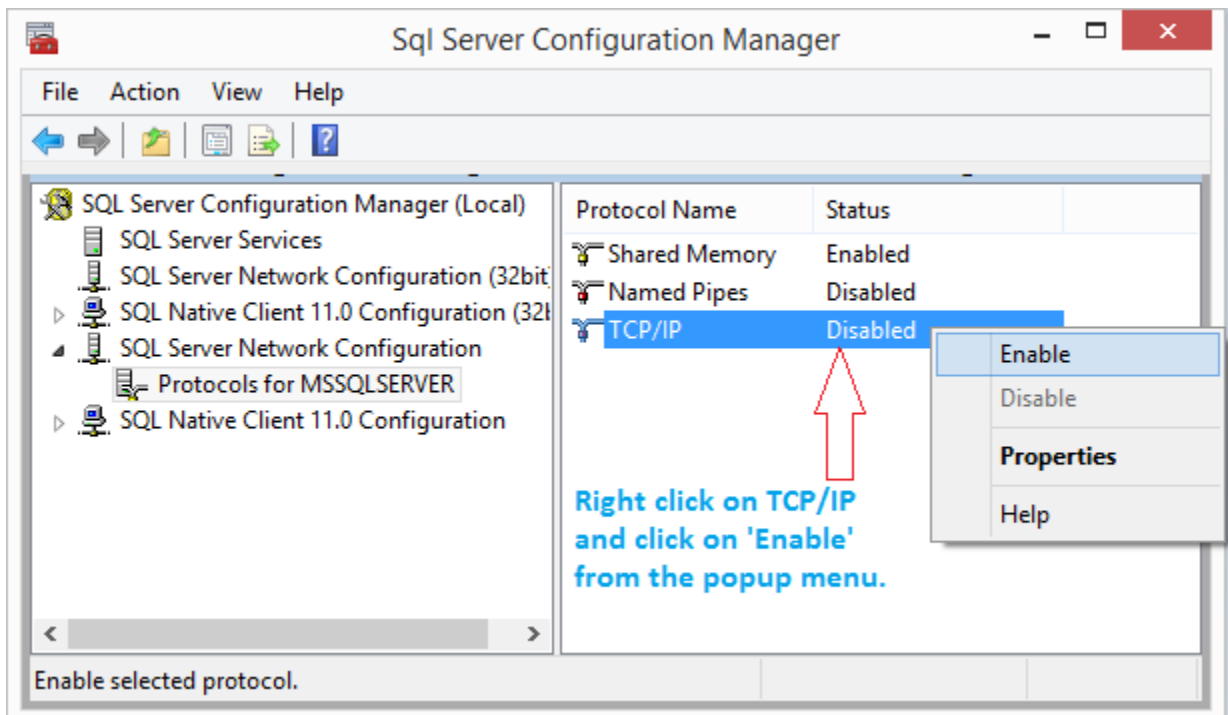
To fix above issue please follow these steps:

- a) Open 'Sql Server Configuration Manager' and locate 'Protocols for MSSQLSERVER'.  
Where MSSQLSERVER is an instance name (you may have a different instance

name).

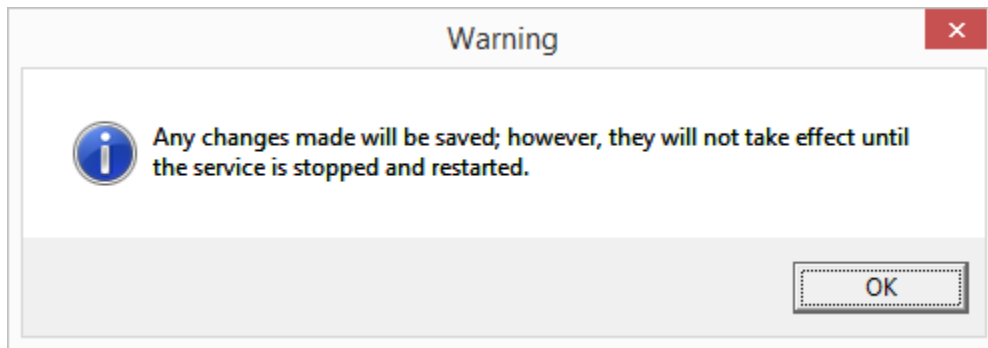


- b) On the right panel if 'TCP/IP' is disabled, right click on 'TCP/IP' and choose 'Enable' from the popup menu.

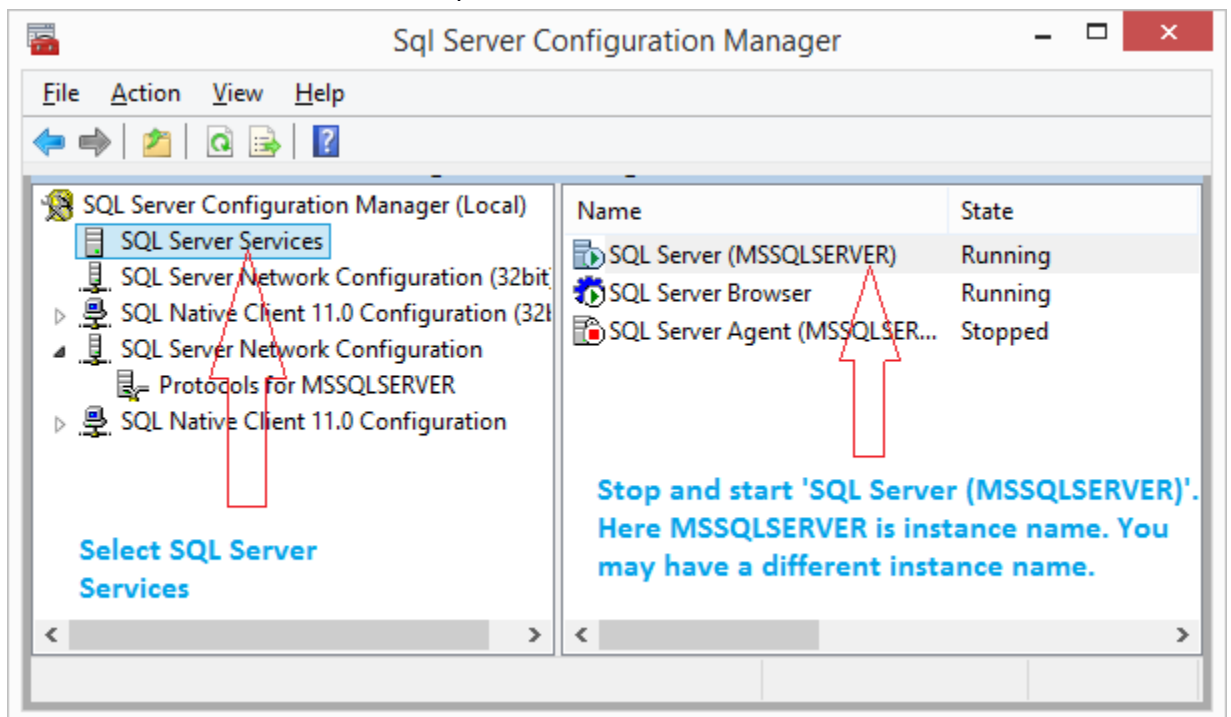




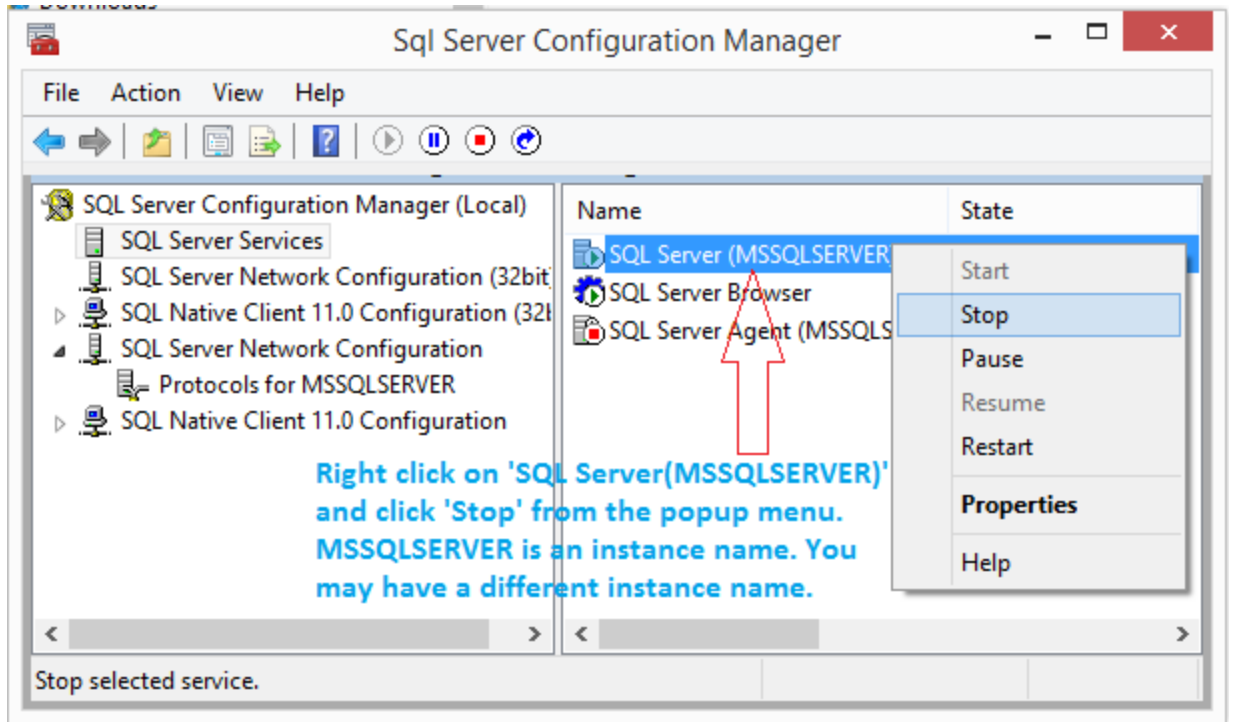
c) You will see a warning message. Click OK.



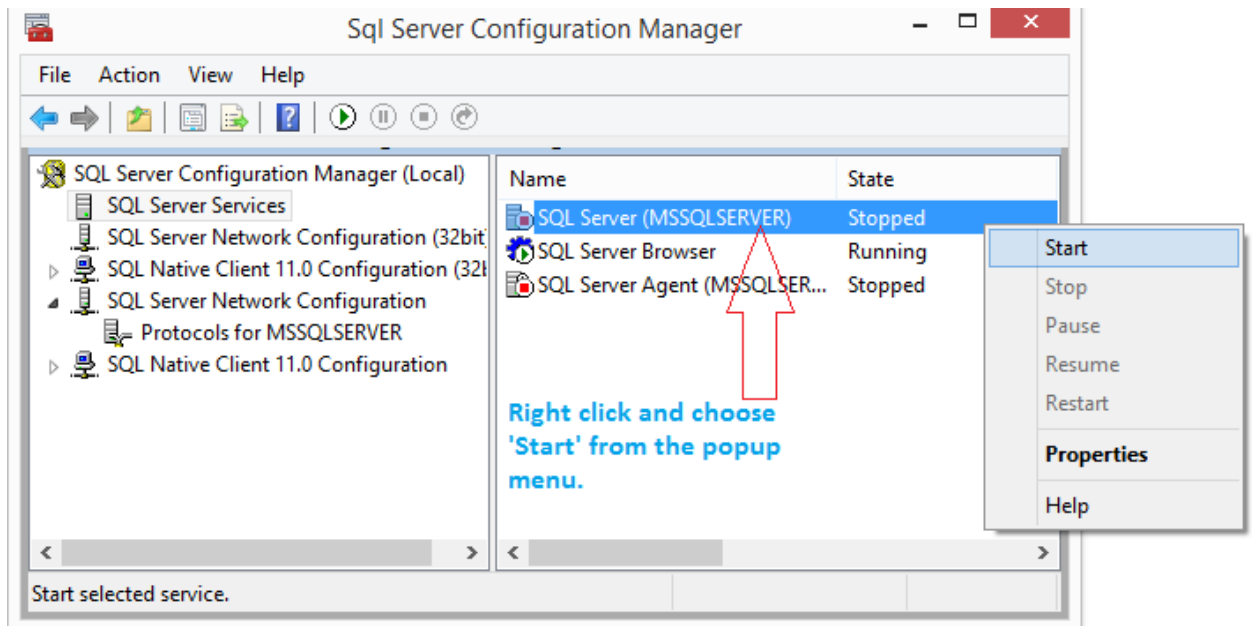
d) Now we need to restart the Sql server. In 'Sql Server Configuration Manager' select 'SQL Server Services' from the left panel.



e) From the right panel, right click 'SQL Server (MSSQLSERVER)' and select 'Stop' from the popup menu.



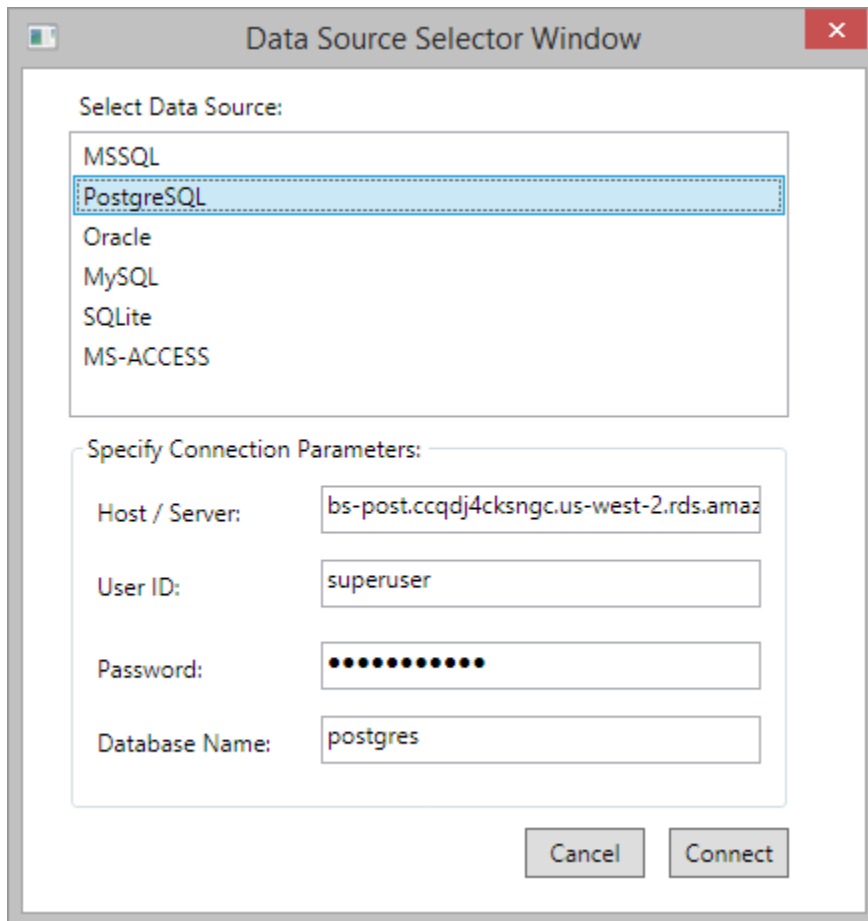
- f) Right click 'SQL Server (MSSQLSERVER)' again and select 'Start' from the popup menu.



## Configure PostgreSQL and Import PostgreSQL data into BlueSky Statistics

To get PostgreSQL “host” address, user id, password and database name, you need to contact your PostgreSQL server admin.

1. Steps for connecting to PostgreSQL are similar to MS-SQL. Except you need to specify database name in ‘Database Name’ field.



The image shows a 'Data Source Selector Window' with a title bar containing a close button. The window is divided into two main sections. The top section, titled 'Select Data Source:', contains a list of database types: MSSQL, PostgreSQL (highlighted with a blue selection bar), Oracle, MySQL, SQLite, and MS-ACCESS. The bottom section, titled 'Specify Connection Parameters:', contains four input fields: 'Host / Server' with the value 'bs-post.ccqj4cksngc.us-west-2.rds.amaz', 'User ID' with the value 'superuser', 'Password' with a masked field of 12 black dots, and 'Database Name' with the value 'postgres'. At the bottom right of the window are two buttons: 'Cancel' and 'Connect'.

- Click "Connect" button and you will see following window. In this window you need to select a database name from the dropdown and then based on choice you can check "Table" and/or "Views" checkbox to see tables and/or views in the list box below, on the left. If you click any table or view name in the left table you will see its column names in the list box, on the right. Finally, in the text box below, you can write your select query or sub query with join etc. and the results of the query will be loaded in the data grid of the BlueSky Statistics application.

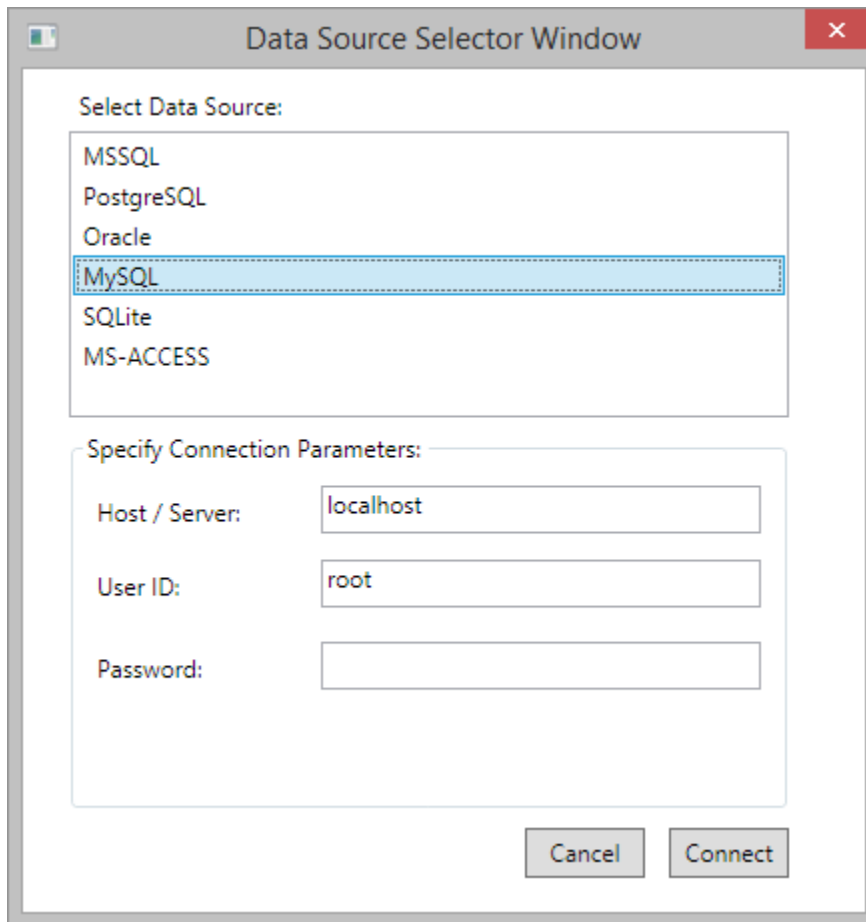
The screenshot shows a window titled "Table and Column(s) Selector Window". At the top, there is a dropdown menu for "Select a database:" with "postgres" selected. Below this, there are two columns of text: "Check Tables/Views to see the list of Tables/Views. Click on the table/view name to see its columns on the right pane" and "Displays the columns of the selected table." Under the first column, there are checkboxes for "Tables" (checked) and "Views" (unchecked). The "Tables/Views:" section contains a list box with "test" and "products" (selected). The "Columns:" section contains a list box with "product\_no", "name", and "price". Below these sections is a text box for writing a SQL query, with the example "select \* from products" entered. At the bottom right, there are "Back" and "OK" buttons.

- Click 'OK' to load the result of select query in the BlueSky Statistics grid.

## Configure MySQL and Import MySQL data into BlueSky Statistics

Contact MySQL server admin to get “host” address, user id and password of MySQL server.

1. Connection step are similar to MS-SQL connection steps. Enter MySQL server name, user id and password.

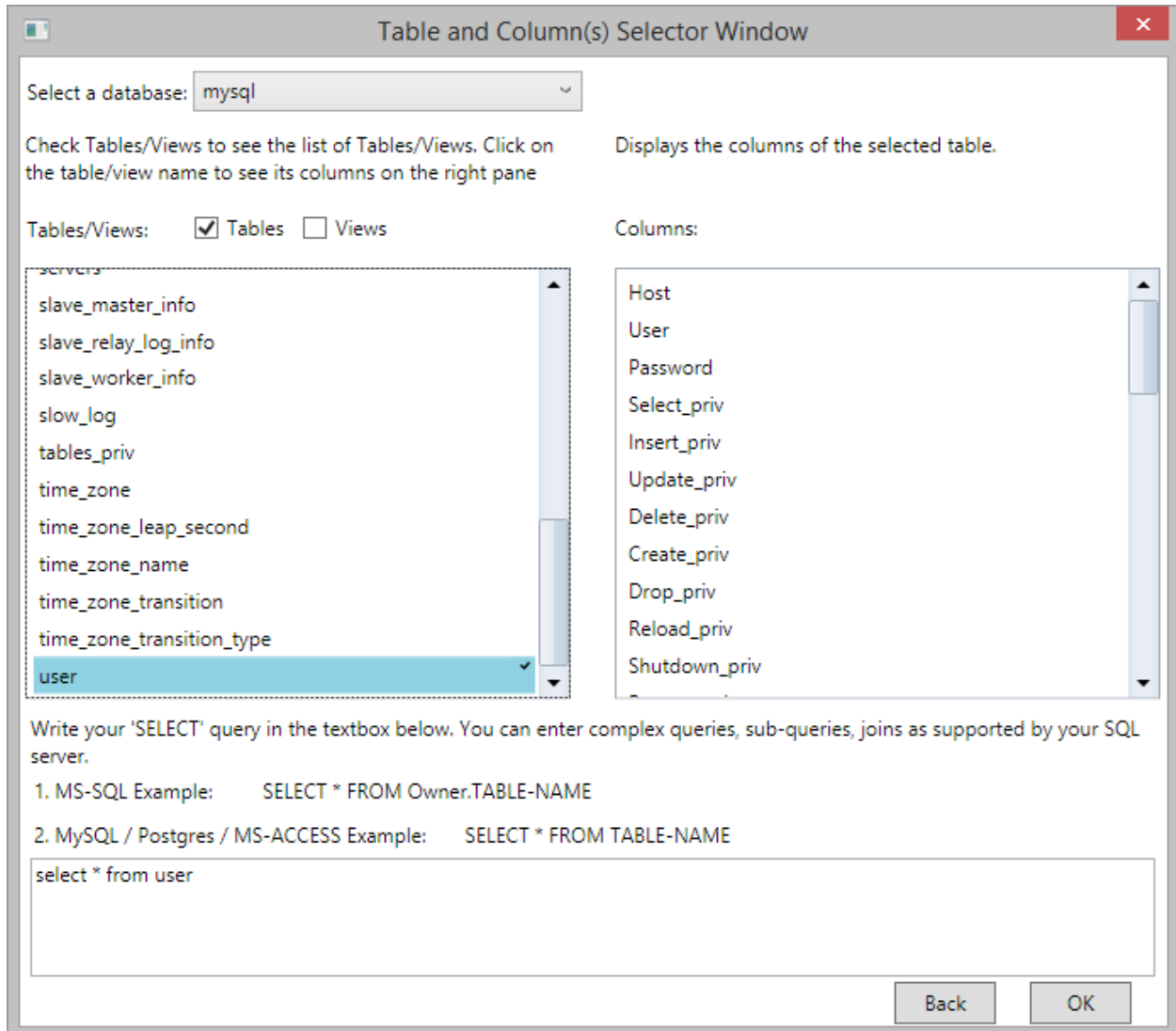


The image shows a screenshot of a software window titled "Data Source Selector Window". The window has a standard Windows-style title bar with a close button (X) in the top right corner. Inside the window, there are two main sections:

- Select Data Source:** A list box containing the following options: MSSQL, PostgreSQL, Oracle, MySQL (which is highlighted with a blue dashed border), SQLite, and MS-ACCESS.
- Specify Connection Parameters:** A section with three input fields:
  - Host / Server:** A text box containing the value "localhost".
  - User ID:** A text box containing the value "root".
  - Password:** An empty text box.

At the bottom of the window, there are two buttons: "Cancel" and "Connect".

- Click "Connect" button and you will see following window. In this window you need to select a database name from the dropdown and then based on choice you can check "Table" and/or "Views" checkbox to see tables and/or views in the list box below, on the left. If you click any table or view name in the left table you will see its column names in the list box, on the right. Finally, in the text box below, you can write your select query or sub query with join etc. and the results of the query will be loaded in the data grid of the BlueSky Statistics application.



- Click 'OK' to load the result of select query in the BlueSky Statistics grid.